

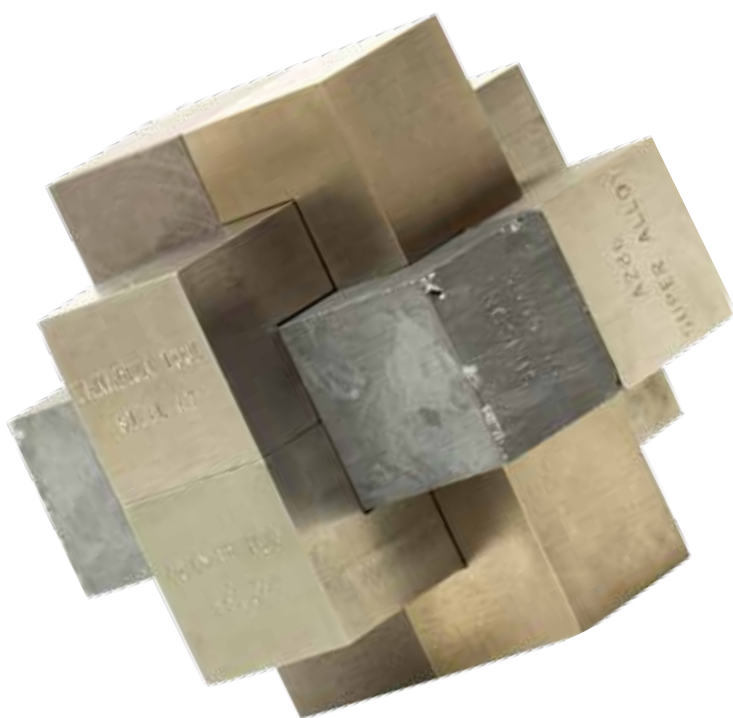
3,275 employees

15 countries

4 markets

3 business segments





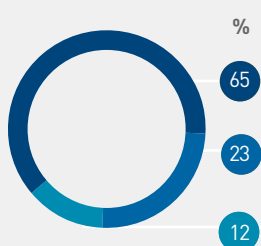
# one AMG

AMG Advanced Metallurgical Group N.V. (AMG or “the Company”) creates and applies innovative metallurgical solutions to support the global trends of sustainable development of natural resources and CO<sub>2</sub> reduction. These trends require the development and application of new material science-based solutions, including advanced metals and alloys. AMG creates these solutions using its metallurgical expertise, integrated business model and process technology. AMG’s unique combination of specialty metals reduces volatility, increases economies of scale and enables technology sharing across niche materials.

Operating in 15 countries via three segments, Processing, Engineering and Mining, these businesses form one company, AMG. These three segments, effective January 2013, have distinct business dynamics, but they share one focus and one vision – to create innovative metallurgical solutions for the global markets of energy, aerospace, infrastructure and specialty metals & chemicals.

# Financial & Operational Highlights

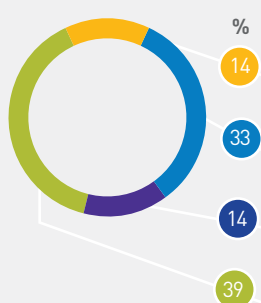
Revenue by Segment 2012



\$M

Advanced Materials	791.3
Engineering Systems	273.8
Graphit Kropfmühl	150.5

Revenue by Market 2012



\$M

Energy	171.7
Aerospace	397.6
Infrastructure	171.0
Specialty Metals & Chemicals	475.3

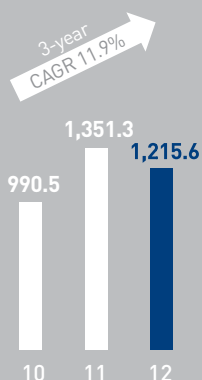
## ADVANCED MATERIALS

<div> <div>\$791.3</div> <div>million in revenue</div> </div> <div> <div>\$112.8</div> <div>million in gross profit, 14% of revenue</div> </div>	
<div>\$50.3</div> <div>million in EBITDA, 6% of revenue</div>	<div>\$49.3</div> <div>million in cash flow from operations</div>
<div>2.14</div> <div>Lost Time Incident Rate</div>	

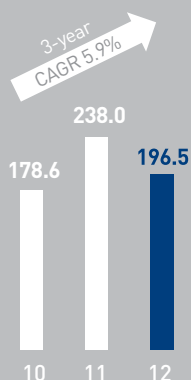
- Completed the expansion of the spent catalyst processing facility for the production of vanadium
- Consolidated KB Alloys into AMG, fully integrating the legacy AMG and KB units, rebranding the combined unit as AMG Aluminum
- Completed the construction of a gravimetric separation and concentration plant at AMG's antimony mine in Turkey
- Entered into a long-term sale of tantalum to reduce volatility and improve margins



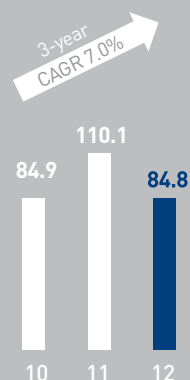
#### REVENUE \$M



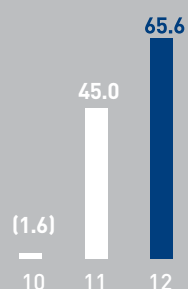
#### GROSS PROFIT \$M



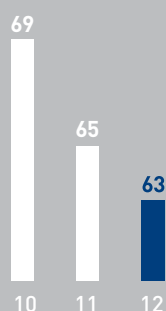
#### EBITDA \$M



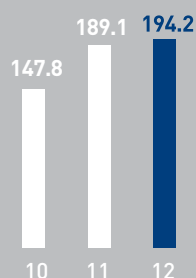
#### CASH FLOW FROM OPERATIONS \$M



#### WORKING CAPITAL DAYS



#### NET DEBT \$M



### ENGINEERING SYSTEMS

**\$273.8**  
million in revenue

**\$60.7**  
million in gross profit,  
22% of revenue

**\$19.3**  
million in EBITDA,  
7% of revenue

**\$3.3**  
million in cash flow  
from operations

**2.82**  
Lost Time  
Incident Rate

- Appointed Dr. Markus Holz as President of the Engineering Systems Division and CEO of ALD Vacuum Technologies GmbH
- Launched the SyncroTherm® furnace, an eco-friendly system utilizing "one-piece-flow" process technology and an innovative vacuum carburizing process, for the global automotive industry
- Acquired a controlling interest in Dynatech Furnaces, Mumbai, India. Dynatech is a provider of heat treatment furnaces
- Entered into a marketing and sales agreement with a major industry participant for the sale of sintering furnace units for the global nuclear industry, in early 2013

### GRAPHIT KROPFMÜHL

**\$150.5**  
million in revenue

**\$23.0**  
million in gross profit,  
15% of revenue

**\$15.2**  
million in EBITDA,  
10% of revenue

**\$13.0**  
million in cash flow  
from operations

**1.97**  
Lost Time  
Incident Rate

- Initiated a voluntary tender for 11.8% of Graphit Kropfmühl (GK) shares that were publicly owned at €31.75 per GK share, increasing AMG's ownership of GK to 93.5% in the second quarter 2012
- Reopened the natural graphite mine in Kropfmühl, Germany, to meet increased demand for high-purity natural graphite
- Completed the acquisition of 100% of GK in the fourth quarter 2012. This is the culmination of the process to simplify AMG's corporate structure by consolidating all operating activities under one public entity
- Received a mining concession for natural graphite in Mozambique, including an open-pit graphite mine and processing plant

# Letter to Shareholders

In 2012, the world economy was characterized by uncertainties, and it retreated from its growth path. In many ways, a significant part of the world economy has been paralyzed by the financial crisis, and the big question is when a return to a predictable economic environment can be expected. This has been particularly noticeable in global businesses such as steel.

A substantial portion of AMG's alloys and melting technology products are used in the steel industry. 2012 global steel production only grew 1.2% from 2011, and although we as a supplier serve the high-performance steel sector, many investment projects were delayed.

In this challenging economic environment, consolidated revenue was down 10% to \$1,215.6 million, and EBITDA decreased 23% to \$84.8 million. It is important to note, however, that cash flow from operating activities increased 46% to \$65.6 million. The increase of cash flow from operating activities reflects the priority on cash generation in contrast to AMG's traditional focus on EBITDA growth. The cash flow from operating activities also improved due to a 15% reduction of selling, general and administrative (SG&A) expenses from \$170.8 million to \$145.6 million.

In 2012, the Advanced Materials Division performed satisfactorily. It generated EBITDA consistent with 2011 levels, despite falling prices for many of our rare metals and materials, including vanadium, molybdenum, chrome metal and antimony.

Tantalum, however, was a bright spot with global market dynamics exhibiting strong long-term demand for our product, tantalum concentrates. Cash flow from operating activities of the Advanced Materials Division was excellent, improving \$28.0 million over 2011 to \$49.3 million.

The EBITDA of Engineering Systems was \$19.3 million, however, cash flow from operating activities was consistent with 2011 at \$3.3 million. Most importantly, the backlog of \$165.3 million is slightly above the backlog at year-end 2011.

This is an achievement in the midst of a world of delayed investment decisions.

AMG acquired the balance of Graphit Kropfmühl (GK) in 2012, simplifying our operational and capital structures. Lower silicon metal and graphite prices affected GK's 2012 results; however, the business is well positioned to capitalize on longer-term secular trends. GK generated \$15.2 million of EBITDA and \$13.0 of cash flow from operating activities in 2012.

## ONE THEME, THREE SEGMENTS

AMG's basic strategic proposition is centered around the belief that superior metallurgical process know-how results in competitive leadership in our industry. This proposition in summary:

1. Accelerating technology trends in communication, "new" energy, mobility and infrastructure require new tailored metals and alloys solutions, including lower weight, higher strength, heat and corrosion resistance. The demand for these new alloys has activated previously rather quiet corners of the mineral table, creating the term "critical" materials and resulting in demand supply imbalances.
2. As a consequence, prices are trending upwards with high volatility. Prices for antimony, chrome metal, vanadium, graphite, tantalum, niobium have shown five-year average growth rates above 10% compared to prices for traditional metals such as aluminum and zinc, growing at less than 5%. In a number of "rare" metals, the multiplier between the highest and the lowest price in the last ten years has exceeded five times.

3. AMG is committed to a portfolio approach to handle this extraordinary price volatility and the corresponding erratic demand swings. AMG is also exploring growth potential beyond the boundaries of specific metals and alloys. This allows us to leverage our process know-how and the associated expenses.
4. Process know-how is the key competitive instrument in the race for new material science-based solutions. AMG's approach is to combine operations experience with engineering services, especially in furnace technology. It is the furnace where specialty metals are melted together to create new required specifications.
5. The combination of operational and engineering expertise enables AMG to vertically move around in the value chain of each metal. AMG can also follow signals of emerging scarcities "upstream" into producing concentrates from primary materials, which typically have challenging characteristics requiring new metallurgical and chemical flowsheets.

As previously announced, we realigned the Advanced Materials Division and GK, forming AMG Processing and AMG Mining, effective January 1, 2013. The new Mining segment includes all of our mine-based rare metal and material value chains; i.e., tantalum, antimony and the graphite and silicon businesses of GK, which, following a successful squeeze-out of minority shareholders, has now been fully integrated into AMG. As we have identified the need to move upstream to secure stable raw material sources, it is necessary to consolidate our exploration and mine management expertise.

The key aspect of AMG Mining is upstream integration by the way of mine development; the key operational and strategic activity in AMG Processing is the effective purchase and sales decisions to manage pricing risk. AMG Processing contains our "conversion" activities; i.e., purchasing and upgrading of high-performance materials. This segment includes aluminum alloys, ferrovanadium and related alloys, ferrotitanium, titanium master alloys, chrome metal, the conversion of tantalum and niobium concentrates from third parties and various coating products.

Ferrovanadium and related alloys are recycling based, as are most of our ferrotitanium and titanium master alloys.

It should be noted that the Engineering Systems Division, referred to as AMG Engineering in 2013, includes the fast-growing Heat Treatment Services business. In this business, AMG operates the furnace systems for our own account and substantially all of the working capital is owned by our clients. We developed large-scale operational know-how in addition to our furnace production expertise in order to unlock the growth potential of this new service offering.



These three segments form one company, AMG. While they are unique businesses, they share one focus and one vision — to create innovative metallurgical solutions for global markets including energy, aerospace, infrastructure and specialty metals & chemicals.

#### AMG PROCESSING<sup>1</sup>

Conversion and Recycling Technologies and Processes

#### AMG ENGINEERING<sup>1</sup>

Vacuum Systems, Services, and Processes

AMG's Material Science

#### AMG MINING<sup>1</sup>

Mining and Milling Technologies and Processes

## MANAGEMENT

In 2012, AMG strengthened its management team and focused on improving operations. Management activities included:

- Revamping management structure, both corporate and divisional, lowering the cost base and increasing transparency
- Integrating the aluminum master alloy activities, including the acquisition of KB Alloys, into AMG Aluminum — one unit with six plants in four countries
- Successfully starting-up the new roaster at AMG Vanadium, Ohio
- Stabilizing tantalum and niobium mining operations in Brazil and signing a major multi-year forward contract for the tantalum mine production
- Intensive exploration and mine development activities in Brazil (tantalum, niobium), Turkey (antimony), Germany and Mozambique (graphite)

AMG also reduced the size of the Management Board from four to three, while creating a Chief Operating Officer position. These changes reflect a management structure, which is an effective fusion of the Dutch Management Board system combined with the CEO, CFO and COO functions of a US system.

AMG also recognizes the importance of a diverse composition of its Management Board and Supervisory Board, as further explained in the Report of the Supervisory Board.

<sup>1</sup> These segments were formed effective January 2013.

## SAFETY, HEALTH AND ENVIRONMENT

AMG measures itself in not only terms of revenue, earnings and the quality of our products and services, but also in how we ensure the safety and health of all of our employees, how we reduce our impact on the environment and how we support the communities in which we operate.

Safety, health and environmental (SHE) excellence has always been, and remains, a core value for AMG. Our results have continually improved during the past five years, despite periods of economic challenge and the expansion of the business.

In 2012, we completed another year of strong SHE performance. The incident rate for lost workday cases improved 23% over 2011, and injury severity improved by 29%. Despite this continued improvement, AMG remains dissatisfied until we get much closer to our goal of zero injuries. In 2013 we will focus on:

- Strengthening our established SHE culture;
- Supporting locations with higher-than-average incident rates;
- Increasing near-miss reporting, broadening SHE auditing and improving incident investigation quality.

AMG will continue to make SHE an integral part of our culture, and I am confident that by maintaining this focus in all that we do, we will move closer to eliminating all injuries.

AMG also remains committed to ethical, environmentally sustainable production, values supported by our commitments to the United Nations Global Compact, the Extractive Industries Transparency Initiative and our stakeholder status within the Global Reporting Initiative.

## OUTLOOK

The latest OECD Economic Outlook states, “after five years of crisis, the global economy is weakening again.” The report, however, has positive elements of improved performance in China, India and Brazil, reduced gloom in Europe and 2% GDP growth in the US, which may be on the low side.

In regard to AMG’s products and markets, we see small signs of life (vanadium, molybdenum and, of course, tantalum). On the capital goods side, however, the backlog is still suffering from delayed project decisions.

We expect the top line to slightly increase in 2013. What is more important is the focus on operational efficiency that will begin to work its way through the financial results. We anticipate improvements in operating profit, reductions in net debt and increase in net income in 2013.



**Dr. Heinz C. Schimmelbusch**

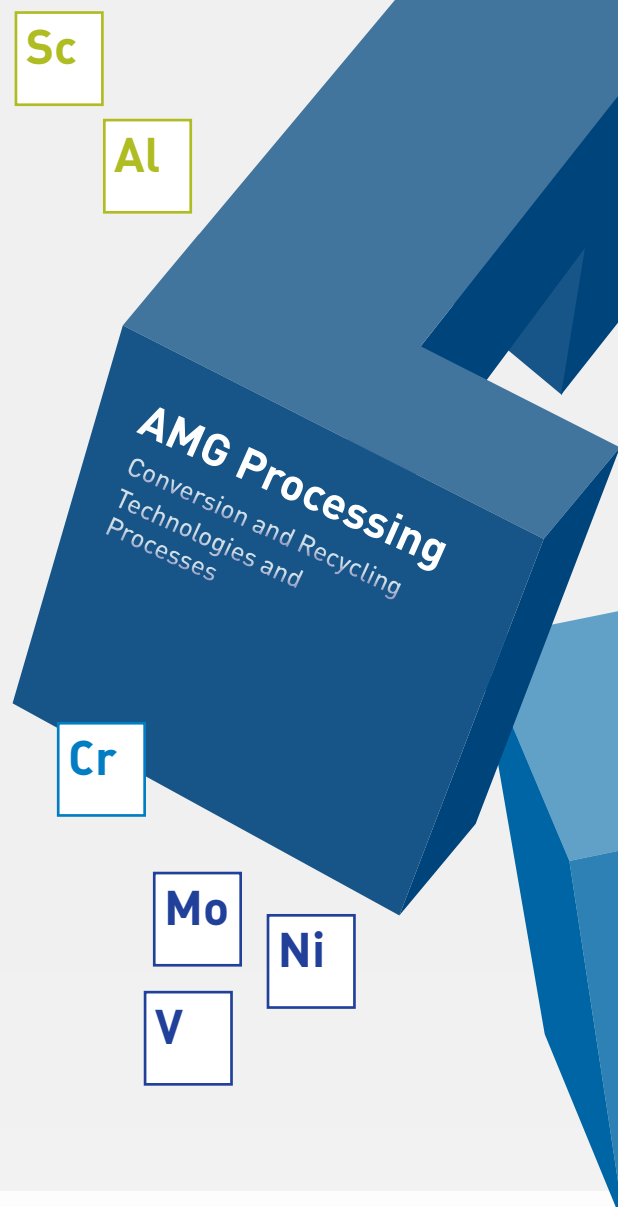
Chief Executive Officer

# One Company

AMG is one company, comprised of three business segments, all centered on the material science necessary to produce critical niche materials and technologies. The three segments, which became effective in January 2013, AMG Processing, AMG Mining and AMG Engineering share the common focus of applying material science solutions to produce specialty metals and materials and metallurgical process technology for the energy, aerospace, infrastructure and specialty metals & chemicals markets.

AMG applies its material science expertise to mining, recycling and conversion-based raw materials and vacuum furnace technology. The combination of vertically integrated raw materials and process technology is essential in the minor metals field. AMG's business model involves extensive technical interaction between mining, processing and engineering. This combination results in lower volatility in operations and cash flow.

AMG comprises 3,275 dedicated employees, at over 30 facilities, in 15 countries. Many of these operations have been in existence for over 100 years. As one company however, AMG is still young, less than ten years old. During this brief time, AMG has developed a number of material science-based solutions and positioned them for long-term growth. In order to achieve this growth, AMG is simplifying its corporate structure, centralizing management responsibilities, leveraging best practices and strengthening the bonds between its three segments in order to create value for our customers and our stakeholders.



## AMG PROCESSING<sup>1</sup>

AMG Processing, the conversion-based businesses of the former Advanced Materials, develops and produces specialty metals, alloys and high-performance materials. AMG Processing's expertise is in the upgrading and modification of high-performance materials such as ferrovanadium, ferronickel-molybdenum, aluminum master alloys and additives, chrome metal and specialty alloys and coatings for titanium and superalloys for energy, aerospace, infrastructure and specialty metals & chemicals applications.

<sup>1</sup> These segments were formed effective January 2013.



#### AMG MINING<sup>1</sup>

AMG Mining, the mine-based businesses of the former Advanced Materials and Graphit Kropfmühl, mines and processes critical minerals utilizing secure raw material sources in Africa, Asia, Europe and South America. AMG Mining produces essential materials such as high-purity natural graphite, tantalum, niobium, antimony and silicon metal. These materials are of significant importance to the global economy and are available in limited supply. Markets for these materials include energy saving, infrastructure and electronics.

#### AMG ENGINEERING<sup>1</sup>

AMG Engineering, formerly Engineering Systems, designs, engineers and produces advanced vacuum furnace systems and provides vacuum heat treatment services, primarily for the energy, aerospace, infrastructure and automotive industries. Furnace systems produced by AMG include vacuum induction melting, vacuum remelting, solar silicon melting and crystallization, vacuum heat treatment with high-pressure gas quenching, turbine blade coating and sintering. AMG also provides vacuum case-hardening heat treatment services utilizing its own furnace and technology on a tolling basis.

# One Vision

AMG's three segments<sup>1</sup>, AMG Processing, AMG Mining and AMG Engineering, provide material science solutions to meet the demand for increasing energy efficiency, increasing fuel efficiency for mobility — particularly for aerospace and automotive, emerging market infrastructure and specialty metals & chemical markets.

Specialty Metals & Chemicals

Infrastructure

Energy

Aerospace

<sup>1</sup> These segments were formed effective January 2013



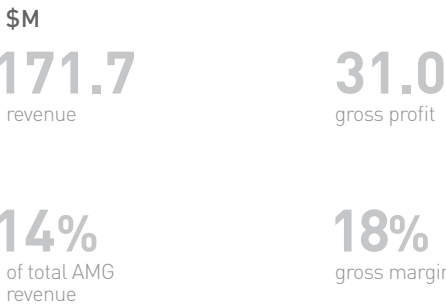


AMG's vision is to be the leading niche specialty metals and materials solutions company. AMG's business model is centered on material science to produce critical materials for next-generation technologies. These technologies include major, long-term and dynamic global secular trends of emerging market infrastructure growth, fuel efficiency, increasing energy demand and related resource scarcity for a broad range of markets, from aerospace to consumer electronics. These trends all require new material science solutions involving critical materials.

AMG believes long-term growth opportunities exist in materials such as tantalum, ferrovanadium and lightweight alloys and coatings needed for new energy and energy efficiency technologies. AMG's products, such as vacuum heat treatment with high-pressure gas quenching and gamma titanium aluminum, enhance fuel efficiency for aerospace and automotive applications. AMG also endeavors to secure critical raw materials such as antimony and tantalum, which are used in the global electronics industry. AMG's integrated critical materials and technologies applied to long-term growing trends are the core of its vision.

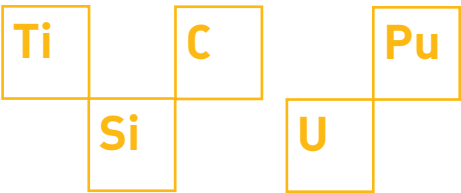
# One Vision

## Energy Market

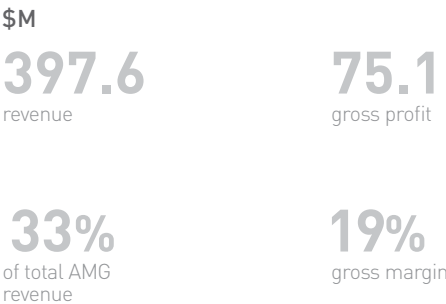


Global energy demand is projected to increase by more than 33% over the period to 2035, during which time growth in global traditional energy demand would be halved<sup>1</sup>. Conversely, alternative and renewable energy are forecast to contribute an increasing share of energy production. This trend, combined with increases in fuel efficiency, are all key drivers of CO<sub>2</sub> emission reductions. AMG provides integrated material science solutions and process know-how widely used for the production of solar, wind and nuclear energy, and for more efficient use of energy in building, aerospace and automotive markets. In 2012, AMG completed acquisition of Graphit Kropfmühl, reopened its graphite mine in Germany, and is developing new mine projects in Mozambique to increase its supply of high-purity natural graphite products, which are increasingly used for more energy efficient building insulation materials. AMG also introduced SyncroTherm®, a new product that facilitates acceleration of fuel-efficient vehicle production.

1. International Energy Outlook 2012

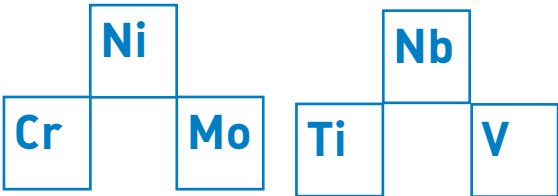


## Aerospace Market



Airplanes will fly 16 billion passengers in 2050, representing an annual compound growth rate of 5%<sup>1</sup>, more than double the projected global GDP growth rate. China and India are at the industry's forefront. This requires increased aerospace production rates, which are enabled by AMG's innovative products. AMG is a world leader in producing vacuum melting and remelting, turbine blade coating, and casting furnace systems used for the production of titanium and high-performance steel for aerospace applications. AMG's aluminum master alloy products are essential to the lightweight high-strength aluminum applications for airframes. These products enable airplanes to be stronger, lighter, and more fuel-efficient, reducing CO<sub>2</sub> emissions. AMG's chromium, niobium, tantalum, and nickel-based high-purity superalloys and coating materials enable viable production of critical aerospace components. AMG's recent innovations, such as titanium master alloys and gamma titanium aluminum high-performance materials, are vital for the latest generation of aerospace jet engines.

1. Vision 2050, IATA



## Infrastructure Market

\$M  
**171.0**  
revenue

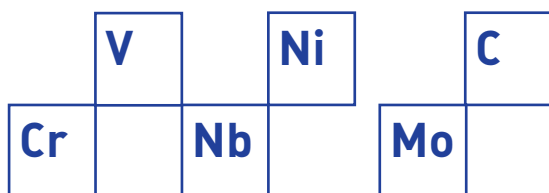
**29.4**  
gross profit

**14%**  
of total AMG  
revenue

**17%**  
gross margin

New infrastructure projects in developing countries, the result of urbanization and rising standards of living, are driving demand for AMG's products. China has been investing significantly in infrastructure to create the world's second largest economy, including a recently announced approval of over \$157 billion investment package<sup>1</sup> aimed to support the world's growth engine. AMG produces ferrovanadium, ferronickel molybdenum, ferroniobium and chrome metal, which are all critical materials used to improve the quality and strength of high-performance steel. These advanced materials are often melted and purified by VAR, VIM, and ESR vacuum furnace systems supplied by AMG. In 2012, AMG completed the expansion of the spent catalyst processing capacity for the production of vanadium products. AMG is well positioned to capitalize on the opportunities resulting from the growth in emerging market infrastructure.

1. National Development and Reform Commission of China



## Specialty Metals & Chemicals Market

\$M  
**475.3**  
revenue

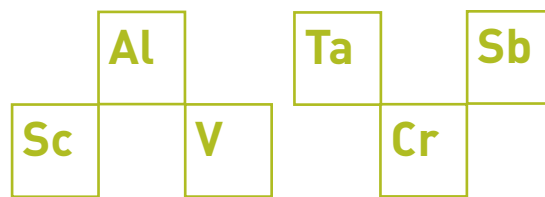
**60.9**  
gross profit

**39%**  
of total AMG  
revenue

**13%**  
gross margin

AMG utilizes its specialized material science and process know-how to produce niche materials for the dynamic specialty metals and chemicals markets. AMG's antimony based materials, widely used in everyday electronics and plastics, are critical to ensuring safety from heat and flame. In 2012, AMG completed the construction of a gravimetric separation and concentration plant at the antimony mine in Turkey. This is the next step to reduce potential supply disruptions through vertical integration of its antimony business. AMG's tantalum products empower capacitors in smartphones and portable electronic devices, helping to make new technologies faster and more compact. The global aluminum market, served by AMG Aluminum, is projected to grow at 6% through 2020, faster than the growth of GDP.<sup>1</sup> Collaborating with its customers, AMG identified faster growth trends in this market and is rationalizing its aluminum master alloy product mix to capture this growth. This is an example of AMG tailoring its strategy to address specific higher growth niches in its markets.

1. Rio Tinto Alcan



# One Focus

AMG is one global organization, consisting of three segments serving four markets on five continents in 15 countries through its 3,275 employees. AMG has one focus: to create innovative metallurgical solutions for the global energy, aerospace, infrastructure and specialty metals & chemicals markets.

AMG's long-term focus is exemplified through its commitment to mining, processing and metallurgical technologies for specialty metals and materials. While these markets can be cyclical, AMG is dedicated to creating value for its stakeholders through establishing operational excellence in production of these materials and technologies. AMG believes that over the long term, this focus on specialty metals and materials will produce returns in excess of the overall market.

Examples of AMG's focus on specialty metals include the following:



1

AMG Heat Treatment Services enable increased fuel efficiency in gas combustion engines.

2

AMG produces critical materials for more fuel-efficient aerospace engines.

3

AMG is increasing capacity in its spent catalyst recycling facility to produce vanadium for high-performance steel for infrastructure.

4

AMG is the world's largest producer of conflict-free tantalum for electronics.



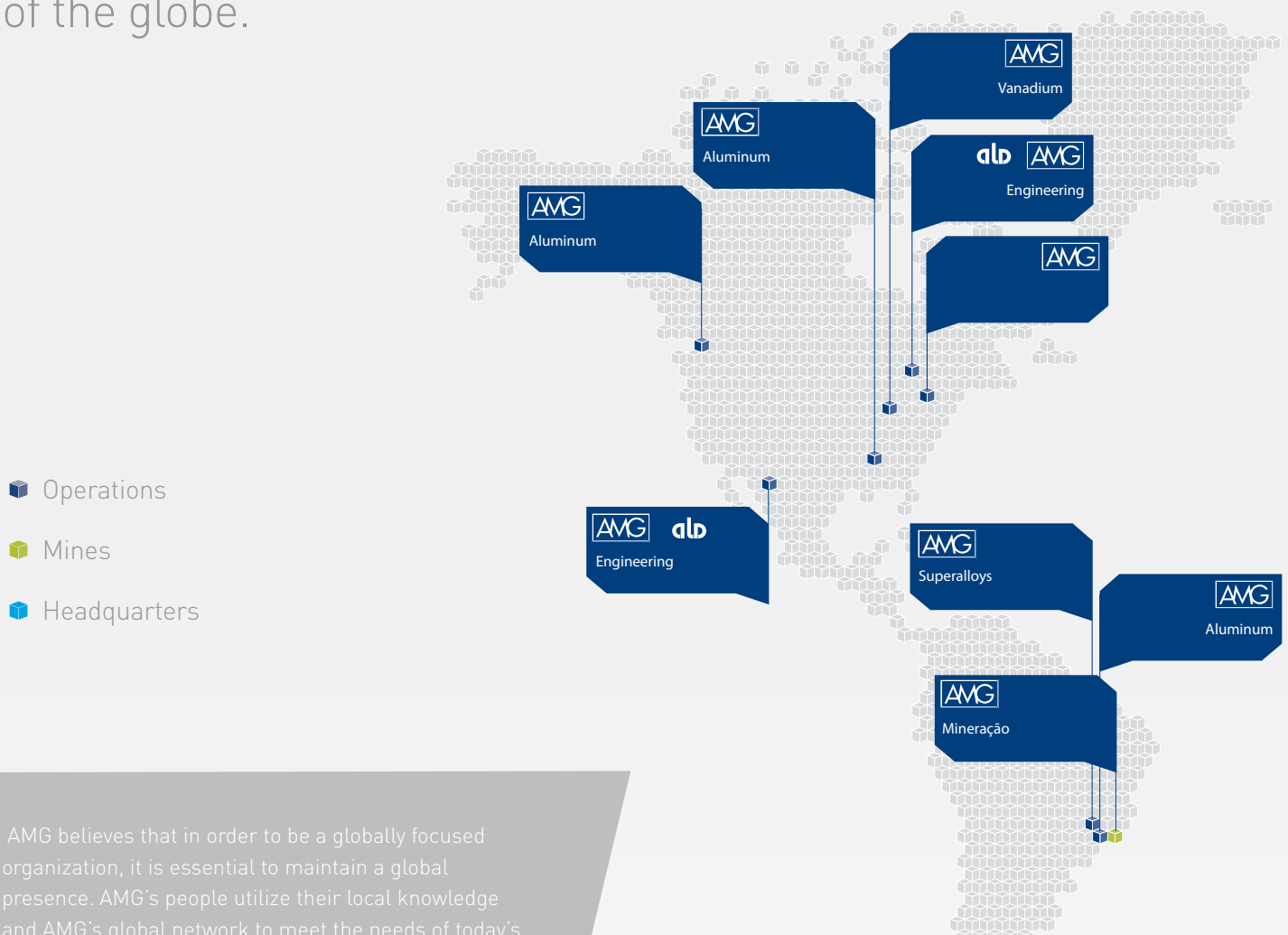




AMG's focus on material science for critical niche products is the combination of its expertise in mining, recycling, processing and metals technology. This material science knowledge is unique in the industry and enables AMG to focus on creating advanced metallurgical solutions.

# One Focus

AMG's global reach is driven by its knowledge of local markets. AMG sources critical materials and provides products to every corner of the globe.

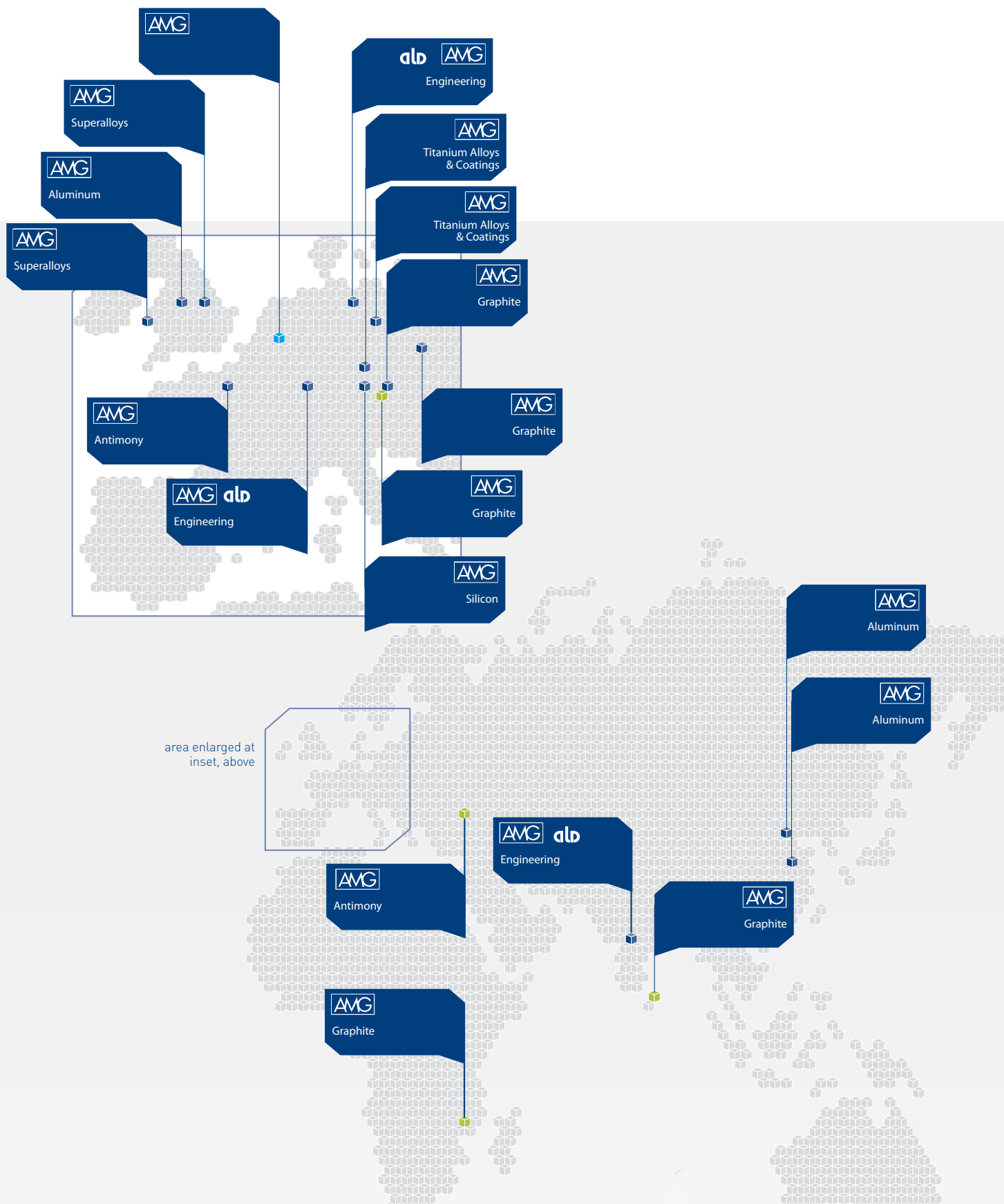


AMG believes that in order to be a globally focused organization, it is essential to maintain a global presence. AMG's people utilize their local knowledge and AMG's global network to meet the needs of today's multinational businesses. One example of this global focus is AMG Aluminum, which has six facilities on four continents. Through this integrated network, AMG Aluminum can meet and exceed the needs of the global aluminum industry.



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# Report of the Management Board



Dr. Heinz Schimmelbusch  
Chairman & Chief Executive Officer

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William Levy  
Chief Financial Officer

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Eric Jackson  
Chief Operating Officer &  
President, Advanced Materials

60



Dr. Schimmelbusch was appointed Chief Executive Officer and Chairman of the Management Board on November 21, 2006, and he was re-appointed for a term of four years on May 11, 2011. He has served in a similar capacity for businesses comprising AMG since 1998. Dr. Schimmelbusch also serves as Non-Executive Chairman of the Board of various companies, including Allied Resource Corporation, United States. Dr. Schimmelbusch served as Chairman of Metallgesellschaft AG from 1989 until he resigned in 1993. His directorships have included Allianz Versicherung AG, Mobil Oil AG, Teck Corporation, Methanex Corporation and MMC Norilsk Nickel. Dr. Schimmelbusch served as a member of the Presidency of the Federation of German Industries (BDI) and the Presidency of the International Chamber of Commerce (ICC). Dr. Schimmelbusch received his graduate degree (with distinction) and his doctorate (magna cum laude) from the University of Tübingen, Germany.

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Mr. Levy was appointed Chief Financial Officer and member of the Management Board on April 1, 2007, and he was re-appointed for a term of four years on May 13, 2009. Mr. Levy has been employed by a subsidiary of AMG since 2005. Previously, he was CFO of PQ Corporation, a leading global chemicals and engineered glass materials company. He was appointed Vice President and Chief Financial Officer of PQ Corporation in 2002. From 1984 to 1996, Mr. Levy held various senior positions in finance and marketing with Imperial Chemical Industries plc in the United Kingdom and the United States. In 1984, Mr. Levy qualified as a certified public accountant with PricewaterhouseCoopers LLP, in the United States. Mr. Levy received a BS in accountancy (magna cum laude) from Villanova University, United States.

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Mr. Jackson was appointed President of the Advanced Materials Division and member of the Management Board on April 1, 2007, and he was re-appointed for a term of four years on May 13, 2009. Mr. Jackson has served in various senior capacities for businesses now owned by AMG since 1996 and was appointed Chief Operating Officer of the Company on November 9, 2011. He previously acted as Director at Phibro, a division of Salomon, Inc, and as Vice President at Louis Dreyfus Corporation. In addition, from 1979 to 1989 Mr. Jackson acted in various roles for Cargill Incorporated in Canada and the United States. Mr. Jackson received a BS in economics and an MBA, both from the University of Saskatchewan, Canada.

BUSINESS REVIEW

# Advanced Materials Division

\$M

**791.3**

Revenue

**50.3**

EBITDA

**112.8**

Gross Profit

**49.3**

Cash Flow from Operations

# Despite the challenging global economic environment, the Advanced Materials Division improved gross margin and operating cash flow.

The 2012 business environment was extremely challenging. Revenue for the Advanced Materials Division (AMD) decreased to \$791.3 million, 9% less than 2011, primarily the result of lower prices for most specialty metals and materials. Vanadium pentoxide prices, for example, were 16% lower in 2012 compared to 2011 and declined to their lowest level in the fourth quarter of 2012. This pricing pattern was similar for many of the division's products.

In this difficult market environment, AMG, and AMD in particular, focused on improving productivity, reducing costs, lowering working capital and limiting capital spending to the most strategically important projects expected to deliver strong operating cash flow. Therefore, despite the decrease in revenue, these actions enabled AMD to maintain gross margin at 14% of revenue. During 2012, AMG selectively optimized product mix, eliminating lower margin products in the aluminum master alloy and the superalloy businesses.

In this environment, AMD implemented measures to address SG&A expenses. Specifically, AMD aggressively reduced external professional fees and compensation expenses. The result was an 11% reduction in SG&A to \$78.1 million, \$9.4 million less than 2011. The combination of these activities with the stable gross margin generated EBITDA of \$50.3 million, essentially unchanged from 2011, despite the lower revenue.

AMD also reduced working capital by \$27.8 million, or 18% during 2012 to \$129.0 million at year-end. All of these initiatives resulted in \$49.3 cash flow from operations, a 132% improvement over 2011. AMD's invested \$32.3 million in capital expenditures, up 11% from 2011, as a number of strategic projects reached or neared completion.

AMD continued its strong commitment to safety during 2012. AMD's Lost Time Incident Rate was reduced to 2.14, from 3.34 in 2011, the fourth consecutive year that the division's safety statistics have improved. We continue to make safety a top priority, believing that a strong safety program is consistent with strong financial performance.

We made a number of organizational and management changes in 2012. We have simplified our organizational structure, reduced administrative and overhead costs and focused our business on delivering earnings and operating cash flow to enable AMD to capitalize on future growth opportunities.

**Eric Jackson,**  
Chief Operating Officer & President  
Advanced Materials

## AMG ALUMINUM

In 2012, AMG Aluminum completed the global consolidation of KB Alloys, fully integrating the legacy AMG and KB units, rebranding the combined unit as AMG Aluminum. While the consolidation is complete, AMG Aluminum continues to optimize production and product mix to improve gross margins and operational efficiencies. AMG Aluminum's product mix rationalization and lower aluminum pricing affected revenue; however, the unit substantially improved gross profit and gross margin while reducing working capital. The net result of these initiatives was a dramatic improvement in operating cash flow.

## AMG VANADIUM

AMG Vanadium delivered improved results over 2011, despite lower revenue caused by weak pricing and lower volumes. AMG Vanadium's volumes were impacted by the construction and implementation of a new roaster to expand spent catalyst roasting capacity. The facility was completed in the fourth quarter of 2012 and is undergoing commissioning and optimization with existing environmental control systems during the first half of 2013.

## AMG SUPERALLOYS

AMG Superalloys, a producer of chrome and specialty metals, experienced a decline in earnings in 2012 as an increase in volumes was offset by a decline in chrome prices. Chrome metal prices were down by approximately 9% in 2012, as the European credit crisis and economic uncertainty resulted in increased volatility, especially in the fourth quarter of 2012. We are installing an AMG Engineering vacuum furnace in our UK operations to expand capacity of high-purity chrome metal, AMG's highest value chrome product. We expect improved margins in these superalloy products in 2013 as a result.

## AMG TITANIUM ALLOYS AND COATINGS

Driven by demand from the global aerospace market, AMG Titanium Alloys and Coatings operated at or near capacity in our titanium master alloy facility in Germany, however, prices (to some extent derived from vanadium pentoxide) were weak by historical measures. The business made good progress during

2012, expanding production capacity and market acceptance of titanium aluminides for aerospace engine components and hydrogen storage alloys for energy applications. These product lines have strong growth visibility in 2013.

## AMG ANTIMONY

2012 was a challenging year for AMG Antimony as prices and volumes were significantly impacted by the slowdown in the European electronics and infrastructure market. To address this situation, reduce costs and upgrade our organizational and technical capabilities, we made a number of senior management changes in this business during 2012. AMG is rationalizing its product offering and implementing operational improvements at its French conversion facilities. These initiatives will take full effect in 2013, including the closure and consolidation of operations in China, and we expect continued progress on production rationalization.

The antimony mining operation continued to make progress. We completed the construction of a gravimetric separation and concentration plant in 2012, which should improve throughput in 2013. We are also continuing the geological and mineralogical studies to optimize process technologies and finalizing engineering plans for a smelting facility. With our focus on improving overall cash flow and the backdrop of weaker antimony prices, we are moving forward with our mine development activities at a steady, but measured, pace. We intend to make investment decisions on the mining activities in late 2013.

## AMG MINERAÇÃO

AMG's tantalum mining operations in Brazil made significant progress during 2012, especially in the second half of the year. Production reached a record in 2012. Specifically, production was 26% higher in the second half of 2012 compared to the first half of the year. In October 2012, we completed a long-term sale of tantalum at prices that will reduce the Company's risk profile and improve operating margins and cash flow in 2013 and beyond. Additional geological work continued and we intend to complete an updated NI 43-101 mineral resource classification study in 2013.

## OUTLOOK

Effective January 2013, AMG formed AMG Processing, which contains the conversion activities of Advanced Materials. The outlook refers to this new segment.

2013 will again be a challenging year for significant revenue growth, as the global economy continues to struggle. Despite this environment, AMG's streamlined Management Board and new divisional structure, in which the operating units are aligned under a clear management reporting organization, should enable AMG to reduce costs and drive operational efficiencies. We will also be extremely selective in capital spending as many growth projects are now complete. We will work to harvest those investments to increase return on capital employed and create shareholder value in 2013. The specific focus of these actions is to improve earnings and operating cash flow.

Regional Breakdown of Revenue



## 2012 Overview

Revenue decreased 9% to \$791.3 million

Gross margin remained constant at 14% despite a decline in revenue

SG&A decreased by 11% to \$78.1 million

Generated \$50.3 million EBITDA, unchanged from 2011

Generated \$49.3 million cash flow from operations

Lost Time Incident Rate reduced for the 4th consecutive year

## Market Uses

### /// ENERGY

Superalloys for industrial gas turbines

Coating materials for thin film solar applications

Energy storage technologies

### /// AEROSPACE

Titanium alloys

Superalloys

Turbine coatings

### /// INFRASTRUCTURE

Ferrovandium for building materials (structural steel)

### /// SPECIALTY METALS & CHEMICALS

Aluminum powders for paints and pigments

Tantalum for capacitors

Coatings for glass, tools and optics



BUSINESS REVIEW

# Engineering Systems



\$M

**273.8**

Revenue

**19.3**

EBITDA

**60.7**

Gross Profit

**3.3**

Cash Flow from Operations



## The Engineering Systems Division continued to adjust to a challenging global capital goods market.

The global market for capital goods was challenging in 2012, as many businesses deferred investment decisions. The Engineering Systems Division (ESD) revenue decreased to \$273.8 million, 13% less than 2011. The decrease was the result of an 83% decline in solar silicon furnace revenue, slightly offset by 16% and 8% increases in revenue from remelting furnaces, primarily for the aerospace industry and Heat Treatment Services, respectively. ESD's diversified product portfolio partially enabled the division to offset the negative impact of the solar market, as the aerospace and mobility markets continued their growth.

Requests for quotation remained reasonably robust in 2012, but actual order intake declined 6% in 2012 to \$276.0 million. ESD achieved a book-to-bill ratio of 1.0 times for the year, and the year-end 2012 order backlog increased 4% to \$165.3 from \$158.5 million at year-end 2011.

In light of the current economic situation, ESD focused on reducing costs, rationalizing and consolidating production, lowering working capital and limiting capital spending to improve cash flow. 2012 gross margin decreased to 22% from 27% in 2011 due to unfavorable product mix and lower revenues, resulting in a decline in economies of scale.

2012 EBITDA decreased by 43%, to \$19.3 million or 7% of revenue due to a \$23.0 million decrease in gross profit, slightly offset by an \$8.7 million decrease in SG&A expenses. SG&A expenses decreased 15%, to \$51.5 million, due to a decline in professional fees and research and development spending.

ESD limited capital expenditures in 2012, only spending \$5.4 million, 60% less than 2011. The division invested in maintenance capital expenditures and additional capacity for the growing Heat Treatment Services facilities during 2012.

ESD also reduced working capital by \$6.0 million, or 17% to \$29.3 million at year-end 2012. All of these initiatives resulted in \$3.3 million cash flow from operations.

Although ESD's Lost Time Incident Rate increased to 2.82 in 2012 from 2.57 in 2011, the Incident Severity Rate decreased to 0.15 in 2012 from 0.19 in 2011, indicating that the reported incidents are becoming less serious. In 2013, the Division will focus heavily on safety and is implementing additional measures to ensure the safety of all its employees, as this is one of our key measures of success.

The breadth and depth of the Engineering Systems Division's vacuum furnace product portfolio insulated it from the full impact of the slowdown in 2012 capital goods spending, particularly related to the solar industry.

**Dr. Markus Holz,**  
President  
Engineering Systems

## MANAGEMENT

In 2012, AMG appointed Dr. Markus Holz as President of ESD and CEO of ALD Vacuum Technologies GmbH, replacing Dr. Reinhard Walter. Dr. Holz joined AMG to lead ESD's growth initiatives and efficiency enhancement efforts. Dr. Holz reorganized the senior management structure in 2012, and that team is currently evaluating all aspects of ESD's business. The management team expects to implement a number of changes to increase profitability and create a more market-focused organization in 2013.

## INNOVATION

Innovation is a key component of ESD's business model. One of the innovations introduced in 2012, with orders from two launch customers, was the SyncroTherm furnace. The SyncroTherm furnace meets the automotive industry's demand for lower cost, single part manufacturing with just-in-time production principles. The SyncroTherm furnace utilizes one-piece-flow process technology using an innovative vacuum carburizing process followed by gas quenching with six-bar nitrogen. SyncroTherm® is more eco-friendly than traditional heat treatment by eliminating oil quenching and washing.

In order to better leverage its technology assets, ESD is collaborating with third parties to bring its technologies to market. In early 2013, ESD entered into a marketing and sales agreement with a major industry participant for the sale of sintering furnace units for the global nuclear industry. ESD and a major industry participant are combining their technical expertise in the recycling of spent nuclear fuel for the global energy industry to promote the efficient mixed oxide (MOX) production processes using ESD's sintering furnace units for the sintering of fuel elements for nuclear reactors.

## OPERATIONS

In 2012, ESD assumed a controlling interest in Dynatech Furnaces, Mumbai, India, (Dynatech) a provider of heat treatment furnaces. This strategic acquisition facilitated ESD's entry into the rapidly growing Indian aerospace and automotive markets and compliments ESD's existing heat treatment furnace product line. Dynatech is the largest vacuum heat treatment furnace producer in India and offers a wide range of vacuum furnaces primarily for more price-sensitive markets.

Another aspect of ESD's diversified business product and service offering is Heat Treatment Services. This is a service in which ESD utilizes its own advanced vacuum heat treatment and high-pressure gas quenching systems to provide outsourced heat treatment, primarily to the automotive and aerospace industries. This technology is essential to reduce the weight, maintain ductility and improve the strength of automotive components such as gears. Weight and size reduction for automotive components are critical to reduce emissions and improve fuel efficiency. The market continues to recognize the value of this combined technology and service, as ESD generated 8% revenue growth during 2012 at its three Heat Treatment Services facilities. The division is currently evaluating additional opportunities to expand existing facilities or build new sites to meet increasing market demand.

## AMG'S METALLURGICAL PROCESS TECHNOLOGY CENTER

ESD is AMG's development center for advanced technologies used to create high-performance alloys for the aerospace industry. ESD is the metallurgical technology provider for the equipment used in the production of gamma titanium aluminum. This aerospace grade material was developed together with AMG's advanced materials division. Gamma titanium aluminum is a high-performance material, that can replace twice as heavy nickel super alloys, particularly for aerospace applications. Gamma titanium aluminum-based components are vital for the latest generation of aerospace jet engines powering the more fuel-efficient aircraft, including the Boeing 787 Dreamliner and the Airbus A380.

ESD also developed and provided vacuum furnaces to the AMG Advanced Materials Division's Superalloys unit. This furnace system will expand capacity and lower the unit costs of high-purity chrome metal, AMG's highest value chrome product.



## OUTLOOK

Revenue growth will continue to be a challenge in 2013. Aerospace furnaces and Heat Treatment Services should continue to be resilient, while specialty steel and alloys markets remain uncertain. Innovation and expansion in niche markets, such as heat treatment and specialty optics, are partially offsetting the continuing decline in the global solar market. ESD is implementing a cost-reduction plan to adjust to this market environment, improve margins and generate incremental cash flow.

Regional Breakdown of Revenue



## 2012 Overview

Revenue decreased 13% to \$273.8 million

Gross margin decreased to 22% from 27%

SG&A decreased 15% to \$51.5 million

EBITDA decreased 43% to \$19.3 million

Generated \$3.3 million cash flow from operations

Lost Time Incident Rate increased slightly

Appointed Dr. Markus Holz as President

## Market Uses

### /// ENERGY

Solar vacuum furnaces

Vacuum furnaces used to produce nuclear fuels

Vacuum melting and precision casting systems for industrial gas turbines

### /// AEROSPACE

Vacuum furnaces for titanium

Electron beam coating systems for aerospace turbines

### /// INFRASTRUCTURE

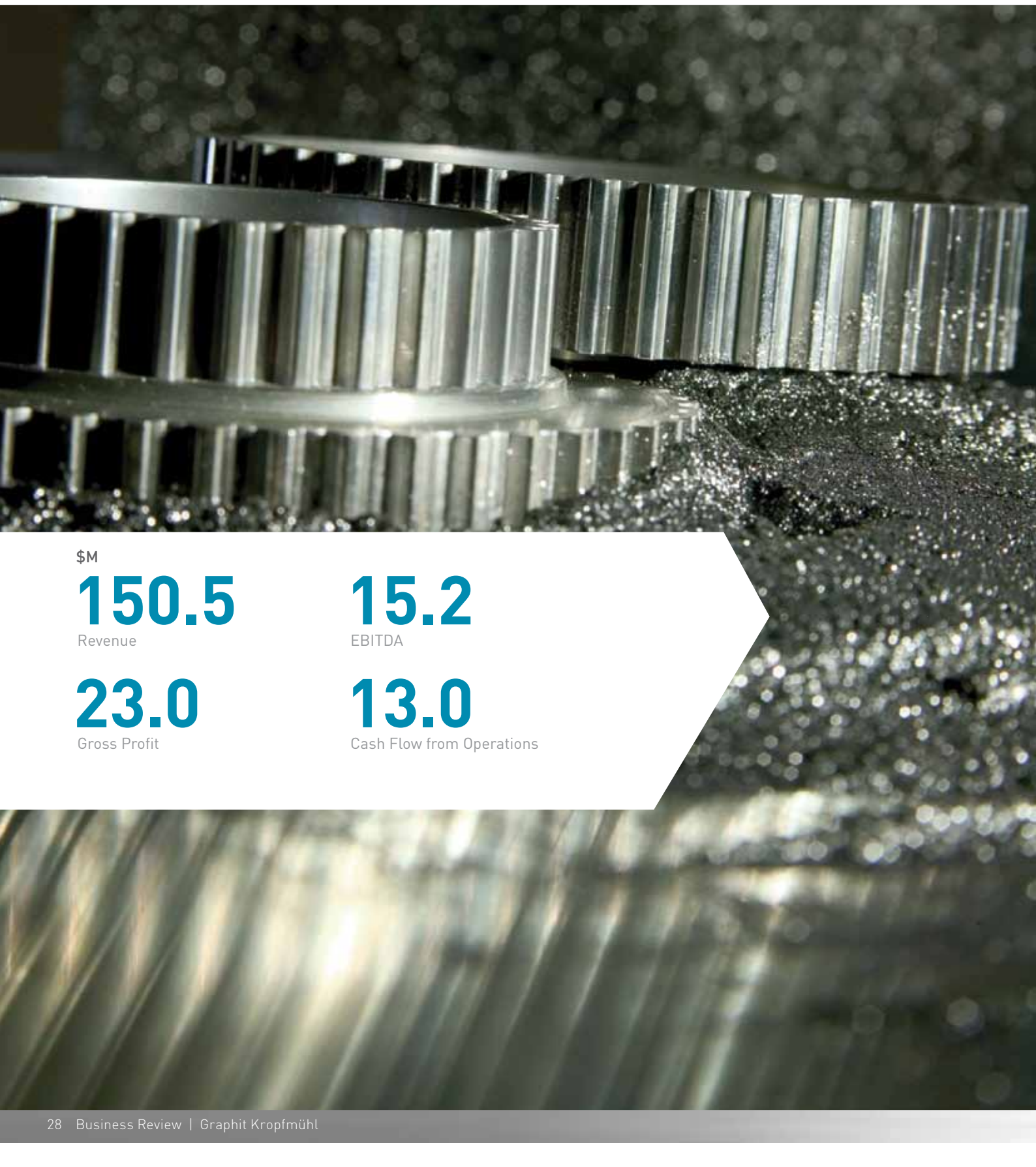
Vacuum furnaces for specialty steel

### /// SPECIALTY METALS & CHEMICALS

Vacuum systems for high-performance materials such as tantalum, niobium and titanium

BUSINESS REVIEW

# Graphit Kropfmühl



\$M

**150.5**

Revenue

**15.2**

EBITDA

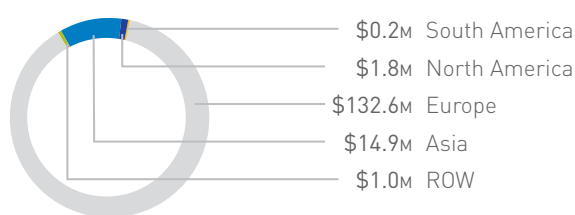
**23.0**

Gross Profit

**13.0**

Cash Flow from Operations

## Regional Breakdown of Revenue



# AMG acquired the balance of Graphit Kropfmühl in 2012 through a voluntary tender and squeeze-out process.

On October 22, 2012, AMG completed the acquisition of 100% of Graphit Kropfmühl (GK). The acquisition and subsequent merger into AMG was the culmination of the process to simplify AMG's corporate structure by consolidating all operating activities under one entity. In the first quarter of 2012, AMG initiated a voluntary tender for 11.8% of GK shares that were publicly owned at a price of €31.75. Following completion of the voluntary tender and owning approximately 93.5% of GK's shares, AMG successfully completed a squeeze-out pursuant to German securities law, in return for a cash compensation of €31.92 per share. The merger was completed by merging GK into AMG Mining during the fourth quarter of 2012.

## FINANCIAL SUMMARY

GK generated \$150.5 million in revenue in 2012, down 9% from 2011 as the slowdown in European industrial production resulted in lower silicon metal and natural graphite pricing and lower natural graphite volume. GK generated \$15.2 million in EBITDA in 2012, down 41% from 2011. The decline in EBITDA was caused by lower revenue, declining economies of scale and expenses related to the merger with AMG. GK generated \$13.0 million in cash flow from operations in 2012 and invested \$10.4 million in upgrading and expanding its natural graphite production capabilities and a storage building and furnace upgrade in the silicon metal operation.

GK declared 2012 a year of safety at its operations. These initiatives achieved a remarkable improvement in Lost Time Incident Rate, reducing it to 1.97, from 5.26 in 2011, and in the Incident Severity Rate, reducing it to 0.11 from 0.46 in 2011.

## SILICON METAL

GK sold over 29,000 metric tons of metallurgical-grade silicon metal and 28,000 metric tons of silicon metal by-products in 2012. GK's silicon metal products are used in the solar,

chemical and aluminum industries. In 2012, GK generated \$96.8 million in revenue from silicon products, a decrease of 10% from 2011. Revenue was impacted by an 11% decline in the average selling price for GK's silicon metal products resulting from a change in product mix to lower value materials and production challenges in the third quarter of 2012. GK completed a major conversion project on the third of its four silicon metal furnaces in 2012. This conversion should improve the cost structure of the silicon metal operations.

## NATURAL GRAPHITE

GK sold over 22,000 metric tons of high-purity natural graphite products in 2012. These products are used in the infrastructure industry for their heat resistance and in the chemical and transportation industries for their electrical conductivity. In 2012, GK generated \$53.7 million in revenue from natural graphite, a decrease of 8% from 2011. This was the result of a 5% decrease in volumes and a shift in product mix resulting in a 3% decrease in average price. Demand decreased across most end markets in 2012 as the European infrastructure market was impacted by the European Union crisis.

GK received a mining concession for natural graphite in Mozambique in 2012. AMG is in the process of restarting graphite mining activity after rehabilitation of the graphite mine and upgrading the processing plant capacities.

## OUTLOOK

Effective January 2013, AMG formed AMG Mining, which contains the GK businesses.

Revenue growth for silicon metal and natural graphite is expected to be challenging in 2013 as European infrastructure, energy and consumer demand remains subdued. AMG's focus is on integrating GK into AMG Mining, reducing SG&A expenses and improving operational efficiencies.



NEW SEGMENT<sup>1</sup>

# AMG Mining



<sup>1</sup> This segment was formed effective January 2013.

# A critical or strategic material is defined as a commodity whose lack of availability would seriously affect the economic, industrial and defensive capability of a country or group of countries.

The key factors that impact the definition of a critical material include possibility of substitution, supply risks and scarcity of supply, economic importance and increasing demand. The European Union, the United States, Germany, France and the United Kingdom have identified a number of critical materials based upon these characteristics. AMG produces tantalum, niobium, antimony, silicon and natural graphite, all of which have been identified as critical materials.

Having a sustainable and secure supply of these critical raw materials is essential to successfully producing advanced specialty metals and materials. Geopolitical concerns are playing an increasing role in access to these materials, and AMG is in the forefront of this activity globally. These materials are experiencing trade restrictions, monopolistic markets, intense competition over supply and remote and precarious operating locations. All of these issues require a strict focus on strategic initiative and operational efficiencies. These challenges create the need to move upstream in the value chain and secure stable raw material sources. AMG has established a new division, AMG Mining<sup>1</sup>, to focus on securing, mining and processing these critical minerals. AMG Mining is a vertically integrated producer focused on reducing value chain disruptions, minimizing volatility and optimizing synergies and operating cash flows.

Following the successful completion of the acquisition of Graphit Kropfmühl in 2012, AMG formed the AMG Mining operating segment, effective January 1, 2013, under the leadership of Hoy Frakes. The new Mining segment includes AMG's mine-based rare metal and material value chains. This new unit is under the leadership of an experienced management team, it consolidates exploration and mine management expertise into one operation, and it will create a more transparent reporting structure.

In 2013, AMG Mining will focus on improving operations, integrating Graphit Kropfmühl and reducing costs and continuing the development of projects in Turkey (antimony) and Mozambique (natural graphite).

**Hoy Frakes,**  
President  
AMG Mining

<sup>1</sup> This segment was formed effective January 2013.

# Risk Management and Internal Controls

## Risk Management Approach

AMG employs a risk management approach that includes a “top-down” and “bottom-up” analysis and assessment of the Company’s risks. AMG employees at all levels of the workforce consider risks facing the Company, from everyday operational situations to formal board meetings. Appropriate and diverse lines of property and liability insurance coverage are also an integral part of this risk management program. AMG has implemented a comprehensive risk management program centered on the Company’s Risk Assessment Package (RAP). The RAP is a detailed document requiring each business unit to:

- (i) identify potential risks and quantify the impact of such risks;
- (ii) prioritize the risks using a ranking system to estimate the financial impact, likelihood, and suddenness of occurrence;
- (iii) describe the risk mitigation or transfer procedures in place; and
- (iv) document the periodic monitoring of the risks.

Each business unit undertakes a full review of its RAP on a quarterly basis. The RAPs are then reviewed in detail by AMG’s Risk Manager in coordination with the operating managers of the business units. Key risks from all business units are then summarized and presented to the Management Board. Individual risks of special note are discussed at the Management Board’s bi-weekly meeting. The Management Board has the responsibility to inform the Supervisory Board of the most significant risk exposures and the related risk management plans in place. The Audit Committee of the Supervisory Board carries out a semi-annual review of the Company’s internal control and risk management program. During 2012, special attention was given to:

- (i) enlarging the credit facility;
- (ii) reorganizing the mining operations; and
- (iii) managing foreign exchange exposure.

## Risks

Risks faced by AMG can broadly be categorized as:

- **Strategic:** includes risks related to marketing and sales strategy, product innovation, technology innovation, raw material sourcing decisions, capacity decisions, and acquisitions
- **Operational:** includes risks related to executing the strategic direction, production, maintenance of production equipment,

distribution of products, labor relations, human resources, IT infrastructure, and health, safety and environmental

- **Market and External:** includes risks related to global and regional economic conditions, market supply/demand characteristics, metal prices, product substitution, customer and competitor actions and community relations
- **Financial:** includes risks related to accuracy and timeliness of financial reporting, compliance with IFRS accounting standards, compliance with the Netherlands Authority for the Financial Markets (AFM) and Euronext Amsterdam requirements, compliance with credit facility covenants, currency fluctuations, liquidity, refinancing, budgeting, metal price and currency hedging, treasury, and tax functions
- **Legal and Regulatory:** includes risks related to the political, environmental, legislative and corporate governance environment.

AMG, like most industrial companies, faces a combination of risks. The largest risks faced by the Company evolve throughout each calendar year and cannot be viewed as static challenges.

It is not the intention to detail each risk posed to AMG in this report, but the most pertinent risks to the business are described below in no particular order.

### CUSTOMER RISK

Customer concentrations in particular business units exacerbate the importance of monitoring customer risk. AMG has insured its accounts receivable where economically feasible and has set credit limits on its customers, which are closely tracked. In addition to constant monitoring from business unit leaders, AMG’s Management Board reviews accounts receivable balances on a regular basis. As a result of the collection of prepayments from most of its customers, the Engineering Systems Division mitigates a portion of customer payment and performance risk.

### CURRENCY RISK

AMG’s global production and sales footprint exposes the Company to potential adverse changes in currency exchange rates, resulting in transaction, translation and economic foreign exchange risk. These risks arise from operations, investments and financing transactions related to AMG’s international business profile. While AMG transacts business in numerous currencies other than its functional currency, the United States dollar, the Company’s primary areas of exposure are the euro, British pound, and Brazilian real. AMG’s subsidiaries

use various functional currencies and are subject to foreign exchange risk as they generate sales and operational expenses in nonfunctional currencies. AMG has developed a uniform foreign exchange policy that governs the activities of its subsidiaries and corporate headquarters. AMG typically enters into non-speculative spot and forward hedge transactions to mitigate its transaction risk exposure, and also employs hedges to mitigate translation risk to a certain degree. AMG's economic foreign exchange risk is somewhat limited by the natural hedge provided by its portfolio of products. While AMG will continue to monitor foreign exchange risk and hedge exposures where appropriate, fundamental changes in exchange rates could have an adverse impact on the Company.

### Entrepreneurial Risk

The continued growth of AMG's business may require the development of new products and production processes, as well as the personnel needed to manage these changes. Developing and investing in these products and processes involves the acceptance of certain measured entrepreneurial risks. As competitors duplicate successful technologies or develop new methodologies, AMG must continue to innovate in order to maintain leading positions in its strategic niches. It is particularly important to strike an appropriate balance between investments in innovation to secure future growth versus the need to preserve cash to withstand an economic crisis. For this reason, AMG management evaluates more than the projected internal rate of return or the discounted cash flows of a potential project. AMG also examines the opportunity costs of rejecting certain proposed projects and the possibility of lost cash flows due to the inability to innovate. In addition to looking at the inherent risk on a project-by-project basis, AMG also evaluates the portfolio risk of projects being undertaken or developed in the pipeline. Evaluating a project within a portfolio of opportunities allows AMG to better manage liquidity and capital allocation. While certain projects may be beneficial and profitable in the long run, the timing of cash flows is critically important as AMG always seeks to maintain sufficient liquidity to operate its existing businesses. Managing entrepreneurial risk requires active management. AMG executives stay informed of entrepreneurial projects through frequent Management Board meetings, allowing for quick action, further reducing risk. During 2012, AMG gained a controlling interest in Dynatech Furnaces, a provider of heat treatment furnaces. Dynatech,

located in Mumbai, India, provides AMG a strategic footprint in an important growth market. Acquisitions such as these help AMG mitigate entrepreneurial risk. AMG's highly educated and skilled workforce contributes greatly to AMG's entrepreneurial success. High employee turnover or loss to a competitor of key personnel, many of whom possess specific technical and manufacturing knowledge, is a risk to AMG. Many incentives, financial and other, are used to maintain a motivated workforce.

### FINANCING RISK

A prolonged restriction on AMG's ability to access the capital markets and additional financing may negatively affect AMG's ability to fund future innovations and capital projects. The Company's primary bank facility matures in April 2016, and AMG does not currently have liquidity on hand to repay this facility without a further debt or equity raise. As of December 31, 2012, AMG's senior leverage as calculated by its credit facility was 2.29x, compared to a covenant maximum of 3.00x. AMG's financing risk is also mitigated by its year-end 2012 liquidity of \$172.4 million. AMG enlarged its credit facility by the equivalent of \$60 million during 2012 as it completed the squeeze-out of Graphit Kropfmühl AG. AMG's future liquidity is dependent on the Company's continued compliance with the terms and conditions of its credit facility. In March 2013, the Company amended certain debt covenants to ensure compliance over its forecasting horizon. See note 22 to the consolidated financial statements for additional information.

### INFORMATION TECHNOLOGY RISK

Potential failure of IT systems or significant loss of key data could substantially impair AMG's financial condition and operating results. Effective, reliable and dependent IT systems are necessary for AMG's operations. AMG has begun a worldwide review of systems to move toward a fully integrated global systems environment. This effort includes ongoing internal and external analyses and audits of potential weaknesses, risks and threats to ensure failure free operation and early mitigation of potential risks. Continuous improvement efforts are being made to the current diversified systems by implementing strong, precise policies and procedures throughout the Company to provide the framework for a consolidated, standardized, reliable and cost-effective systems landscape and architecture. During 2012, AMG implemented a new Enterprise Resource Planning system in two of its subsidiaries.



#### LEGAL AND REGULATORY RISK

AMG must comply with shifting regulatory environments in the countries and regions where it conducts business. Notable changes affecting the Company include adjustments to environmental policy as well as governmental restrictions on the freedom to operate in certain countries and jurisdictions. New environmental regulations or a change in regulatory bodies that have jurisdiction over AMG products and facilities could result in new restrictions, including those relating to the storage or disposal of legacy material at AMG-owned properties. This may result in significantly higher costs to AMG (see note 35 to the consolidated financial statements). More stringent regulations may be enacted for the release of air emissions, wastewater discharge or solid waste, which may negatively impact AMG's operations. Also, international and governmental policies and regulations may restrict AMG's access to key materials or scarce natural resources in certain regions or countries or may limit its freedom to operate in respect of certain countries. Additionally, the REACH Directive became effective in the European Union in June 2007. REACH requires new operational procedures regarding the registration, evaluation and authorization of chemical substances. AMG's business units have pre-registered all required materials and also made complete registrations for those products required in 2011 as a result of tonnage or hazardous properties. Plans are in place to meet 2013 and 2018 deadlines. See note 35 to the consolidated financial statements for information regarding legal matters affecting the Company. AMG has continuing obligations to comply with international and government regulations and practices concerning corporate organization, business conduct and corporate governance. For example, in addressing possible conflicts of interest affecting its Management or Supervisory Board members, AMG follows strict rules of procedure. These procedures are described in the Company's Articles of Association and the rules of procedure of the Management Board and Supervisory Board, respectively. Compliance with both legal and regulatory matters is monitored and augmented by the Company's Chief Compliance Officer and the Company's General Counsel, who makes use of the services of several prominent local and global law firms.

#### METAL PRICE VOLATILITY RISK

AMG is exposed to risk in the prices of certain metals. Risk can arise from changes in price between purchase, process,

and sale of the metals or from end-price risk for metals when raw materials are purchased under fixed price contracts.

Most metals, alloys and chemicals that AMG processes and sells, such as chromium, tantalum, graphite, ferrotitanium and antimony trioxide, cannot be hedged on an exchange. To mitigate price risk for these materials, AMG seeks to enter into complementary raw material supply agreements and sales agreements whereby the price is determined by the same index. AMG also attempts to time its raw material purchases with sales orders from customers. Further mitigation comes from establishing low-cost long positions in key raw materials through, for example, ownership positions in mining activities (antimony, tantalum, niobium, graphite, quartz), through structured long-term supply contracts (in ferrovanadium and ferronickel-molybdenum), or long-term fixed-price sales contracts. Despite the mitigation strategies related to mine ownership, supply contracts and sales contracts, AMG retains some exposure to price volatility. Success of the mitigation plans is dependent on the severity of metal price volatility and counterparties performing under their contracts. The Company hedges exchange-traded metals, such as aluminum, when possible. In its aluminum business, AMG also sells conversion services with no metal price risk.

#### MINING RISK

AMG is exposed to certain safety, regulatory, geopolitical, operational and economic risks that are inherent to a mining operation. The profitability and sustainability of the Company's operations in various jurisdictions could be negatively impacted by environmental legislation or political developments, including changes to safety standards and permitting processes. AMG's mining businesses are subject to geological risk relating to the uncertainty of mine reserves and economic risk relating to the uncertainty of future market prices of particular minerals. The mining business has certain operational risks related to the ability to extract materials, including weather conditions and the performance of key machinery. AMG also faces a competitive environment for recruiting and retaining mining personnel. During 2012, AMG made adjustments to its mining organizational chart to better synchronize its worldwide mining operations. In March 2012, AMG appointed a new President of AMG Mining. To increase the understanding and transparency of its mining operations, AMG plans to publicly report the results of its mining operations in a new reporting segment beginning in 2013.



# Statement of Responsibilities

## SUPPLY RISK

AMG's Advanced Materials Division is dependent on supplies of metals and metal containing raw materials for the production of its products. Some of these raw materials are available from only a few sources or a few countries, including countries that have some amount of political risk. In order to mitigate the risk of supplies becoming difficult to source, AMG enters into longer-term contracts with its suppliers when practical. AMG's Engineering Systems Division is dependent on a limited number of suppliers for many of the components of its vacuum furnace systems as a result of its stringent quality requirements. If availability of AMG's supplies or components is limited, the Company can suffer from reduced capacity utilization. This could result in fewer economies of scale and higher per-unit costs. If AMG is not able to pass on its increased costs, financial results could be negatively impacted.

## Risk Monitoring and Procedures

AMG has a strategic risk function that monitors and establishes internal controls to mitigate business and financial risks. AMG's strategic risk function is complemented by its Internal Audit function. Through the risk reporting system, the Risk Manager works with business unit managers to develop risk mitigation strategies, where applicable. The purpose of the risk reporting and monitoring system is to manage rather than eliminate the risk of failure to achieve business objectives, and provides only reasonable, not absolute, assurance against material misstatement or loss.

## Statement on Internal Control Pursuant to the Dutch Corporate Governance Code

Risks related to financial reporting include timeliness, accuracy and implementation of appropriate internal controls to avoid material misstatements. During 2012, the Management Board conducted an evaluation of the structure and operation of the internal risk management and control systems. The Management Board discussed the outcome of such assessment with the Supervisory Board (in accordance with best-practice provision III.1.8). AMG's Management Board believes internal risk management and control systems in place provide a reasonable level of assurance that AMG's financial reporting does not include material misstatements. In relation to AMG's financial reporting, these systems operated effectively during 2012.

On the basis of and with reference to the preceding sections and in accordance with best practice II.1.5 of the Dutch Corporate Governance Code of December 2008, and Article 5:25c of the Financial Markets Supervision Act, the Management Board confirms that internal controls over financial reporting provide a reasonable level of assurance that the financial reporting does not contain any material inaccuracies, and confirms that these controls functioned properly in the year under review and that there are no indications that they will not continue to do so. The financial statements fairly represent the company's financial condition and the results of the Company's operations and provide the required disclosures. It should be noted that the above does not imply that these systems and procedures provide absolute assurance as to the realization of operational and strategic business objectives, or that they can prevent all misstatements, inaccuracies, errors, fraud and non-compliances with legislation, rules and regulations.

In view of all of the above, the Management Board confirms that, to the best of its knowledge, the financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company, and the management report includes a fair review of the position at the balance sheet date and the development and performance of the business during the financial year together with a description of the principal risks and uncertainties that the Company faces.

Management Board

AMG Advanced Metallurgical Group N.V.

Dr. Heinz Schimmelbusch

William Levy

Eric Jackson

March 22, 2013

# Report of the Supervisory Board



Pedro Pablo Kuczynski  
Chairman  
74



General Wesley Clark  
68



Martin Hoyos  
65



Jack L. Messman  
Vice Chairman  
73



Norbert Quinkert  
70



Guy de Sellières  
60

Male/US and Peru  
Date of birth: October 3, 1938  
Date of initial appointment: June 6, 2007  
Date of end of term: 2015

Economist & Investment Banker, Partner, The Rohatyn Group  
Current board positions: Agualimpia NGO (Chairman), Ternium Inc.  
Former positions: Prime Minister of Peru and Chairman,  
First Boston International (Credit Suisse)

Male/US  
Date of birth: December 23, 1944  
Date of initial appointment: June 6, 2007  
Date of re-appointment: May 13, 2009  
Date of end of term: 2013

Chairman & CEO, Wesley K. Clark & Associates  
Current board positions: Amava Gaming Group Inc., Bankers Petroleum Ltd.,  
GeoOptics Inc., Gold Bullion International, Juhl Wind, Inc., United Global Resources  
LLC, BNK Petroleum Inc., Solace Systems, Rentech, Torvec, Clean Terra, Inc.,  
Envidity, MFG com., SoloPower Inc., Premier Alliance Group Inc.  
Former position: NATO Supreme Allied Commander, Europe

Male/Austria  
Date of birth: October 27, 1947  
Date of initial appointment: May 13, 2009  
Date of end of term: 2013

Corporate Director  
Current board positions: KPMG Germany AG, Prinzhorn Holding GmbH,  
CAG Holding GmbH, Curanum AG  
Former positions: CEO KPMG Europe, Middle East and Africa

Male/US  
Date of birth: March 13, 1940  
Date of initial appointment: June 6, 2007  
Date of re-appointment: May 13, 2009  
Date of end of term: 2013

Corporate Director  
Current board positions: RadioShack Corporation, Safeguard Scientifics, Inc.,  
Telogis, Inc. (Chairman)  
Former positions: Chief Executive Officer, Novell, Inc. and  
Union Pacific Resources Corporation

Male/Germany  
Date of birth: January 18, 1943  
Date of initial appointment: June 6, 2007  
Date of re-appointment: May 12, 2010  
Date of end of term: 2014

CEO, TSB Technology Foundation Berlin  
Current board positions: VTION Wireless Technology AG (Chairman),  
TSB Technology Foundation Berlin, MSC-Gleichmann  
Former position: Motorola (Germany, Austria, Switzerland and the Netherlands)  
(Chairman)

Male/Belgium  
Date of birth: June 14, 1952  
Date of initial appointment: June 6, 2007  
Date of re-appointment: May 12, 2010  
Date of end of term: 2014

Corporate Director  
President, HCF International Advisers Ltd.  
Current board positions: Solvay SA, Wessex Grain, Ageas Group SA (Vice Chairman),  
Ageas UK, Ltd. (Chairman), Ivanplatz Ltd., Ipulse Ltd.  
Former position: Robert Fleming and Co. Limited, Eastern Europe (Chairman)

# Report of the Supervisory Board

## Powers of the Supervisory Board

The Supervisory Board oversees both the policies pursued by the Management Board and the general course of AMG's business. It also provides advice to the Management Board. In performing its duties, the Supervisory Board is required to act in the interests of the AMG Group and its businesses as a whole. While retaining overall responsibility, it has assigned certain of its preparatory tasks to three committees: the Audit Committee, the Selection and Appointment Committee and the Remuneration Committee, each of which reports on a regular basis to the Supervisory Board. The separate reports of each of these Committees are published below.

The Supervisory Board further supervises the systems and management of the internal business controls and financial reporting processes and it determines the remuneration of the individual members of the Management Board within the remuneration policy adopted by the General Meeting of Shareholders.

## Composition of the Supervisory Board

The Supervisory Board was first established on June 6, 2007, and currently consists of six members. Pedro Pablo Kuczynski (Chairman), Jack Messman (Vice Chairman), Guy de Selliers, Norbert Quinkert, General Wesley Clark and Martin Hoyos. The Supervisory Board aims for an appropriate level of experience in technological, manufacturing, economic, social and financial aspects of international business and public administration. The composition of the Supervisory Board must be such that the combined experience, expertise and independence of its members enable the Supervisory Board to carry out its duties. All Supervisory Board members qualify as independent as defined in the Dutch Corporate Governance Code. All members of the Supervisory Board completed a questionnaire to verify compliance in 2012 with the applicable corporate governance rules and the rules governing the principles and practices of the Supervisory Board.

The Resignation Schedule of the members of the Supervisory Board is as follows:

Pedro Pablo Kuczynski	2015
Wesley Clark	2013
Jack Messman	2013
Martin Hoyos	2013
Norbert Quinkert	2014
Guy de Selliers	2014

During the Annual General Meeting to be held on May 3, 2013, in Amsterdam, the Supervisory Board will propose to the General Meeting of Shareholders to expand the size of the Supervisory Board to eight members. Since AMG is active in technology, specialty metals and mining and operates in a difficult and unpredictable economic environment, maintaining appropriate diversity in skills and experience of the Company's Supervisory Directors is felt to be a key prerequisite for the performance of the Supervisory Board going forward.

Therefore the Supervisory Board is very pleased to nominate the following candidates to fill the two new positions at the Supervisory Board.

Professor Steve H. Hanke, Professor of Applied Economics and Co-Director of the Institute for Applied Economics, Global Health and the Study of Business Enterprise at the Johns Hopkins University in Baltimore.

Mrs. Ute Wolf, Head of the Finance Department of Evonik Industries AG, Dusseldorf, a specialty chemicals world leader with approximately €14 billion in sales, over €2.5 billion in EBITDA and over 30,000 employees in 2012.

In case these two candidates will be appointed by the General Meeting of Shareholders, the Resignation Schedule of the Supervisory Board will be adjusted accordingly, as well as the composition of the committees of the Supervisory Board. During the Annual General Meeting, the Supervisory Board will also propose to the General Meeting of Shareholders to re-appoint General Clark and Messrs. Hoyos and Messman as members of the Supervisory Board as their term expires on May 13, 2013.

## Gender Diversity

The Supervisory Board recognizes the importance of a diverse composition of the Supervisory Board and the Management Board in terms of gender. The Supervisory Board is pleased that Mrs. Ute Wolf is willing to become one of its members, so the first woman to be part of the Company's Supervisory Board.

New Dutch legislation that entered into effect on January 1, 2013, requires the Company to pursue a policy of having at least 30% of the seats on the Supervisory Board and the Management Board be held by men and at least 30% of the seats be held by women. The Company will take this allocation of seats into account in connection with the following actions: (1) the appointment or nomination for the appointment of the Supervisory Board and the Management Board and (2) drafting the criteria for the size and composition of the Supervisory Board and the Management Board. At this moment, the Company does not fully comply with article 2:166 Dutch Civil Code, since, in the event the General Meeting of Shareholders will resolve to appoint Mrs. Ute Wolf and Professor Steve H. Hanke on May 3, 2013, only 12.5% of the Supervisory Board seats will be held by women. The Supervisory Board will continue to look for suitable female candidates for the Management Board and for the Supervisory Board; however, given the particular industries in which the Company is operating, suitable candidates with different gender are difficult to identify and select.

## Supervisory Board Meetings

The Supervisory Board held ten meetings over the course of 2012, including four meetings by telephone conference. Six of these meetings were held in the presence of the Management Board. Almost all meetings were attended by all members. None of the members of the Supervisory Board was frequently absent from Supervisory Board meetings. The items discussed in the meetings included recurring subjects, such as AMG's financial position, objectives and results, strategy, potential acquisitions, progress in the creation of a separate business segment for AMG's mining assets, the buy-out of the minority shareholders in Graphit Kropfmühl AG, business plans of the Advanced Materials Division (AMD) and Engineering Systems Division (ESD), capital expenditure programs, succession planning, legal and compliance review, operations review as well as regular review of the strategic objectives and initiatives of the Company and

the Company's ongoing actions in the field of corporate social responsibility. Financial metrics presented to the Supervisory Board to measure the performance of AMG include net income, earnings per share, EBITDA, financial leverage (net debt to EBITDA), debt to equity, liquidity and operating cash flow, return on shareholders' equity and return on capital employed. Furthermore, the Supervisory Board discussed the risks of AMG's business and the assessment by the Management Board of the structure of the internal risk management and control systems, as well as any significant changes thereto. In addition to the scheduled meetings, the Chairman and other members of the Supervisory Board had regular contact with the Chief Executive Officer and other members of the Management Board as well as senior executives of the Company throughout the year. On November 12, 2012, the Supervisory Board (without the presence of the Management Board) met and reviewed the performance of the Management Board and its members. During this meeting the Supervisory Board concluded its earlier discussions during the year on the size, performance and composition of the Management Board at which occasions it had agreed to reduce the size of the Management Board to three members; i.e. the Chief Executive Officer (and Chairman of the Management Board), the Chief Operating Officer and the Chief Financial Officer. Furthermore, at this meeting, the Supervisory Board also evaluated its own functioning and that of the three committees and their members. In doing so, the Chairman of the Supervisory Board had invited each member of the Supervisory Board to provide his comments on these topics to the Chairman. The Chairman then shared the main conclusions drawn from such comments with his fellow Supervisory Board members in a plenary private session of the Supervisory Board. During that session, the Supervisory Board unanimously concluded that the Supervisory Board was functioning adequately and that the Supervisory Board's composition was well balanced in terms of competence, nationality, age and experience. However, during that session, it was also established that given the difficult economic environment, the challenges facing the Company, the changing corporate governance requirements and the relatively small size of the Supervisory Board, that the Chairman of the Supervisory Board, together with the Chairman of the Selection and Appointment Committee, would carry out a review, whether it would be recommendable to increase the number of Supervisory Directors from six to eight. This need for review was firmly rooted in the shared belief that an expanded Board

would give better footing to the work and focus of the relevant Committees and would bring in additional skills and experience, which was deemed important in the present economic and social environment.

### Remuneration Supervisory Board in 2012

In its meeting of May 13, 2009, the General Meeting of Shareholders had amended the remuneration of the members of the Supervisory Board with effect from January 1, 2009. The members of the Supervisory Board receive remuneration in the form of a cash component and a share component. No loans, guarantees or the like have been granted to any of the Supervisory Board members. In 2012, no changes were made or effected with respect to the remuneration of the Supervisory Board members compared to 2011.

Cash remuneration: The cash remuneration of the Supervisory Board members as determined by the General Meeting of Shareholders was set at \$95,000 for the Chairman, \$70,000 for the Vice Chairman and \$60,000 for the other members. Chairmen of the Remuneration Committee, the Audit Committee and the Selection and Appointment Committee are each paid an additional \$20,000 annually.

Share remuneration: The members of the Supervisory Board do not participate in any of AMG's incentive plans. As part of the Supervisory Board's annual remuneration in 2012, the General Meeting of Shareholders authorized the issue of a number of shares for no cash consideration to each member of the Supervisory Board as part of their remuneration.

The number of shares issued to each member is computed with respect to a specified amount of euros for each member. During 2012, the specified numbers of euros were 49,400 for the Chairman, 34,200 for the Vice Chairman and 30,400 for each other member. Shares issued may not be disposed of by the relevant member of the Supervisory Board until the earlier of the third anniversary of the grant or the first anniversary of the date on which he ceases to be a member of the Supervisory Board.

The Dutch Corporate Governance Code requires that the remuneration of a Supervisory Board member not be dependent on the results of the Company. Best practice provision III.7.1 states that a Supervisory Board member may not be granted any shares and/or rights to shares by way of remuneration. AMG does not comply with best practice provision III.7.1 and III.7.2 for reasons further explained in the Corporate Governance chapter (page 57).

The table below shows the total remuneration of each member of the Supervisory board for 2012 (in thousands, except shares granted):

FOR THE YEAR ENDED DECEMBER 31, 2012	ROLE	CASH REMUNERATION	SHARE REMUNERATION	# OF SHARES GRANTED
Pedro Pablo Kuczynski	Chairman & Member	\$95	\$64	7,545
Jack L. Messman	Vice Chairman & Remuneration Committee Chair	\$90	\$44	5,223
Wesley Clark	Member	\$60	\$39	4,643
Norbert Quinkert	Member & Selection and Appointment Committee Chair	\$80	\$39	4,643
Guy de Selliers	Member & Audit Committee Chair	\$80	\$39	4,643
Martin Hoyos	Member	\$60	\$39	4,643

### SHARES HELD BY MEMBERS OF THE SUPERVISORY BOARD

As of December 31, 2012, the members of the Supervisory Board held a total of 157,136 shares in the Company. Out of that number, a total of 123,736 shares were awarded to them during 2007, 2008, 2009, 2010, 2011 and 2012 as part of their annual remuneration.

### REMUNERATION SUPERVISORY BOARD IN 2013

The Supervisory Board will ask the General Meeting of Shareholders during the Annual Meeting on May 3, 2013, to approve an amendment in the remuneration of the Supervisory Board members as of 2013 and beyond.

### Committees

The Supervisory Board has three standing committees: the Audit Committee, the Selection and Appointment Committee and the Remuneration Committee.

#### AUDIT COMMITTEE

Composition: Messrs. de Selliers (Chairman), Hoyos and Messman

The Audit Committee is responsible for, among other things, considering matters relating to financial controls and reporting, internal and external audits, the scope and results of audits



and the independence and objectivity of auditors as well as the Company's process for monitoring compliance with laws and regulations and its Code of Business Conduct. It does monitor and review the Company's audit function and, with the involvement of the independent auditor, focuses on compliance with applicable legal and regulatory requirements and accounting standards.

The Audit Committee met six times during 2012 in addition to its meetings to review and approve annual and interim financial reports and statements of the Company and reported its findings periodically to the plenary meeting of the Supervisory Board. Topics of discussion at the meetings included the Internal Audit plan and the External Audit plan, audit reports of the various units within the Group, the Management Letter issued by the external accountant, liquidity and cash situation, credit facility and arrangement with the Company's major banks, insurance, environmental risk situation, status of the IT environment within AMG, compliance and Code of Business Conduct review program, foreign currency exposure and hedging policies, tax structuring and spending approval matrices, risk management reports and litigation reports. Ernst & Young Accountants LLP also provided the Audit Committee with agreed-upon mid-year procedures and a year-end audit of the Company's accounting policies and procedures. Furthermore, the Internal Audit Director of the Company maintained regular contact with the Audit Committee and the external auditors of the Company. The Audit Committee held regular meetings with the external auditors without any member of the Management Board or financial or accounting staff of the Company present and the Audit Committee reviewed the contents of the 2012 Management Letter of the external accountant and reported on this matter to the plenary meeting of the Supervisory Board. The Audit Committee further performed an elaborate evaluation and assessment of the performance of the external auditors Ernst & Young Accountants LLP as part of its regular audit services review. In this evaluation, the Audit Committee used a detailed questionnaire, which focused on the quality of services and related costs of services, the sufficiency of resources made available, communication and interaction with AMG staff, and the independence, objectivity and professional skepticism of the auditors. Based on this evaluation and subsequent review and discussion in a plenary session of the Audit Committee, the Audit Committee had recommended to the Supervisory Board to propose to the General Meeting of Shareholders to re-appoint

Ernst & Young Accountants LLP through the financial year ending December 31, 2013. Fees were established in the amount of \$2.1 million per annum, which includes the cost of the mid-year procedures. Present at all meetings of the Audit Committee were the Chief Financial Officer, the Corporate Controller and the Internal Audit Director. AMG's auditors Ernst & Young Accountants LLP were present at most of these meetings while at certain meetings, the Company's Chief Compliance Officer, General Counsel and Treasurer were present.

#### **SELECTION AND APPOINTMENT COMMITTEE**

Composition: Mr. N. Quinkert (Chairman) and General W. Clark

The Selection and Appointment Committee is responsible for: (i) preparing the selection criteria, appointment procedures and leading searches for candidate Management Board and Supervisory Board members; (ii) periodically evaluating the scope and composition of the Management Board and the Supervisory Board; (iii) periodically evaluating the functioning of individual members of the Management Board and the Supervisory Board; and (iv) supervising the policy of the Supervisory Board in relation to the selection and appointment criteria for senior management of the Company. The Selection and Appointment Committee held three regular meetings during 2012, in addition to various informal meetings between the committee members and contacts with the Chairman of the Management Board and other members of the Supervisory Board, and reported its findings to the Supervisory Board.

Particular attention was paid in 2012 to the composition of the Management Board and succession planning and the composition of the Supervisory Board. A key development in 2012 concerned the reduction of the Management Board to three members, consisting of a Chief Executive Officer (and Chairman of the Management Board), Chief Operating Officer and Chief Financial Officer. The reduction followed the departure of Dr. Reinhard Walter as member of the Management Board. In addition the management structure of the Engineering Systems Division (ESD) was simplified with the appointment of Dr. Marcus Holz as President of ESD as per October 1, 2012, replacing Dr. Walter. Dr. Walter's position on the Management Board will not be filled when his term ends on May 13, 2013. The Supervisory Board wishes to thank Dr. Walter for his service to the Company.



## REMUNERATION COMMITTEE

Composition: Messrs. Messman (Chairman) and Kuczynski

The Remuneration Committee is responsible for establishing and reviewing material aspects of the Company's policy on compensation of members of the Management Board and preparing decisions for the Supervisory Board in relation thereto. This responsibility includes, but is not limited to, the preparation and ongoing review of: (i) the remuneration policy as adopted by the General Meeting of Shareholders; and (ii) proposals concerning the individual remuneration of the members of the Management Board to be determined by the Supervisory Board. The Remuneration Committee held two regular meetings in 2012, in addition to various informal discussions among its members and the other members of the Supervisory Board and the Chairman of the Management Board. Topics of discussion at the meetings included: (i) a periodic review of the remuneration of the members of the Supervisory Board, (ii) a periodic review of the Remuneration Policy of the Company which has been effective since January 1, 2009, (iii) review of the base salary for members of the Management Board; and (iv) review of the performance related compensation of the Management Board members. In performing its duties and responsibilities, the Remuneration Committee was assisted by external remuneration experts.

The periodic reviews by the Remuneration Committee of the remuneration of the Supervisory Board and Management Board respectively have resulted in the recommendation by the Remuneration Committee to the Supervisory Board, to propose during the General Meeting of Shareholders on May 3, 2013, to amend the remuneration of the Supervisory Board with effect as of January 1, 2013, and to amend the Remuneration Policy of the Management Board with effect as of January 1, 2013.

### Remuneration Report for 2012

The year 2012 was the fourth year in which the Supervisory Board had to implement the new Remuneration Policy for the Management Board, since this was approved and adopted by the General Meeting of Shareholders in May 2009.

The Supervisory Board will propose an amendment of the Remuneration Policy for approval by the Annual General Meeting to be held on May 3, 2013, as basis for the remuneration of the Management Board in 2013 and beyond. For 2012, the Remuneration Policy adopted by the General Meeting of Shareholders in 2009 (hereafter "the Remuneration Policy") was the guiding document. The Remuneration Policy is posted on the Company's website under the heading Corporate Governance. This Remuneration Report contains the following two sections:

- Report on Remuneration of the Management Board in 2012
- Remuneration of the Management Board in 2013

### Report on Remuneration of the Management Board in 2012

The remuneration of AMG's Management Board for 2012 was based on the Remuneration Policy of the Company. The Remuneration Policy was developed with a group of peer companies drawn from the Hay Group Industrial Market Database. This peer group is an important yardstick for the Supervisory Board in determining performance by the Company and setting compensation for the Company's Management Board. In addition, it is noted that pursuant to the Remuneration Policy, it has been accepted that the Remuneration Committee would honor existing contractual agreements of the current Management Board members and therefore would continue to accept the dual employment contract system as basis for the remuneration of the Management Board members. The main terms and conditions of the employment contracts of the Management Board members are published on the Company's website under the heading Corporate Governance. In establishing the 2012 remuneration, the Supervisory Board has considered multiple scenarios on how the remuneration components would be affected given different sets of circumstances (which related in this year particularly to the level of growth by the Company resulting from the global economy, volatility levels of the financial markets and the USD-EUR exchange rate).

(in thousands)				VALUE OF VESTED OPTIONS "IN THE MONEY" AT DEC. 31, 2012		RETIREMENT BENEFITS & PENSIONS	OTHER REMUNERATION
FOR THE YEAR ENDED DECEMBER 31, 2012	BASE SALARY	ANNUAL BONUS	OPTION COMPENSATION		PERFORMANCE SHARE UNITS		
Dr. Heinz Schimmelbusch	\$1,071	–	\$689	–	\$131	\$524	\$139
Eric Jackson	\$629	–	\$207	–	\$39	\$314	\$42
Dr. Reinhard Walter	\$534	–	\$207	–	\$39	\$848	\$63
William J. Levy	\$539	–	\$138	–	\$16	\$234	\$29

## Management Board Remuneration in 2012

The remuneration contracts of the Management Board members were with more than one company now part of the AMG Group. The remuneration levels in the table above show the aggregate amounts of the contracts per Management Board member. In addition, Dr. Schimmelbusch received compensation of €35,700 as Chairman of the Supervisory Board of AMG's subsidiary Graphit Kropfmühl AG, which is included in other remuneration. A detailed explanation of the remuneration paid in 2012 is provided in note 36 to the consolidated financial statements.

### BASE SALARY

The base salaries of the Management Board members were determined by the Supervisory Board in line with the Remuneration Policy of the Company.

### ANNUAL BONUS

In line with the Remuneration Policy, the short-term incentive plan provides for an annual cash bonus, which depends on three key performance metrics:

- 40%: Return on Capital Employed (ROCE) (excluding construction in progress)
- 40%: Adjusted Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA)
- 20%: Individual performance.

Given the disappointing financial results of the Company, the Management Board has declined an annual bonus for 2012, although according to the bonus metrics in the Remuneration Policy, a cash bonus would have been due.

Both EBITDA and ROCE realized in 2012 by the Company were below the targets set by the Supervisory Board.

The table below shows the target and paid-out annual bonus over 2012 as a percentage of base salary per Management Board member. The base salary for annual bonus calculation purposes corresponds to full-year base salary.

FOR THE YEAR ENDED DECEMBER 31, 2012	TARGET (AS A % OF BASE SALARY)	PAYOUT (AS A % OF BASE SALARY)
Dr. Heinz Schimmelbusch	85%	0%
Eric Jackson	65%	0%
Dr. Reinhard Walter	65%	0%
William J. Levy	65%	0%

### LONG-TERM INCENTIVES

Each member of the Management Board participates in the AMG Option Plan introduced in 2007 and in the AMG Management Board Option Plan adopted as per the Remuneration Policy in 2009. In addition, each member of the Management Board participates in the AMG Performance Share Unit Plan adopted as part of the Remuneration Policy in 2009. The table on page 45 provides an overview of the options granted under the AMG Option Plan during 2007, 2008, 2009, 2010, 2011 and 2012. All options granted in 2007 and 2008 are unconditional and have a vesting scheme of 25% per year starting one year after the grant date. In 2009, the Management Board members received options twice, one part governed by the AMG Option Plan and unconditional and one part governed by the AMG Management Board Option Plan 2009 and conditional, all as further explained on page 41 of the 2009 Annual Report of the Company. In May 2012, options were granted to the Management Board members pursuant to the Remuneration Policy as long-term incentive. These options are all conditional and follow the conditions set forth in the Remuneration Policy and are governed by the AMG Management Board Option Plan adopted in 2009.

## PERFORMANCE SHARE UNITS

In 2012 the Supervisory Board awarded performance share units for the fourth time to the Management Board members since adoption of the Remuneration Policy. The present value of the Performance Share Units (PSU) award for the Management Board members in 2012 was as follows:

(in thousands)	
Dr. Heinz Schimmelbusch	€500
Eric Jackson	€150
Dr. Reinhard Walter	€150
William J. Levy	€100

The present value of the PSUs is calculated as 80% of the fair market value at the grant date. These PSU awards will vest in accordance with the phased-in vesting scheme adopted as part of the Remuneration Policy. In 2012, one-third of the PSU award granted in 2009 vested (as part of the phased-in vesting scheme adopted as part of the Remuneration Policy). Vesting of the PSUs was subject to:

- A minimum average ROCE over the performance period as established by the Supervisory Board
- The relative Total Shareholder Return (TSR) compared to Bloomberg World Metal Fabricate/Hardware Index

The first threshold (minimum ROCE) for vesting in 2012 met the target set by the Supervisory Board. The relative TSR for the Company resulted in a multiplier to reach 100% of the number of initial 2009 performance share units vested and 125% of the number of initial 2010 performance share units vested. As a result the following amounts were paid out in cash in 2012:

(in thousands)	
Dr. Heinz Schimmelbusch	\$1,003
Eric Jackson	\$301
Dr. Reinhard Walter	\$301
William J. Levy	\$201

## PENSIONS AND RETIREMENT BENEFITS

The members of the Management Board, except for Dr. Walter, are members of a defined contribution plan maintained in the United States. Dr. Walter is provided pension benefits in accordance with the defined benefit plan at AMG's German subsidiary, ALD Vacuum Technologies GmbH (ALD). Dr. Schimmelbusch, Mr. Jackson and Mr. Levy receive additional retirement benefits from Metallurg's Supplemental Executive

Retirement Plan (SERP). With respect to Dr. Schimmelbusch, the supplemental benefits are payable commencing at the later of age 70 or the end of his employment with AMG. The benefit to be paid will be reduced by the amounts received under the normal retirement benefit under the Metallurg pension plan. See note 24 to the consolidated financial statements. Pursuant to Mr. Jackson's and Mr. Levy's SERP, if Mr. Jackson and/or Mr. Levy are employed by Metallurg or remains in Metallurg's employment until he is 65, he is entitled, whether or not he has terminated his employment, to receive retirement benefits (reduced by amounts received under Metallurg's other pension plan). Mr. Jackson's and Mr. Levy's benefits will be reduced if their employment with Metallurg ends prior to reaching age 65. Dr. Walter received additional retirement benefits from AMG. According to these pension arrangements, if Dr. Walter would have been employed by AMG until he turned 65, he would have been entitled, whether or not he had terminated his employment, to receive retirement benefits (reduced by amounts received under ALD's pension plan). Since Dr. Walter's employment with AMG will end prior to his reaching age 65, his benefits will be reduced. Total costs to AMG with respect to the pension and retirement benefits of the Management Board in 2012 are provided in the table on page 43 which sets forth total costs incurred in 2012 for Management Board remuneration.

## OTHER BENEFITS

All Management Board members receive benefits, which are in line with industry and individual country practice. No loans and guarantees are granted to any Management Board members. Total costs to the Company with respect to other remuneration of the Management Board is provided in the table on page 43, which sets forth total costs incurred in 2012 for Management Board remuneration.

## CONTRACTS

Each member of the Management Board has a contract of employment with AMG. In case AMG terminates the contract(s) of employment without cause, the maximum severance payment is limited to two years' base salary and two years of target annual bonus. Current agreements with respect to severance payments do not comply with best practice provision II.2.7 of the Dutch Corporate Governance Code. As part of its approved and adopted Remuneration Policy, AMG will honor existing contractual agreements for its current Management Board members and adapts to individual country practices, which

AMG OPTION PLAN			NON-VESTED OPTIONS UNDER THE PLAN			VESTED OPTIONS UNDER THE PLAN		
FOR THE YEAR ENDED DECEMBER 31, 2012	YEAR	DATE OF GRANT	NUMBER OF OPTIONS	PRESENT VALUE AT DATE OF GRANT	VESTING SCHEME	EXERCISE PRICE	NUMBER OF OPTIONS	MARKET VALUE AT 12/31/2012
Dr. Heinz Schimmelbusch	2007	7/11/07	—	€2,700,000	25% each yr over 4 years	€24.00	225,000	—
	2008	11/12/08	—	€846,664	25% each yr over 4 years	€12.70	133,333	—
	2009	5/13/09	—	€661,852	100% vested on 1/1/10	€8.00	165,463	—
	2009	11/10/09	50,813	€499,999	50% vested after 3 years, 50% vested after 4 years	€9.84	50,813	—
	2010	5/12/10	62,578	€249,999	50% vested after 3 years, 50% vested after 4 years	€7.99	—	n/a
	2011	5/11/11	66,313	€500,000	50% vested after 3 years, 50% vested after 4 years	€15.08	—	n/a
	2012	5/15/12	155,352	€500,233	50% vested after 3 years, 50% vested after 4 years	€6.44	—	n/a
Eric Jackson	2007	7/11/07	—	€1,200,000	25% each yr over 4 years	€24.00	100,000	—
	2008	11/12/08	—	€254,000	25% each yr over 4 years	€12.70	40,000	—
	2009	5/13/09	—	€383,116	100% vested on 1/1/10	€8.00	95,779	—
	2009	11/10/09	15,244	€150,000	50% vested after 3 years, 50% vested after 4 years	€9.84	15,244	—
	2010	5/12/10	18,773	€74,998	50% vested after 3 years, 50% vested after 4 years	€7.99	—	n/a
	2011	5/11/11	19,894	€150,000	50% vested after 3 years, 50% vested after 4 years	€15.08	—	n/a
	2012	5/15/12	46,606	€150,071	50% vested after 3 years, 50% vested after 4 years	€6.44	—	n/a
Dr. Reinhard Walter	2007	7/11/07	—	€1,200,000	25% each yr over 4 years	€24.00	100,000	—
	2008	11/12/08	—	€254,000	25% each yr over 4 years	€12.70	40,000	—
	2009	5/13/09	—	€414,112	100% vested on 1/1/10	€8.00	103,528	—
	2009	11/10/09	15,244	€150,000	50% vested after 3 years, 50% vested after 4 years	€9.84	15,244	—
	2010	5/12/10	18,773	€74,998	50% vested after 3 years, 50% vested after 4 years	€7.99	—	n/a
	2011	5/11/11	19,894	€150,000	50% vested after 3 years, 50% vested after 4 years	€15.08	—	n/a
	2012	5/15/12	46,606	€150,071	50% vested after 3 years, 50% vested after 4 years	€6.44	—	n/a
William J. Levy	2007	7/11/07	—	€1,200,000	25% each yr over 4 years	€24.00	100,000	—
	2008	11/12/08	—	€169,335	25% each yr over 4 years	€12.70	26,667	—
	2009	5/13/09	—	€300,252	100% vested on 1/1/10	€8.00	75,063	—
	2009	11/10/09	10,162	€99,999	50% vested after 3 years, 50% vested after 4 years	€9.84	10,162	—
	2010	5/12/10	12,516	€50,001	50% vested after 3 years, 50% vested after 4 years	€7.99	—	n/a
	2011	5/11/11	13,263	€100,003	50% vested after 3 years, 50% vested after 4 years	€15.08	—	n/a
	2012	5/15/12	31,070	€100,045	50% vested after 3 years, 50% vested after 4 years	€6.44	—	n/a

differ from best practice provision II.2.7 of the existing Dutch Corporate Governance Code. In addition to the employment contracts with AMG, the members of the Management Board have a contract with one of AMG's subsidiaries. Details of the employment contracts of the Management Board members with AMG and its subsidiaries are provided on the Company's website under the Corporate Governance section.

### Management Board Remuneration for 2013

Subject to the approval by the General Meeting of Shareholders held on May 3, 2013, of an amended Remuneration Policy, the Remuneration Committee has set up the size and structure of the Management Board's remuneration for 2013. The Remuneration Committee has analyzed the possible outcomes of the different remuneration components in view of various economic scenarios and how these may affect the remuneration of Management Board members.

#### BASE SALARY

The Supervisory Board has for 2013 decided that the base salary of the Management Board members will not change as compared to the base salary levels of 2012. The table below shows the base salaries for 2013 and 2012. Differences are only due to exchange rate assumptions.

(in thousands)		
BASE SALARY	2012	2013
Dr. Heinz Schimmelbusch	\$ 1,071	\$ 1,080
Eric Jackson	\$ 629	\$ 632
William J. Levy	\$ 539	\$ 542

#### ANNUAL BONUS

Each year, a variable cash bonus can be earned based on achievement of challenging targets. The annual bonus criteria are set forth below and relate 80% to financial indicators of the Company and 20% to the individual performance of Management Board members. The Supervisory Board determines ambitious target ranges with respect to each performance metric and with respect to the threshold, target and maximum payout and determines whether performance targets are met. It has the ability to adjust the value upward or downward if the predetermined performance criteria would produce an unfair result due to incorrect financial data or extraordinary circumstances.

The annual bonus pay-out in any year relates to achievements realized during the preceding year in relation to the agreed targets. The annual bonus for 2013 will be determined as follows:

- 40% from ROCE (excluding construction in progress)
- 40% from operational cash flow (against agreed target ranges) realized
- 20% from individual performance — discretionary by the Supervisory Board

The table below shows the annual bonus for each member of the Management Board as a percentage of base salary in case threshold and target performance levels are reached. Below threshold level the payout will be 0%. The annual bonus can vary based on actual performance reached and can range from zero up to three times target in case of superior performance. The Supervisory Board further has the ability to adjust the value upward or downward if the predetermined performance criteria would produce an unfair result due to incorrect financial data or extraordinary circumstances.

MANAGEMENT BOARD POSITION	TARGET PAYOUT
Chairman and Chief Executive Officer	85%
Chief Operating Officer	65%
Chief Financial Officer	65%

#### LONG-TERM INCENTIVES

In line with the Remuneration Policy, the long-term incentives for the Management Board for 2013 consist of two programs: the Performance Share Unit Plan and the Stock Option Plan.

To facilitate a smooth transition from the old remuneration policy to the (new) Remuneration Policy, the Performance Share Unit Plan has a phasing-in schedule as indicated below.

PSU INITIAL GRANT	2009	2010	2011	2012	2013	2014
Grant #1 Phase-in	Grant 1	1/3 vest	1/3 vest	1/3 vest		
Grant #2 Phase-in		Grant 2	No vest	1/3 vest	2/3 vest	
Grant #3 Normal cliff			Grant 3	No vest	No vest	3/3 vest

This year's grant (2013) will be the fifth grant under the new plan, and vesting will apply as outlined in the schedule above. Vesting of the Performance Share Units under the fourth grant is subject to:

- A minimum average ROCE over the performance period
- The relative TSR compared to the Bloomberg World Metal Fabricate/Hardware Index

Each year the Supervisory Board determines the target range with respect to the ROCE performance metric, which serves as threshold and determines whether such threshold has been achieved. In addition, it monitors and establishes the applicable TSR ranking for the relevant PSU period. The TSR ranking used applies the Bloomberg World Metal Fabricate/Hardware Index as further explained in the Company's Remuneration Policy, which is available in the Corporate Governance section of the Company's website. The Supervisory Board has the ability to adjust the value upward or downward if the predetermined performance criteria would produce an unfair result due to incorrect financial data or extraordinary circumstances.

The present value of the PSUs to be granted in 2013 is \$1,080,000 for Dr. Schimmelbusch, \$360,000 for Mr. Jackson and \$360,000 for Mr. Levy. The present value of the PSUs is calculated as 80% of the fair market value at the grant date.

With regard to the Stock Option Plan (SOP), each member of the Management Board will be granted stock options in 2013 in accordance with the Remuneration Policy. Vesting of the stock options is subject to a minimum three-year average ROCE requirement. The stock options will vest half after the third anniversary and half after the fourth anniversary.

The present value of the stock options under the SOP to be granted in 2013 is \$270,000 for Dr. Schimmelbusch, \$90,000 for Mr. Jackson and \$90,000 for Mr. Levy.

The present value of the stock options under the SOP is calculated as 50% of the fair market value of the shares at the grant date. The aggregate number of stock options to be granted under the Remuneration Policy to members of the Management Board shall not exceed 10% of the outstanding share capital of the Company from time to time.

#### **PENSION AND OTHER BENEFITS**

The pension and other benefits of the members of the Management Board will not change compared to 2012.

#### **CONTRACTS**

The current contractual agreements will not change compared to 2012. Main elements of the contracts with the Management Board members are published under the Corporate Governance section of the Company's website.

#### **SHARES HELD BY MEMBERS OF THE MANAGEMENT BOARD**

As of December 31, 2012, Dr. Schimmelbusch held 277,797 AMG shares, Mr. Jackson held 60,000 AMG shares, and Mr. Levy held 5,000 AMG shares.

#### **APPRECIATION FOR THE MANAGEMENT BOARD AND THE EMPLOYEES OF AMG**

The Supervisory Board would like to thank the Management Board for its extraordinary efforts in leading the Company through what has been again a difficult year in very challenging economic circumstances. After a promising start in 2012, the economic and financial climate has been severely set back primarily due to the sovereign debt crisis, which erupted in the eurozone in 2011 and continued affecting economies on a global scale and which will continue to cloud the outlook of the Company going forward into 2013. The Management Board did an excellent job of keeping the Company focused on its operations despite the challenging economic and financial environment. The Supervisory Board would also like to thank all the employees of AMG Group for their daily commitment to AMG.

#### **Annual Report 2012**

The Annual Report and the 2012 Annual Accounts, audited by Ernst & Young Accountants LLP, have been presented to the Supervisory Board. The 2012 Annual Accounts and the report of the external auditor with respect to the audit of the annual accounts were discussed with the Audit Committee in the presence of the Management Board and the external auditor. The Supervisory Board endorses the Annual Report and recommends that the General Meeting of Shareholders adopts the 2012 Annual Accounts.

#### **Supervisory Board AMG Advanced Metallurgical Group N.V.**

Pedro Pablo Kuczynski, Chairman

General Wesley Clark

Martin Hoyos

Jack Messman, Vice Chairman

Norbert Quinkert

Guy de Selliers

March 22, 2013



# Sustainable Development

NAME	LOCATION	COUNTRY	DIVISION
ALD FNAG	Hanau	Germany	ESD
ALD Hanau	Hanau	Germany	ESD
ALD IMP	Berlin	Germany	ESD
ALD Japan	Shinjuku-ku	Japan	ESD
ALD Singapore	Singapore	Singapore	ESD
ALD TT Mexico <sup>3</sup>	Ramos Arizpe	Mexico	ESD
ALD TT USA <sup>3</sup>	Michigan	USA	ESD
ALD UK	Guildford	UK	ESD
ALD USA	Connecticut	USA	ESD
ALD Vacuheat	Limbach	Germany	ESD
Alpoco	Minworth	UK	AMD
Alpoco <sup>3</sup>	Anglesey	UK	AMD
AMG Aluminum Henderson <sup>3</sup>	Kentucky	USA	AMD
AMG Aluminum Wenatchee <sup>3</sup>	Washington	USA	AMD
AMG Aluminum Office	Pennsylvania	USA	AMD
AMG Headquarters	Amsterdam	Netherlands	AMD
AMG USA Headquarters	Pennsylvania	USA	AMD
AMG Vanadium <sup>3</sup>	Ohio	USA	AMD
Bogala Graphite Lanka <sup>3</sup>	Colombo	Sri Lanka	GK
CIF Mining <sup>2</sup>	Nazareno	Brazil	AMD
Edelgraphit <sup>3</sup>	Bonn	Germany	GK
GfE <sup>3</sup>	Nürnberg	Germany	AMD
GfE Fremat	Brand-Erbisdorf	Germany	AMD
Graphit Kropfmühl <sup>2</sup>	Kropfmühl	Germany	GK
Graphit Tyn	Tyn	Czech Republic	GK
LSM Brazil <sup>3</sup>	São João del Rei	Brazil	AMD
LSM China	Jiaxing	China	AMD
LSM UK	Rotherham	UK	AMD
PCDL	Lucette	France	AMD
Qingdao Graphite	Qingdao	China	GK
RW Silicium <sup>2</sup>	Pocking	Germany	GK
SICA <sup>3</sup>	Chauny	France	AMD
TIV	Grenoble	France	ESD

1. The chart indicates which facilities were included in the scope of the sustainable development data. Only data from these facilities is included in this section, which may therefore show inconsistency with other sections of this Annual Report covering all facilities. Advanced Materials Division (AMD), Engineering Systems Division (ESD) and Graphit Kropfmühl (GK).

2. Externally audited data 2012.

3. Remote externally audited data 2012.

## Report Boundaries

This section provides our sixth annual sustainability report. It builds upon the foundation laid by previous reports and evaluates AMG's social and environmental performance compared to previous years. The reporting boundaries have expanded from 2011 with recent acquisitions and changes in the percentage ownership of entities affecting the extent of the report. The total number of locations reporting in 2012 is 33. This includes mining and manufacturing operations and sales and administrative offices in 13 countries across four continents. The major changes include the addition of Graphit Kropfmühl (GK) sites and the AMG Aluminum North America (formerly KB Alloys) operations. The facilities included are detailed in the table on page 48. All of these are operational sites in which AMG has a 51% or greater stake holding. Several smaller sites that have only recently been acquired or are in development are currently excluded, but they are not considered material to the overall conclusions of the report. AMG will assess the boundaries of this report continually and on the basis of the corporate ownership structure. All locations report their performance at the end of the fourth quarter, and no forecast data is used.

## Scope of This Report

AMG utilizes the Global Reporting Initiative (GRI) G3 aspects, taken from its Mining and Metals Sector Supplement. The GRI is a network-based organization that publishes the world's leading sustainability reporting framework. Additionally, AMG has applied GRI's principal of materiality to the report, which states: "Information in this report should cover issues and indicators that would substantively influence the decisions of stakeholders using this report."

AMG continues to apply these reporting principles and has utilized a standard reporting template, which sites use to report their data in order to ensure consistency in the interpretation of definitions of the key indicators. The report is independently verified by Conestoga-Rovers & Associates.

The environmental key performance data for the Advanced Materials, Engineering Systems and Graphit Kropfmühl Divisions are summarized in the table on page 56.

**AMG Advanced Metallurgical Group N.V.**  
**www.amg-nv.com**  
**Contact: global.sustainability@amg-nv.com**

## Labor Practices and Decent Work Indicators

### GRI INDICATORS LA1, LA4, LA6, LA7, LA10, LA13 AND MM4

At year-end 2012, the Advanced Materials Division (AMD) had a workforce of 1,537, the Engineering Systems Division (ESD) had 931 and Graphit Kropfmühl (GK) had 542 employees. For those facilities reporting here, including corporate staff (42), the total AMG workforce was 3,050 (facilities not yet covered in this section employ a further 225 people). Geographically, these were located in Asia (271), Europe (1,804), North America (536) and South America (439). A further 291 directly supervised contract workers were employed at AMG sites. AMG assesses the diversity of its workforce in terms of gender and age. The multinational, and therefore multicultural, nature of the business means that ethnic diversity is significant, but because of the difficulty in defining minority employees in such an environment, the Company does not collect data on this aspect. Of the total employees, 16% are female; 21% are under 30 years of age, 52% between 30 and 50, and 27% over 50. The Management and Supervisory Boards are currently all male, and all members are over 50 years of age.

AMG respects the freedom of its individual employees and their rights to join, or to choose not to join, unions. Across the combined Divisions, including corporate staff, 1979 AMG employees (65%) were covered by collective bargaining agreements. For AMD, 78% of employees are covered by such arrangements, for GK, 77%, and for ESD, which includes a higher proportion of professional salaried staff, 35% were in collective bargaining units. There were no strikes or lockouts reported at any of AMG's facilities in 2012.



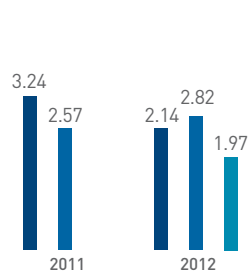
Manufacturing  
Metallurgical  
Solutions Safely

### ZERO ACCIDENTS IS OUR GOAL

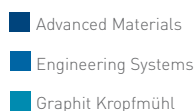
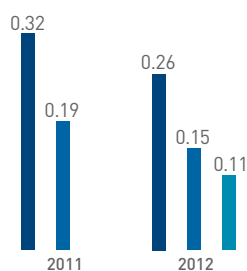
AMG is pleased to report that no fatal accidents occurred at any of our sites in 2012. Since our first Annual Report covering 2008, our safety performance has significantly improved. Our medium-term goal is zero lost-time incidents – we cannot accept that any incident is inevitable. In 2012, we saw our best safety performance yet, extending the improving trend. For AMG as a whole, the Lost Time Incident Rate<sup>1</sup> dropped from 3.0 in 2011 to 2.3. Similarly, the

1. Lost-time accident frequency rate equals the number of lost-time accidents multiplied by 200,000 divided by the total hours worked. Lost-time injury was defined using local regulations and ranged from minimum one lost day to three lost days.

## Lost Time Incident Rate



## Accident severity



incident severity<sup>2</sup> reduced from 0.27 to 0.20. Of the 33 sites included in this report, 14 achieved zero lost time incidents in 2012. No specific occupational diseases were reported in 2012. Details of the performance of the three segments are given in the table on page 56. The average absenteeism rate across AMG was 3.3%. The Company will continue to unerringly focus on our ultimate goal of zero harm to any of our employees. Seven sites are now OHSAS 18001 certified, while many others are working toward this goal. Programs to encourage near-miss reporting, expanding safety training and strengthening internal auditing have also been implemented.

Formal health and safety committees with representatives from all levels of the organization are in place at every major production facility and most of the smaller facilities. These facility-level committees are encouraged to lead and be intimately involved in decisions regarding safety at their location. In 2012 85% of the AMG workforce was represented in these committees.

In 2010, AMG began reporting the hours we invest in our people to develop their skills. This is important to our safety, environmental and ethics programs, and is required if we are to maintain our technical competitive advantage. In 2012, AMG has continued to collect data on the three categories of employees initially selected —management; professional, technical, sales and administration; and production and maintenance. Training data on corporate employees is not fully available. In 2012, the training delivered was: Management (152 employees trained, averaging 30 hours per person), Professional, Technical, Sales and Administration (871 employees trained, averaging 21 hours) and Production and Maintenance (1,416 employees trained, averaging 29 hours). Across all the reporting sites, AMG employees received an average of 17 hours of training time in 2012 (approximately 1% of total hours worked). The categories of training tracked included technical and professional development, quality, anti-corruption policies, human rights policies and health and safety.

2. Accident severity is defined as the number of scheduled workdays lost as a result of disabling injuries per thousand worker-hours of exposure. In some locations, calendar days are counted by local regulators, and this data is used here if scheduled workdays data are unavailable.

## Human Rights and Ethics

### GRI INDICATORS HR3, HR5, HR6 AND SO3

AMG remains fully committed to the protection of internationally proclaimed human rights and works to make sure it is not complicit in human rights abuses. Each AMG site is assessed during site visits and internal audits to identify if there is the possibility of freedom of association or collective bargaining being put at risk as a result of political or business factors. In 2012, it was found that no sites were at risk, with the exception of China, where the formation of unions remains severely restricted. Similarly, the Company has reviewed sites to ensure that they are not at risk for employing child labor or exposing young workers to hazards. It was again found that no sites posed a risk at this time. Our policy on human rights is included in the Company Code of Business Conduct and Ethics, which was revised and updated in 2012, and detailed in the company's human rights policy, both available on the AMG website.

In 2012, AMG continued its ongoing training in this area. Refresher human rights training was given to 9% of the workforce, focusing mainly on senior employees that may be called on to make important, ethically based decisions. 17% were given refresher training in ethical businesses practices, including some human rights-based materials. Compliance officers at the major sites monitor and implement the Code of Business Conduct and Ethics.

## Resource Efficiency and Recycling

### GRI INDICATORS EN1 AND EN2

The use of resources varies between AMG business units ranging from those that locally mine or purchase primary raw materials to produce metals, alloys and inorganic chemicals through those which produce metals and alloys from secondary, recycled resources to those which provide technology and engineering services. AMG resource usage data comprises raw materials, associated process materials, semi manufactured goods and parts and packaging, by weight.

The Engineering Systems Division provides predominantly furnace technology and engineering services. Production activities include furnace assembly operations and heat treatment services. ESD utilizes limited amounts of resources in these activities, mainly component parts for furnaces and heating and quenching fluids. Some steel and aluminum

components may have secondary content, but data is not available on this. These components are often complex and diverse, and are routinely measured in units rather than by mass. Therefore, unlike the chemicals and alloys business units, only limited data is available on resource mass. In 2012, ESD reported using 5,280 metric tons of resources, all of which were classified as primary.

The Advanced Materials Division uses a much more diverse range of resources ranging from mined pegmatite ores for tantalum production through power plant wastes and spent refinery catalysts for the production of vanadium alloys. AMD also uses recycled iron, steel, aluminum and titanium in processes when possible. Across AMD, excluding the mine site in Nazareno, Brazil, 168,000 metric tons of resources were used in 2012, of which 22,000 metric tons (13%) were secondary or recycled materials. The Nazareno, Brazil mine used a further 686,000 metric tons of non-renewable resources.

GHG uses non-renewable resources including graphite rich ores, for the manufacture of natural graphite, and quartz, in its silicon metal operations. In 2012, GK reported resource use of 214,000 metric tons, 99% of which was non renewable. Silicon metal production activities accounted for 84% of all resources used by GK.

## Energy Consumption

### GRI INDICATORS EN3 AND EN4

Energy remains a major area of focus for AMG for both environmental and economic reasons. In particular, high-temperature metallurgical processes and mining operations utilized in AMD and GK are energy intensive. The two most significant energy carriers are electricity and natural gas although other fuels and energy sources are captured in the data discussed here.<sup>3</sup>

The reported energy usage for AMD is larger in 2012 compared to previous years primarily as a result of the increased number of reporting facilities in 2012, rising from 1,098 terajoules (TJ) in 2011 to 1,219 TJ in 2012. The newly included AMG Aluminum facilities in North America account for 152 TJ, while energy usage for the remaining facilities was marginally lower. Direct energy usage was 743 TJ and indirect 476 TJ.

The energy usage for GK, reported here for the first time, was 1,813 TJ, split between direct (54 TJ) and indirect (1,759 TJ). The largest user, accounting for 92% of this usage was the silicon metal production in Germany – an inherently energy intensive process.

The energy used by lower energy heat treatment processes typically used by ESD remains low in comparison. In 2012, increased demand for products and services (particularly heat-treatment services in Germany, Mexico and the United States) again led to a small increase in power usage. The Division used a total of 231 TJ (2011, 218 TJ). Indirect energy, in the form of electricity, accounted for 209 TJ in 2012 while direct energy use, primarily natural gas was 22 TJ.

Across AMG, the split between renewable and non-renewable indirect energy sources is difficult to determine since utilities do not generally publish this information (with some exceptions; e.g. CEMIG in Brazil now produces this data). However, AMG does generate its own renewable energy. In 2012, AMG's upgraded hydroelectric generating facility near São João del Rei, Brazil operated for the full year with its upgraded infrastructure and generated a record 50,000 GJ (13,900 MWh). This supplied AMG's local requirements at its São João del Rei, Brazil plant and provided a surplus that was fed back into the power grid. Additionally, AMG Vanadium's recently installed solar power system generated 954 GJ (265 MWh) in 2012 and is estimated to have eliminated over 190 tons of CO<sub>2</sub> compared to traditional fossil fuels.

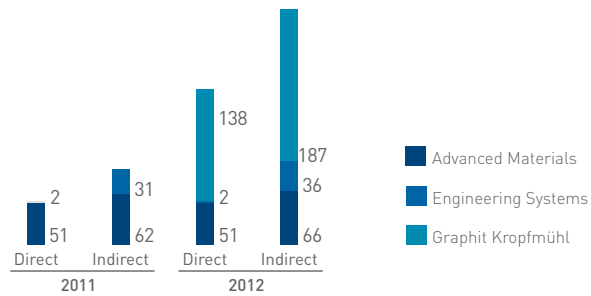
## Water Consumption

### GRI INDICATOR EN8

Water is essential to many manufacturing processes and is used by AMG companies primarily for non-contact, evaporative or single-pass cooling purposes, although a small number of AMG facilities do use wet chemical processes for the production of metal oxides and other chemicals. In addition, mining operations can utilize water from mine dewatering or e.g. for ore processing. Water utilized for cooling, process and sanitary usage is reported by AMG facilities.

3. Indirect energy consumption does not include the energy consumed by electricity producers to generate the electricity or transmission losses.

## Greenhouse Gas Emissions (thousands of metric tons CO<sub>2</sub>e)



Reported water use for AMD rose to 641,000 cubic meters in 2012 because of the inclusion of the AMG Aluminum sites. ESD was similar to previous years at 66,000 cubic meters.

GK, reporting for the first time, has its largest water use at the mine sites in Germany and Sri Lanka, and the silicon metal production plant, also in Germany. Overall water use for this Division was 1.2 million cubic meters.

The mine in Nazareno, Brazil, included in AMD, saw higher water usage in 2012 (7.1 million cubic meters) as a result of challenges with water recycling at the production plants and increases in production. Full data are given in the table on page 56.

## Biodiversity

### GRI INDICATOR EN11

Of the 33 locations reporting for 2012, four reported land areas on or adjacent to their property, which had high biodiversity value, sensitive habitats or were protected. These areas are: river frontage in Hanau, Germany, native forest in São João del Rei, Brazil, river frontage and setback areas in Nazareno, Brazil and wetlands in Ohio. AMG remains very aware of the need to be responsible stewards of these important areas.

## Climate Change

### GRI INDICATOR EN16

AMG facilities utilize processes that are associated with both direct and indirect greenhouse gas (GHG) emissions, and both types are reported here. Electricity used for the generation of heat for metallurgical processing has been, and remains, the most significant source of GHG emissions for AMG. This electricity use gives rise to indirect GHG emissions of CO<sub>2</sub> equivalent (CO<sub>2</sub>e), which are dependent on the nature of its generation. Whenever possible, emissions have been calculated using up-to-date emission factors available from the electricity supplier, the local environmental agency or the GHG protocol. Indirect emissions are defined as those emissions generated by sources outside of AMG's control, but where AMG ultimately uses the energy. Direct GHG emissions result primarily from the combustion of carbon-containing materials often as part of the metallurgical process, such as using coke as a reductant, but also for the generation of heat, such as burning natural gas in a boiler. Other GHGs occurring from processes other than

combustion, such as hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride, are minimal for the AMG business units, but are included if relevant.

The expansion of the boundaries of this report in 2012 gave increases in the reported energy usage, and the preponderance of fossil fuels for energy generation in turn gives rise to increased absolute CO<sub>2</sub>e emissions. Despite this, AMD's GHG emissions rose only marginally from 114,000 metric tons of CO<sub>2</sub>e in 2011, to 117,000 metric tons in 2012, or an approximately 2% increase. Of these emissions, 57% are attributed to indirect sources and 43% to direct sources.

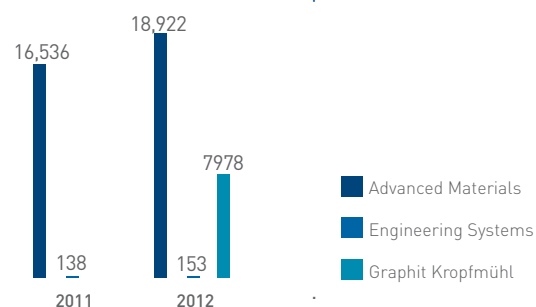
ESD's GHG emissions in 2012 were 38,000 metric tons, an increase from 2011 (32,100 metric tons). This increase was, in the same way as the increased electricity usage that generates the emissions, related to the increased throughput at ESD's heat treatment plants in Limbach Germany, Port Huron, Michigan and Ramos Arizpe, Mexico plus the addition of the TIV facility in the scope. Ninety-five percent of these emissions are indirect and associated with electricity usage.

GK's GHG emissions, reported here for the first time, are dominated by the silicon metal production activities. Of the 324,000 metric tons of CO<sub>2</sub>e emissions in 2012, 307,000 metric tons are attributable to silicon metal manufacture (approximately 5 kg CO<sub>2</sub>e per kg silicon metal produced). This activity also dominates AMG's overall GHG emissions, accounting for 61% of total group emissions.

AMG provides a complex mix of products and services, and it has become clear that year-on-year comparisons are difficult as product mix varies. Once again in 2012, GHG intensity has been defined on the basis of revenue rather than, for example, metric tons of product. Normalized to a revenue basis, AMD emitted 117,000 metric tons, with revenue of \$791.3 million, equivalent to 148 metric tons CO<sub>2</sub>e per million \$ revenue. For ESD (38,000 metric tons CO<sub>2</sub>e, \$273.8 million) the figure was 138 metric tons CO<sub>2</sub>e per million \$ revenue, while GK is the most carbon-intensive division with 328,000 metric tons of CO<sub>2</sub>e and \$150.5 million in revenue, equivalent to 2152 metric tons CO<sub>2</sub>e per million \$ revenue. This wide range reflects the diversity of AMG but also guides focus on reduction opportunities.



## Total landfill waste disposal (metric tons)



## Emissions to Air

### GRI INDICATORS EN19 AND EN20

The emissions of ozone-depleting substances remain de minimis for all of the divisions. Additionally, the nature of ESD's business means that it has minimal air emissions for other pollutants, resulting from only small sources such as heating and hot water boilers; these are again considered de minimis for the purposes of this report.

The manufacturing facilities of AMD do have some other air emissions, including SO<sub>x</sub> (606 metric tons), NO<sub>x</sub> (127 metric tons) and particulate materials (46 metric tons). Data is only available for regulated sources where measurements have been made. For GK the largest emissions come from the silicon metal production activities and include SO<sub>x</sub> (335 metric tons), NO<sub>x</sub> (683 metric tons), and particulates (9 metric tons).

## Emissions to Water and Spills

### GRI INDICATORS EN21 AND EN23

AMG facilities continue to maintain records of the volume of aqueous effluents, including process water and non-sanitary sewer releases, discharged to local water courses. Clean water (typically freshwater used for cooling purposes that has not been affected in the process) is included in the figures given below. Chemical analysis of the effluent is utilized to determine the total mass of primary constituents of the water emissions.

In 2012, the total water disposed to water courses by AMD, excluding the Brazil mine, totaled 390,000 cubic meters compared to 131,000 cubic meters in 2011. This increase is attributed to the inclusion of cooling water used by the North American Aluminum alloy facilities in this report for the first time.

Although most of AMD's water is used for cooling purposes and therefore produces clean water discharges, some of the wet chemical processes generate aqueous waste streams. For the five production sites reporting industrial process water disposal, the major constituents were metals (1,083 kg), fluoride (1,693 kg), sulfate (1,056 metric tons) and total suspended solids (15 metric tons). Additionally, the 5.6 million cubic meters of water discharged to surface water from the mine site in Brazil contains suspended solids, although accurate data is not yet available.

ESD also utilizes minimal water for non-contact, closed-cycle cooling purposes, and the discharges are therefore clean water and not considered material to this report. The only significant water discharge of this type takes place at the ALD TT USA site in Michigan (32,000 cubic meters in 2012). GK discharged 883,000 cubic meters in 2012. Primarily, this included cooling water used by the silicon metal furnaces and mine water from dewatering pumps. In several locations, mine water is utilized for process water before final discharge. Constituents from processing included sulfate (214 metric tons), fluoride (3,356 kg) and suspended solids (4,252 kg).

In 2012, there were no significant spills (defined by GRI as one which would affect the Company's financial statement as a result of the ensuing liability or is recorded as a spill) of tailings or other process materials at any AMG site.

## Waste Disposal

### GRI INDICATOR EN 22

Detailed information was collected in 2012 for waste streams generated by AMG subsidiary companies, along with documentation of their recycle or disposal method. AMG continues to minimize waste streams by avoiding generation, increasing reuse and recycling and minimizing landfill disposal. Landfill is a last resort. Wastes as defined here encompass materials not purposefully produced for sale and with no commercial value.

The total landfill or incineration disposal for AMD was 18,922 metric tons, an increase of 14% over 2011 (16,536 metric tons). This increase is primarily related to the remediation projects, partially offset by ongoing and increasing recycling efforts. Of these materials 73% (13,835 metric tons) were non-hazardous, with the remaining 5,087 metric tons disposed to licensed hazardous waste landfills.

The waste produced by ESD is much different in composition, and much smaller in volume. Just 153 metric tons were disposed to landfill in 2012, composed mainly of general waste, contaminated oils and metals that could not readily be recycled. The total amount disposed by this Division was comparable to 2011 (138 metric tons).

GK disposed of 7,978 metric tons of waste in 2012, of which just 19.4 metric tons were hazardous waste. The mine site in Sri Lanka and the silicon metal manufacturing site in Germany together generated 80% of this waste.





Overall, the Company disposed of 27,053 metric tons of waste to landfill or incineration in 2012, of which 7% was hazardous waste. A further 9,735 metric tons of waste materials were recycled.

### Significant Fines for Non-Compliance with Environmental and Other Laws

#### GRI INDICATOR EN28

No Division received any significant fine or equivalent penalty for non-compliance with environmental laws in 2012.

#### GRI Indicator S08

In 2012 ESD and GK did not receive any fines. Within AMD, the mine in Nazareno, Brazil, was fined \$60,000 relating to labor issues in 2011. The LSM Brazil facility did receive fines but these dated back to labor issues from 2006.

### Product Responsibility

#### GRI INDICATOR MM 11

AMG continues its progress regarding its responsibilities under the REACH regulations in Europe, and is prepared for the next series of registrations in 2013 for products with volumes greater than 100 metric tons. European subsidiary companies are involved with Consortia developing the health, safety and environmental data required for these registrations and have taken on the role as lead registrant in several cases. Industry groups continue to focus on developing health and safety knowledge of their products as the regulatory framework grows and expands across the world. AMG subsidiary companies are involved in, among others, the Aluminum Association, the Vanadium International Technical Committee and the International Antimony Association.

### GRI Contents

This section provides an overview of how AMG's Annual Report correlates with the GRI G3 guidelines for the voluntary reporting of sustainable development indices. The table below serves as a reference guide to the sections of the report where information about each item can be found. The GRI G3 guidelines facilitate measurement of economic, environmental and social dimensions of company performance. Third-party verification has been conducted relative to determining consistency with the GRI reporting principles. For brevity, only the most pertinent and not all data is included in this report. A detailed GRI content index can be found under the sustainable development section of the AMG website ([www.amg-nv.com](http://www.amg-nv.com)).

### United Nations Global Compact

AMG commits its support to the principles of the United Nations Global Compact. The Global Compact, which is overseen by the United Nations, is a strategic policy initiative for businesses that, like AMG, are committed to aligning their operations and strategies with ten universally accepted principles in the areas of human rights, labor, the environment and anti-corruption. In 2009, the AMG Management Board approved its commitment to the Global Compact and the intent of AMG to support the ten principles of the Global Compact. AMG will reaffirm its support and submit its second Communication on Progress in April 2013.

### Extractive Industries Transparency Initiative

AMG continues its support of the Extractive Industries Transparency Initiative (EITI, [www.eiti.org](http://www.eiti.org)), a global initiative to improve governance in resource-rich countries through the verification and full publication of Company payments and government revenues from oil, gas and mining. EITI works to build multi-stakeholder partnerships in developing countries in order to increase the accountability of governments. Over 30 countries have now committed to the EITI principles and criteria, although, as of today, AMG does not have any extractive operations in an EITI-implementing country.

### Global Reporting Initiative

AMG supports the GRI, and is an Organizational Stakeholder (OS). GRI is a network based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. In order to ensure the highest degree of technical quality, credibility, and relevance, the reporting framework is developed through a consensus-seeking process with participants drawn globally from business, civil society, labor and professional institutions.

This framework sets out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. The cornerstone of the framework is the Sustainability Reporting Guidelines. AMG utilizes the third version of the Guidelines — known as the G3 Guidelines — which were published in 2006. Other components of the framework include Sector Supplements (unique indicators for industry sectors) and National Annexes (unique country level information). AMG has utilized the Metals

and Mining Sector Supplement, 2010 as a guide in preparing this report. GRI is currently developing a fourth-generation of guidelines, G4. As OSs in the GRI Program, AMG is monitoring the development of this revision and will contribute as appropriate. OSs put their name to the GRI mission, products and processes, and promote broadening participation around sustainability and transparency. The OSs provide a key basis for legitimacy to GRI and reinforce its common commitment as a network to change.

Further information on AMG Sustainable Development and our commitments to these organizations, including our United Nations Global Compact Communication on Progress can be found on the AMG website ([www.amg-nv.com](http://www.amg-nv.com)).

## Environmental, Health, Safety and Social Reporting Statement of Assurance

### SCOPE, OBJECTIVES AND RESPONSIBILITIES

AMG's environmental, health, safety and social performance reporting has been prepared by the management of AMG who were responsible for the collection and presentation of the information. Conestoga-Rovers & Associates (CRA) was retained by AMG to conduct an independent review and assurance of the information and data reported in the Sustainable Development section of this report. The objective of the assurance process was to check the materiality of the issues included in the report and the completeness of reporting. Any claims relating to financial information contained within the report are excluded from the scope of this assurance process. CRA's responsibility in performing our assurance activities is to the management of AMG only and in accordance with the terms of reference agreed with them. CRA does not accept or assume any responsibility for any other purpose or to any other person or organization. Any reliance that any third party may place on the report is entirely at its own risk.

### APPROACH AND LIMITATIONS

CRA's assurance engagement has been planned and performed in accordance with AMG's internal guidance and definitions for the reported indices. The assurance approach was developed to be consistent with the GRI G3 Guidelines and international standards for assurance appointments. AMG and CRA determined a modified approach to assurance in 2012 based on a review of selected facilities. Audits were conducted for 14 facilities identified by AMG, representing 40% of the total number of facilities within the various divisions. CRA carried out onsite audits at three facilities: LSM Brasil Volta Grande mine (CIF), Graphit Kropfmühl/Wedel, and RW Silicium GmbH. Remote audits utilizing telephone and web-based methods were carried out for 11 facilities (see table page 48). Stakeholder engagement was not within the scope of the assurance activities.

### Conclusions/Recommendations

On the basis of the method and scope of work undertaken, and the information provided to CRA by AMG, the process undertaken by AMG provides a balanced representation of the issues concerning AMG's sustainability performance and is an appropriate presentation of AMG's environmental, safety, health and social performance in 2012. In our opinion, the processes for collecting and reporting sustainability-related data that AMG introduced in 2007 continue to be enhanced through better communication and awareness, and more consistent application of the environmental indices. Some challenges remain related to ensuring consistency in the approach related to various performance metrics and providing consistent and complete data in an efficient manner. It is recommended that AMG continue to focus on these challenges to improve reporting, but they do not materially affect the conclusions presented herein.

Julian Hayward, P. Eng., Associate  
Conestoga-Rovers & Associates

Gregory A. Carli, P.E., Principal  
Conestoga-Rovers & Associates

# Social and Environmental Key Performance Indicators and GRI Content Index

## SELECTED SOCIAL AND ENVIRONMENTAL KEY PERFORMANCE INDICATORS\*

GRI INDICATOR	DESCRIPTION		ADVANCED MATERIALS		ENGINEERING SYSTEMS		GRAPHIT KROPFMÜHL		AMG
			2011	2012	2011	2012	2011	2012	2012
LA1	Total workforce		1,369	1,537	820	851	NA	542	3,052
LA4	% of employees covered by collective bargaining agreements	%	81	78	37	35	NA	77	67
LA7	Accident rates	Total	3.2	2.1	2.6	2.8	NA	2.0	2.3
LA7	Accident severity rate	Total	0.32	0.26	0.19	0.15	NA	0.11	0.20
LA10	Average hours of training per year per person	Hours	32	24	15	17	NA	12	20
EN2	% recycled raw materials (excluding mine)	%	26	13	0	0	NA	0.1	2.1
EN3	Direct energy consumption	TJ	652	743	22	22	NA	53	819
EN4	Indirect energy consumption	TJ	446	476	196	209	NA	1,759	2,444
EN8	Water consumption (manufacturing)	Cubic meters	371,000	641,000	65,000	66,000	NA	1,200,000 (all)	1,902,000
EN8	Water consumption (mining)	Cubic meters	4,746,000	7,122,000	NA	NA	NA	Included above	7,122,000
EN16	CO <sub>2</sub> equivalent emissions	mt	114,000	117,000	32,000	38,000	NA	324,000	479,300
EN20	SO <sub>x</sub> emissions	mt	626	606	0	0	NA	683	942
EN20	NO <sub>x</sub> emissions	mt	111	127	0	0	NA	335	810
EN20	Particulates discharged to air	mt	17	46	0	0	NA	55	55
EN21	Metals discharged	kg	1,682	1,083	0	0	NA	0	1,083
EN22	Hazardous waste (including recycled) to water	mt	3,830	5,950	308	355	NA	20	6,325
EN22	Non-hazardous waste (including recycled)	mt	16,229	16,353	803	755	NA	13,399	30,507
EN22	Percent of waste recycled	%	20	20	62	55	NA	40	26
EN22	Waste disposed to landfill	mt	16,536	18,922	138	153	NA	7,978	27,053
EN23	Spills	L	0	0	0	0	NA	0	0
EN28	Environmental fines	\$	0	0	0	0	NA	0	0
S08	Fines for non compliance with laws	\$	0	60,000	0	0	NA	0	60,000

\* For a full list see pages 48-54.

## GRI CONTENT INDEX

PART	SECTION	REFERENCE	PAGES
Part I: Profile Disclosures	Strategy and Analysis	1.1, 1.2	2-7
	Organizational Profile	2.1 to 2.10	1-31
	Report Parameters	3.1 to 3.13	48-56
	Governance, Commitments, and Engagement	4.1 to 4.17	38-47, 57-62
Part II: Disclosures on Management Approach (DMA)	Economic, Environment, Labor, Human Resources, Society, Product Responsibility	DMA EC, EN, LA, HR, SO, PR	1-62
Part III: Performance Indicators	Economic: Economic Performance	EC1	2-3
	Environmental: Materials	EN1, EN2	50-51
	Environmental: Energy	EN3, EN4	51
	Environmental: Water	EN8	51-52
	Environmental: Emissions, Effluents, Wastes	EN16, 19, 20, 21, 22, 23	52-54
	Environmental: Other	EN11, EN28	52-54
	Social: Labor Practices and Decent Work	LA1, 4, 6, 7, 10, 13	49-50
	Social: Human Rights	HR3, 5, 6	50
	Social: Society	SO3, SO8	50, 54
	Social: Product Responsibility	MM11	54

# Corporate Governance

## General

AMG Advanced Metallurgical Group N.V. is a company organized under Dutch law and is the parent company of the AMG Group. The Company was established in 2006 as the holding company for the AMG Group companies, and its shares were first listed on Euronext Amsterdam by NYSE Euronext in July 2007.

In this report, the Company, as a Dutch listed company, sets forth its overall corporate governance structure and the extent to which it applies the provisions of the Dutch Corporate Governance Code (as amended and issued on December 10, 2008). The Dutch Corporate Governance Code can be downloaded at [www.corpgov.nl](http://www.corpgov.nl).

The Supervisory Board and the Management Board, which are responsible for the corporate governance structure of the Company, hold the view that the vast majority of principles set forth in the Dutch Corporate Governance Code as applicable during 2012 are being applied, while certain deviations are discussed and explained hereafter. A full and detailed description of AMG's Corporate Governance structure and AMG's compliance with the Dutch Corporate Governance Code can be found on AMG's website ([www.amg-nv.com](http://www.amg-nv.com)) under the Corporate Governance chapter.

## Annual Accounts and Dividends

The Management Board and the Supervisory Board have approved AMG's audited (consolidated) financial statements for 2012. Ernst & Young Accountants LLP audited these financial statements.

The audited financial statements will be submitted for adoption to the General Meeting of Shareholders.

AMG's dividend policy is to retain future earnings to finance the growth and development of its business. As a result, the Management Board does not anticipate that AMG will pay any dividends for the foreseeable future. The dividend policy will, however, be reviewed from time to time. Payment of future dividends to shareholders will be at the discretion of the Management Board subject to the approval of the Supervisory Board after taking into account various factors, including business prospects, cash requirements, financial performance, new-product development, expansion plans, the terms of the Company's financing facilities and the compliance with applicable statutory and regulatory requirements. Additionally,

payment of future dividends or other distributions to shareholders may be made only if the Company's shareholders' equity exceeds the sum of the issued share capital plus the reserves required to be maintained by law.

## Shares and Shareholders' Rights

As of December 31, 2012, the total issued share capital of AMG amounts to €551,025 consisting of 27,551,269 ordinary shares of €0.02 each. Each ordinary share carries one vote. The ordinary shares are listed on Euronext Amsterdam. The ordinary shares are freely transferable.

Pursuant to the Financial Markets Supervision Act (Wet op het financieel toezicht) and the Decree on Disclosure of Major Holdings and Capital Interests in Securities-Issuing Institutions (Besluit melding zeggenschap en kapitaalbelang in uitgevende instellingen), the Authority Financial Markets (Autoriteit Financiële Markten) has notified the Company that it had been notified about the following substantial holdings (>5%) in ordinary shares of AMG:

As of February 28, 2013

Norges Bank	5.01%
C. Leone/Luxor Management LLP	4.70%
Hunter Hall Investment Management Ltd.	4.48%

Shareholding table:

	2011	2012
Number of ordinary shares outstanding	27,519,929	27,551,269
Average daily turnover	415,414	224,225
Highest closing price	16.76	9.90
Lowest closing price	6.98	5.89

## Introduction of Preference Shares

The General Meeting of Shareholders approved in its meetings of May 12, 2010, and July 6, 2010, that the Articles of Association of the Company would be changed in order to introduce a new class of preference shares, which may be issued and used as an anti-takeover device in order to safeguard the interests of the Company and its stakeholders in all those situations where the Company's interests and those of its stakeholders are at stake including but not limited to situations in which non-solicited public offers are made.

The preference shares carry equal voting rights as ordinary shares and are entitled, if distribution to shareholders is permitted, to a fixed dividend equal to the Euro Interbank Offered Rate for deposit loans of one year increased with maximum of 400 basis points as determined by the Management Board of the Company and subject to approval by the Supervisory Board. The Articles of Association of the Company have been amended on July 6, 2010, and now provide for an authorized share capital of 65 million ordinary shares and 65 million preference shares.

### Stichting Continuïteit AMG

In line with Dutch law and corporate practice, on July 6, 2010, the Stichting Continuïteit AMG (the Foundation) was established in Amsterdam, having as its main objective to safeguard the interests of the Company and its stakeholders. The Board of the Foundation is independent from the Company and consists of Mr. de Munnik, Chairman and Mr. van Hassel and Mr. Borggreve as members. The main objective of the Foundation is to represent the interests of the Company and of the enterprises maintained by the Company and the companies affiliated with the Company in a group, in such a way that the interests of the Company and of those enterprises and of all parties involved in this are safeguarded in the best possible way, and that influences which could affect the independence and/or continuity and/or identity of the Company and those enterprises in breach of those interests are deterred to the best of the Foundation's ability.

Under the terms of an option agreement dated December 22, 2010, between the Company and the Foundation, the Foundation has been granted an option pursuant to which it may purchase a number of preference shares up to a maximum of the total number of ordinary shares outstanding at any given time.

### Voting Rights

There are no restrictions on voting rights of ordinary and preference shares. Shareholders who hold shares on a predetermined record date (mandatory fixed at the 28th day prior to the day of the General Meeting of Shareholders) are entitled to attend and vote at the General

Meeting of Shareholders regardless of a sale of shares after such date.

As far as is known to AMG, there is no agreement involving a shareholder of AMG that could lead to a restriction of the transferability of shares or of voting rights on shares, except as detailed below.

### Management Board

The executive management of AMG is entrusted to its Management Board which is chaired by the Chief Executive Officer. The Articles of Association provide that the number of members of the Management Board shall be determined by the Supervisory Board. The members of the Management Board are appointed by the General Meeting of Shareholders for a maximum term of four years and may be re-appointed for additional terms not exceeding four years. The Supervisory Board is authorized to make a non-binding or binding nomination regarding the appointment of members of the Management Board. A binding nomination means that the General Meeting of Shareholders may appoint the nominated persons, unless the General Meeting of Shareholders rejects the nomination by an absolute majority (more than 50% of the votes cast) representing at least one-third of the issued share capital. If the Supervisory Board has not made a nomination, the appointment of the members of the Management Board is at the full discretion of the General Meeting of Shareholders. The General Meeting of Shareholders and the Supervisory Board may suspend a member of the Management Board at any time.

A resolution of the General Meeting of Shareholders to suspend or dismiss a member of the Management Board requires an absolute majority (more than 50% of the votes cast), representing at least one-third of the issued share capital, unless the Supervisory Board has proposed the suspension or dismissal to the General Meeting of Shareholders, in which case an absolute majority is required but without any quorum requirement. The Management Board follows its own rules of procedure concerning the procedures for meetings, resolutions and similar matters. These rules of procedure are published on the Company's website. The Company has rules to avoid and deal with conflicts of interest between the Company and members of the Management Board. The Articles of Association and the rules of procedure state that in the event of a legal act or a lawsuit between the Company and any of the members of the Management Board, the Company shall be represented by any other non-conflicted members of

the Management Board or by a Supervisory Board member designated by the Supervisory Board. In addition, it is provided that the respective member of the Management Board shall not take part in the decision-making and voting in respect of such legal act or lawsuit, or any other subject whereby the respective member of the Management Board has a conflict of interest which is of material significance to the Company, and that any such legal act or subject require the approval of the Supervisory Board.

The rules of procedure of the Management Board establish further rules on the reporting of (potential) conflicts of interest.

### Supervisory Board

The Supervisory Board supervises the Management Board and its policies and the general course of affairs of the AMG Group. Under the two-tier corporate structure under Dutch law, the Supervisory Board is a separate body that is independent of the Management Board. Members of the Supervisory Board can be neither members of the Management Board nor an employee of the Company. The Supervisory Board in discharging its duties, will act in the interests of the Company and AMG Group taking into account the interests of all of the Company's stakeholders. The Supervisory Board discusses and approves major management decisions and the Company's strategy.

The Supervisory Board has adopted its own rules of procedure concerning its own governance, committees, conflicts of interest, etcetera. The rules of procedure are published on the Company's website and include the charters of the committees to which the Supervisory Board has assigned certain preparatory tasks, while retaining overall responsibility. These committees are the Remuneration Committee, the Selection and Appointment Committee and the Audit Committee. The Supervisory board shall be assisted by the Company Secretary of the Company who shall be appointed by the Management Board after approval of the Supervisory Board has been obtained. The number of members of the Supervisory Board will be determined by the General Meeting of Shareholders with a minimum of three members. Members of the Supervisory Board shall be appointed for a maximum term of four years and may be re-appointed for additional terms not exceeding four years. Unless the General Meeting of Shareholders provides otherwise, a member of the Supervisory Board cannot be re-appointed for more than three terms of four years.

The Supervisory Board is authorized to make a binding or non-binding nomination regarding the appointment of the members of the Supervisory Board. In the event of a binding nomination, the General Meeting of Shareholders appoints the members of the Supervisory Board from a nomination of at least the number of persons prescribed by Dutch law (currently two) made by the Supervisory Board. A binding nomination means that the General Meeting of Shareholders may only appoint one of the nominated persons, unless the General Meeting of Shareholders rejects the nomination with an absolute majority (more than 50% of the votes cast) representing at least one-third of the issued share capital. If the Supervisory Board has not made a nomination, the appointment of the members of the Management Board is at the full discretion of the General Meeting of Shareholders. The General Meeting of Shareholders may, at any time, suspend or remove members of the Supervisory Board. A resolution of the General Meeting of Shareholders to suspend or remove members of the Supervisory Board requires an absolute majority (more than 50% of the votes cast) representing at least one-third of the issued share capital, unless the Supervisory Board has proposed the suspension or dismissal, in which case an absolute majority is required, without any quorum requirement.

As required under the Dutch Corporate Governance Code and Dutch law, the Company has formalized strict rules to avoid and deal with conflicts of interest between the Company and the members of the Supervisory Board, as further described in the rules of procedure of the Supervisory Board. Further information on the Supervisory Board and its activities is included in the Report of the Supervisory Board (pages 36-47 of this Annual Report). Each of the current members of the Supervisory Board has undertaken to AMG not to transfer or otherwise dispose of any shares granted as part of their annual remuneration until the earlier of the third anniversary of the date of grant and the first anniversary of the date on which he ceases to be a member of the Supervisory Board.

### General Meeting of Shareholders

A General Meeting of Shareholders is held at least once per year. During the Annual Meeting, the Annual Report including the report of the Management Board, the annual (consolidated) financial statements and the report of the Supervisory Board



are discussed as well as other matters pursuant to Dutch law or the Company's Articles of Association. As a separate item on the agenda, the General Meeting of Shareholders is entrusted with the discharge of the members of the Management Board and the Supervisory Board from responsibility for the performance of their duties during the preceding financial year. The General Meeting of Shareholders is held in Amsterdam or Haarlemmermeer (Schiphol Airport), and takes place within six months from the end of the preceding financial year.

Meetings are convened by public notice and by letter, or by use of electronic means of communication, to registered shareholders. Notice is given at least 42 days prior to the date of the General Meeting of Shareholders. The main powers of the General Meeting of Shareholders are set forth in the Company's Articles of Association, which are published on the Company's website and the applicable provisions of Dutch law.

On May 15, 2012, the General Meeting of Shareholders resolved to authorize the Management Board for a period of 18 months from that date (until November 14, 2013) as the corporate body, which, subject to approval of the Supervisory Board, is authorized respectively (i) to issue shares, including any grant of rights to subscribe to shares up to a maximum of 10% of the Company's issued share capital as per December 31, 2011, for general corporate purposes, with the power to exclude or restrict pre-emptive rights and (ii) to issue shares, including any grant of rights to subscribe to shares up to a maximum of 10% of the Company's issued share capital as per December 31, 2011, for the purpose of mergers and acquisitions and financial support arrangements (relating to the Company and/or participations (deelnemingen) of the Company), with the power to exclude or restrict pre-emptive rights.

In addition on May 15, 2012, the General Meeting of Shareholders resolved to authorize the Management Board for a period of 18 months from that date (until November 14, 2013) as the corporate body, which, subject to approval of the Supervisory Board, is authorized to effect acquisitions of its own shares by AMG. The number of shares to be acquired is limited to 10% of the Company's issued share capital as of December 31, 2011, taking into account the shares previously acquired and disposed of at the time of any new acquisition. Shares may be acquired through the stock exchange or otherwise, at a price

between par value and 110% of the stock exchange price. The stock exchange price referred to in the previous sentence is the average closing price of the shares at Euronext Amsterdam on the five consecutive trading days immediately preceding the day of purchase by or for the account of the Company.

### Articles of Association

The Company's Articles of Association can be amended by a resolution of the General Meeting of Shareholders on a proposal of the Management Board that has been approved by the Supervisory Board. A resolution of the General Meeting of Shareholders to amend the Articles of Association that has not been taken on the proposal of the Management Board and the approval of the Supervisory Board, should be adopted by a majority of at least two-thirds of the votes cast in a meeting in which at least 50% of the issued share capital is represented.

### Corporate Social Responsibility

AMG endorses and supports the definition of corporate social responsibility as set by the World Business Council for Sustainable Development, being:

"...the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large"

For AMG and its affiliated companies this translates into three main sustainable development objectives that the Company has formulated in connection with its financial objectives, technological capabilities and its leading position at the heart of the global metallurgical industry: to provide safe working conditions for our employees and to be responsible stewards of the environment; to meet or exceed regulatory standards by engaging in ethical business practices, and to be a valued member of the local economy, community and of society at large by contributing to solutions for addressing some of the fundamental environmental and social challenges facing society today. The Supervisory Board and the Management Board of the Company take continued guidance from these objectives when defining and implementing the Company's strategic objectives.

### Decree on Article 10 of the Takeover Directive

The information required by the Decree on Article 10 of the Takeover Directive is included in this Corporate Governance section and the Report of the Supervisory Board, whose information is incorporated by reference in this Corporate Governance report.

Ahead is an overview of the significant agreements to which the Company is a party, which are affected, changed or terminated subject to a condition of a change of control.

The Company is a party to the following agreements that will be terminated under the condition of a change of control over the Company as a result of a public takeover offer.

The Company's Credit Facility Agreement, which was concluded for a period of five years on April 28, 2011, has a provision that requires the Company to repay the entire outstanding amount under its Credit Facility Agreement upon a change of control, as defined therein. The Company is also a party to the following agreements that will come into force upon a change of control pursuant to a public offer. Certain members of the Management Board have provisions in their contracts that pertain to a change of control. Additionally, the AMG Option Plan and the AMG Performance Share Unit Plan have provisions that permit the Supervisory Board to cancel or modify the options granted or performance share units awarded to Management Board members and other employees, upon a change of control.

The Company is a party to an option agreement entered into with the Stichting Continuïteit AMG as further explained on page 58.

Other than the above-mentioned agreements, the Company is not party to any other important agreements that will come into force, be amended or terminated upon a change of control pursuant to a public takeover offer.

### Compliance with the Dutch Corporate Governance Code

In this chapter, the Company discusses its compliance with the principles and provisions set forth in the Dutch Corporate Governance Code as amended in 2008 (hereinafter also referred to as "the Code"). In doing so, the outline and numbering of the Code is being followed.

As a general statement the Company fully endorses the Code's principles and believes that virtually all best practice provisions as included in the Code are complied with. On certain matters involving the remuneration policy of the Company, the Company does not comply with the best practice provisions and it believes that it has sound reasons for doing so, which will be explained hereafter.

Deviation from these best practices provisions stems from the specialized nature of the Company's business, a reflection of local market practice in which executives may be employed and the recognition of pre-existing contractual agreements. AMG was formed in March 2007 through the merger of eight operating companies. The members of the Management Board had pre-existing contracts as executives of certain of the operating companies that formed AMG. These contracts reflect local market conditions and customary provisions in the countries in which the executives may have been employed. They have provisions that do not fully comply with the Code's best practices. In view of the specialized nature of AMG's business and the qualifications and expertise of the present members of the Management Board, AMG intends to honour its existing contractual commitments to those members of the Management Board, in order to retain their services and to maintain their commitment to the Company.

The remuneration policy for members of the Management Board was approved and adopted by the General Meeting of Shareholders in its Annual Meeting of May 13, 2009. This remuneration policy is published on the website of the Company under the heading Corporate Governance (hereafter referred to as "the Remuneration Policy"). Ahead the Company reviews in more detail to what extent its prevailing remuneration practice as embodied in the current Remuneration Policy does not comply with the best practice provisions included in chapter II.2 of the Code. It should be noted that the Supervisory Board will propose to the General Meeting of Shareholders in its meeting of May, 3 2013 to amend the existing Remuneration Policy of the Company. In case that amendment is approved, the Company will explain in the 2013 Annual Report the extent of which the then-prevailing remuneration practices deviate from the best practice provisions referred to above.

#### II.2.4

Under the Company's remuneration policy effective prior to 2009, the members of the Management Board have been granted unconditional options that do not have any performance criteria required to be met. Additionally, such options have a vesting schedule that permits a majority of the options to be exercised within the first three years after having been granted. Furthermore, the members of the Management Board have been granted unconditional options, upon approval by the General Meeting of Shareholders in May 2009, in lieu of part of their base salary for 2009, as a measure to minimize cash expenditures by the Company. As a result, the Company deviates from best practice provision II.2.4.

#### II.2.5

The Company has introduced under the Remuneration Policy so-called performance share units (PSUs) for its Management Board members (as well as other senior executives). No Company shares have been granted to Management Board members. The financial rationale and functioning of PSUs are explained in the Company's remuneration policy, published on its website. PSUs pay out, if and when targets specified beforehand are met, after three years from the date of allocation. The Company believes that this remuneration component does not violate any of the best practice provisions and spirit of the Code. However, by way of enhanced transparency, and because the Supervisory Board has decided to introduce a phased-in vesting scheme for the initial awards, it is felt appropriate to make specific reference to PSUs under this chapter.

#### II.2.8

Each member of the Management Board has a contract of employment with AMG as well as with a now-constituent entity of AMG Group prior to the formation of AMG. These contracts provide for payment of two years of base salary compensation in the event of termination by the Company without cause. As a result, the Company deviates from best practice provision II.2.8 for reasons explained above and in the Company's Remuneration Policy.

#### III.7.1

A supervisory board member shall not be granted any shares and/or rights to shares by way of remuneration. Shareholders at the General Meeting of Shareholders held in May 2009 approved granting shares to members of the Supervisory

Board as part of their remuneration. As the Supervisory Board needs to be able to recruit and maintain future members from the global market place, the ability to grant share by way of remuneration is deemed to be of critical importance.

#### III.7.2

Any shares held by a Supervisory Board member in the Company on whose board he sits are long-term investments. The undertaking by members of the Supervisory Board not to transfer or otherwise dispose of shares in AMG's share capital until the earlier of the third anniversary of the date of the grant and the first anniversary of the date on which such member ceases to be a member of the Supervisory Board is limited to shares granted as part of their annual remuneration and does not extend to any other shares in the Company held by such member.

### Conflicts of Interest

No conflicts of interest that were of material significance to the Company and/or members of the Management Board and Supervisory Board were reported in the period starting January 1, 2012, up to and including March 22, 2013.

Further during the period starting January 1, 2012, up to and including March 22, 2013, the Company did not enter into any material transaction with a shareholder holding an interest of 10% or more in the Company's share capital. Accordingly the Company has complied with best practice provision III.6.4 of the Corporate Governance Code.

### Corporate Governance Statement

The Decree of December 23, 2004, adopting further rules regarding the contents of the annual report, as amended and extended by the Decree of March 20, 2009 (the Decree) requires that a statement is published annually by the Company on its compliance with Corporate Governance regulations in the Netherlands. The Company hereby submits that it has fully complied with this requirement by way of publication of this Annual Report and the specific references therein notably to the Report of the Management Board, Report of the Supervisory Board, the chapter on Risk Management and Internal Control, the chapter on Sustainable Development and the chapter on Corporate Governance, all of which are deemed to be incorporated by reference into the Company's statement on corporate governance as required by the Decree.

# Financial Review

For the year ended December 31	2012	2011
<b>Revenue and expenses</b>		
Advanced Materials revenue	791,329	871,939
Engineering Systems revenue	273,789	313,830
Graphit Kropfmühl revenue	150,484	165,537
Total revenue	1,215,602	1,351,306
Cost of sales	1,019,134	1,113,330
<b>Gross profit</b>	<b>196,468</b>	<b>237,976</b>
Selling, general and administrative expenses	145,569	170,772
Restructuring and asset impairment expenses	16,042	609
Environmental expenses	1,772	5,886
Other (income) expense, net	(1,226)	(8,827)
<b>Operating profit</b>	<b>34,311</b>	<b>69,536</b>

## Revenue

Full year 2012 revenue decreased 10% to \$1,215.6 million, from \$1,351.3 million in 2011. All businesses showed weakness due to the general economic slowdown which continued in 2012. Advanced Materials and Graphit Kropfmühl were impacted by both pricing deterioration and declining demand. Engineering's revenue decline of 13% was driven primarily by the collapse of the solar market.

The Advanced Materials Division's 2012 revenue decreased by \$80.6 million, or 9%, from 2011, to \$791.3 million. Decreases in average selling prices and volumes for antimony and aluminum master alloys and decreases in volumes for ferrovanadium and coatings caused the decline in total revenue.

The Engineering Systems Division's 2012 revenue decreased by \$40.0 million, or 13% to \$273.8 million. The decrease was the result of an 83% decline in solar silicon revenue, slightly offset by 16% and 8% increases in revenue from remelting furnaces and Heat Treatment Services, respectively. 2012 order intake was \$276.0 million, down 5% from 2011.

Graphit Kropfmühl's 2012 revenue decreased by \$15.1 million, or 9%, from 2011, to \$150.5 million. The decrease was the result of lower silicon metal and natural graphite pricing and volume.

## Gross profit

AMG's gross profit declined by \$41.5 million to \$196.5 million in the year ended December 31, 2012, a 17% decline. As a percentage of revenue, gross profit declined from 18% to 16%.

Gross margin remained consistent at 14% for Advanced Materials, as the decline in revenue was offset by improved product mix and a reduction in operating costs.

2012 gross margin for Engineering Systems decreased to 22% from 27% in 2011 due to unfavorable product mix and lower revenues, resulting in a decline in economies of scale.

Graphit Kropfmühl's 2012 gross margin decreased to 15% from 21% in 2011. The decrease in gross profit of \$12.3 million was the result of certain production issues and declining volumes which affected economies of scale.

Note: All amounts in tables in Financial Review section are in thousands of US Dollars, unless otherwise indicated.

## Selling, general and administrative expenses

Selling, general and administrative ("SG&A") costs were \$145.6 million in the year ended December 31, 2012 as compared to \$170.8 million in the year ended December 31, 2011. As a percentage of sales, SG&A costs were slightly lower than 2011 at 12% of sales in 2012 as compared to 13% in 2011.

Personnel expenses declined to \$78.2 million in the year ended December 31, 2012 from \$89.3 million in the year ended December 31, 2011. Due to declining performance in the year, salary and bonuses decreased to \$57.8 million in 2012 from \$61.9 million in 2011. The cash-settled share-based payment expense decreased by \$5.4 million due to stagnant share performance and equity-settled option costs declined by \$1.6 million. The Company incurs professional fees from global service providers for services including audit, tax planning and compliance and legal consultation. Professional fees were \$19.7 million in 2012 as compared to \$22.4 million in 2011. Outside consulting remains a large expense to the Company and was impacted by the costs associated with the GK squeeze-out as well as the legal fees associated with amendments to the Company's credit facility. Research and development expense declined to \$5.7 million in the year ended December 31, 2012 as compared to \$8.1 million in the year ended December 31, 2011. As the economy slowed, certain projects were put on hold. All other SG&A expenses, such as travel and entertainment, insurance, occupancy, communication and bank fees declined to \$42.0 million in the year ended December

31, 2012 from \$50.9 million in the year ended December 31, 2011. The primary reason for this decline was related to bad debt expense. In 2012, the total bad debt expense was \$0.5 as compared to the significant expense of \$12.2 million in 2011. Bad debt expense in 2011 related to a Korean manufacturer's note receivable totaled \$4.2 million while provisions related to non-recoverable Timminco receivables were \$7.5 million.

## Other income

Other income for the year ended December 31, 2011 was primarily negative goodwill ("bargain purchase") income booked on the KB Alloys acquisition of \$5.4 million and an insurance recovery of \$2.8 million. In the year ended December 31, 2012, other income was \$1.2 million.

## Operating profit

AMG's operating profit decreased to \$34.3 million in the year ended December 31, 2012 from \$69.5 million in the period ended December 31, 2011, a 51% decline. The general weakness in gross profit could not be overcome by the declines in SG&A. In addition, the net asset impairment and restructuring expenses were over \$15 million higher in the year ended December 31, 2012. Asset impairment charges of \$9.9 million related to primarily to the assets of a solar business in the United States, which was impacted by a general collapse in the solar industry, and intangible assets at a newly acquired technology company. The reassessment of management across all businesses and a desire to cut costs led to restructuring charges of \$6.2 million during the year.

## Non-recurring items

A summary of non-recurring items affecting the 2012 and 2011 results is presented below:

For the year ended December 31	2012	2011
<b>Non-recurring items included in operating profit:</b>		
Provisions for Timminco receivables and notes	–	7,541
Restructuring expense	6,151	2,526
Environmental expense	1,772	5,886
Impairment of ESD and AMD assets	9,891	14,992
Reversal of impairment of GK assets	–	(16,909)
Bargain purchase gain on acquisition	–	(5,361)
<b>Total non-recurring items included in operating profit</b>	<b>17,814</b>	<b>8,675</b>
<b>Non-recurring losses from investment in Timminco</b>	<b>–</b>	<b>17,706</b>
<b>Non-recurring losses from revaluation of Timminco convertible debt included in finance costs</b>	<b>–</b>	<b>2,624</b>

## Finance costs

The table below sets forth AMG's net finance expense for the periods ended December 31, 2012 and 2011. Increasing debt levels were partially offset by lower extinguishment of debt expense.

For the year ended December 31	2012	2011
Finance expense	26,256	26,370
Finance income	(1,051)	(5,457)
Foreign exchange loss	581	1,366
Net Finance costs	25,786	22,279

## Income taxes

The provision for income taxes decreased to \$10.8 million for the year ended December 31, 2012 from \$18.7 million for the period ended December 31, 2011. The lower provision was the result of the Company's lower profit before income tax. The effective tax rate for 2012 was 99%, which was significantly higher than the effective rate of 69% in 2011. The tax rate was negatively impacted by the asset impairment expenses of \$9.9 million, which are generally not deductible for tax purposes. In addition, restructuring expenses of \$6.2 million were generally recorded in jurisdictions where no tax benefit could be booked. Excluding those expenses, the effective tax rate would have been 40%.

## Net income

The Company recorded net income attributable to shareholders of \$2.4 million in the year ended December 31, 2012 as compared to income of \$5.2 million in the year ended December 31, 2011.

## Liquidity and capital resources

### SOURCES OF LIQUIDITY

The Company's sources of liquidity include cash and cash equivalents, cash from operations and amounts available under credit facilities. At December 31, 2012, the Company had \$121.6 million in cash and cash equivalents and \$50.8 million available on its revolving credit facility. Changes in the Company's liquidity were due primarily to the investments in expansion projects and acquisitions offset by working capital improvements during the year.

	2012	2011
Non-current loans and borrowings	265,553	210,448
Current loans and borrowings	50,291	58,173
Total debt	315,844	268,621
Cash	121,639	79,571
Net debt	194,205	189,050

The Company is subject to three primary debt covenants in its credit facility. Violating these covenants would limit the Company's access to liquidity. After monitoring the expected debt covenants for 2013 and 2014, the Company amended its covenants in March 2013 to lower a minimum ratio required by its credit facility. See note 22 to the consolidated financial statements for additional details on the covenants in the credit facility and the amendment obtained.

The table below summarizes the Company's net cash provided by or used in its operating activities, investing activities and financing activities for the years ended December 31, 2012 and 2011.

For the year ended December 31	2012	2011
<b>Net cash flows from operations</b>	65,637	45,039
Capital expenditures	(48,109)	(51,922)
Acquisitions, net of cash	(166)	(29,345)
Cash flows used in other investing	(264)	(1,455)
<b>Net cash flows used in investing activities</b>	(48,539)	(82,722)
<b>Cash flows generated from financing activities</b>	21,661	27,824

Cash flows from operations were \$65.6 million in 2012 compared to cash flows from operations of \$45.0 million in 2011. The 2012 cash flows from operations are primarily the result of \$84.8 million in EBITDA and a \$9.9 million decrease in working capital less \$18.6 million in net cash interest payments and \$12.6 million in cash tax payments.

Cash used in investing activities was \$48.5 million in 2012. Significant capital expenditures included the following:

- New capacity for ferrovanadium business - \$11.2 million
- New silicon metal furnace - \$4.2 million
- Mining assets in Brazil - \$4.7 million
- Chrome metal vacuum furnace - \$1.6 million
- General maintenance capital of \$11.6 million

In 2011, AMG invested in capital expenditures of \$51.9 million and acquired KB Alloys LLC and AMG Intellifast GmbH for \$29.0 million.

Cash generated from financing activities was \$21.7 million in 2012, a \$6.2 million decrease from 2011. This decrease was primarily attributable to the acquisition of 11.8% of Graphit Kropfmühl's outstanding common shares in 2012 of \$15.3 million (including related costs), reduced by a \$9.0 million increase in net proceeds from issuance of debt and repayment of borrowings in 2012. The increase in the credit facility in 2012 was used to fund the Brazilian mine expansion and the acquisition of Graphit Kropfmühl shares.



## Outlook

AMG is implementing changes to its reporting and operational structure in 2013. Effective January 1, 2013, to better coordinate organizational responsibilities and value chains and improve transparency, AMG has realigned its three operating units as follows: AMG Processing, AMG Mining and AMG Engineering. AMG Processing contains the "conversion" activities, i.e. purchasing and upgrading of high performance materials. AMG Mining includes AMG's mine based material value chains, i.e. tantalum, niobium, antimony, graphite and silicon. AMG Engineering contains the same operating activities as in 2012. AMG will provide segment reporting for these three entities on a go forward basis.

In this environment of slow global growth, AMG is implementing measures to improve cash flow through reductions in capital investment and improved working capital management. In 2013 AMG is targeting an increase in operating margins through SG&A cost reductions, operational realignment and more streamlined management decision-making. Despite the low growth environment, this should generate increased cash flow and EBITDA leading to a reduction in net debt in 2013.

# Financial Statements

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# Consolidated Income Statement

For the year ended December 31	note	2012	2011
In thousands of US Dollars			
<b>Continuing operations</b>			
Revenue	6	1,215,602	1,351,306
Cost of sales		1,019,134	1,113,330
Gross profit		196,468	237,976
Selling, general and administrative expenses		145,569	170,772
Restructuring expense	26	6,151	2,526
Asset impairment expense (reversal)	12, 13, 17	9,891	(1,917)
Environmental expense	26	1,772	5,886
Other expenses		46	1,243
Other income	7	(1,272)	(10,070)
Operating profit		34,311	69,536
Finance expense	9, 22	26,256	26,370
Finance income	9	(1,051)	(5,457)
Foreign exchange loss	9	581	1,366
Net finance costs	9	25,786	22,279
Share of income (loss) of associates and joint ventures	14	2,353	(20,265)
Profit before income tax		10,878	26,992
Income tax expense	10	10,808	18,702
Profit for the year		70	8,290
Attributable to:			
Shareholders of the Company		2,392	5,160
Non-controlling interests		(2,322)	3,130
		70	8,290
<b>Earnings per share</b>			
Basic earnings per share	21	0.09	0.19
Diluted earnings per share	21	0.09	0.19

The notes are an integral part of these consolidated financial statements.

# Consolidated Statement of Comprehensive Income

For the year ended December 31	note	2012	2011
In thousands of US Dollars			
<b>Profit for the year</b>		70	8,290
Exchange differences on translation of foreign operations	20	3,183	(7,475)
Gain (loss) on cash flow hedges, net of tax of (\$2,029) and \$3,315, respectively	20	6,798	(18,223)
Gain (loss) recognized directly in other comprehensive income	20	9,981	(25,698)
<b>Total comprehensive income (loss)</b>	20	10,051	(17,408)
Attributable to:			
Shareholders of the Company		12,448	(19,902)
Non-controlling interests		(2,397)	2,494

The notes are an integral part of these consolidated financial statements.

# Consolidated Statement of Financial Position

As at December 31	note	2012	2011
In thousands of US Dollars			
<b>Assets</b>			
Property, plant and equipment	12	288,269	263,586
Goodwill	13	24,751	23,535
Intangible assets	13	13,971	14,557
Investments in associates and joint ventures	14	7,351	5,085
Derivative financial instruments	32	527	1
Deferred tax assets	10	28,777	29,142
Restricted cash	18	11,888	11,074
Notes receivable		227	250
Other assets	17	18,463	17,866
<b>Total non-current assets</b>		<b>394,224</b>	<b>365,096</b>
Inventories	15	211,531	228,887
Trade and other receivables	16	177,232	188,103
Derivative financial instruments	32	3,229	3,956
Other assets	17	40,066	35,184
Cash and cash equivalents	19	121,639	79,571
<b>Total current assets</b>		<b>553,697</b>	<b>535,701</b>
<b>Total assets</b>		<b>947,921</b>	<b>900,797</b>
<b>Equity</b>			
Issued capital		743	742
Share premium		382,176	381,921
Other reserves		32,823	26,771
Retained earnings (deficit)		(205,015)	(203,976)
Equity attributable to shareholders of the Company		210,727	205,458
Non-controlling interests		6,818	15,160
<b>Total equity</b>	20	<b>217,545</b>	<b>220,618</b>
<b>Liabilities</b>			
Loans and borrowings	22	265,553	210,448
Employee benefits	24	92,844	90,078
Provisions	26	31,852	27,019
Deferred revenue	28	2,724	–
Government grants	27	472	732
Other liabilities	29	6,690	9,276
Derivative financial instruments	32	11,082	8,122
Deferred tax liabilities	10	28,102	26,434
<b>Total non-current liabilities</b>		<b>439,319</b>	<b>372,109</b>
Loans and borrowings	22	20,333	17,436
Short term bank debt	23	29,958	40,737
Government grants	27	55	34
Other liabilities	29	58,934	51,673
Trade and other payables	30	125,342	128,493
Derivative financial instruments	32	3,900	10,661
Advance payments	6	26,989	30,204
Deferred revenue	28	2,533	–
Current taxes payable	10	8,623	14,468
Provisions	26	14,390	14,364
<b>Total current liabilities</b>		<b>291,057</b>	<b>308,070</b>
<b>Total liabilities</b>		<b>730,376</b>	<b>680,179</b>
<b>Total equity and liabilities</b>		<b>947,921</b>	<b>900,797</b>

The notes are an integral part of these consolidated financial statements.

# Consolidated Statement of Changes in Equity

In thousands of US Dollars	Equity attributable to shareholders of the parent					Non-controlling interests	Total equity
	Issued capital	Share premium	Other reserves	Retained deficit	Total		
	(note 20)		(note 20)				
<b>Balance at January 1, 2011</b>	741	381,636	52,924	(213,247)	222,054	11,911	233,965
Foreign currency translation	–	–	(6,839)	–	(6,839)	(636)	(7,475)
Loss on cash flow hedges, net of tax	–	–	(18,223)	–	(18,223)	–	(18,223)
Net loss recognized through other comprehensive income	–	–	(25,062)	–	(25,062)	(636)	(25,698)
Profit for the year	–	–	–	5,160	5,160	3,130	8,290
Total comprehensive (loss) income for the year	–	–	(25,062)	5,160	(19,902)	2,494	(17,408)
Transfer to retained deficit	–	–	(4,152)	4,152	–	–	–
Issuance of shares to Supervisory board	1	285	–	–	286	–	286
Non-controlling interest obtained through acquisition	–	–	–	–	–	1,102	1,102
Equity-settled share-based payments	–	–	3,061	–	3,061	–	3,061
Dividend paid to non-controlling interest	–	–	–	–	–	(347)	(347)
Other	–	–	–	(41)	(41)	–	(41)
<b>Balance at December 31, 2011</b>	742	381,921	26,771	(203,976)	205,458	15,160	220,618
<b>Balance at January 1, 2012</b>	742	381,921	26,771	(203,976)	205,458	15,160	220,618
Foreign currency translation	–	–	3,258	–	3,258	(75)	3,183
Gain on cash flow hedges, net of tax	–	–	6,798	–	6,798	–	6,798
Net profit (loss) recognized through other comprehensive income	–	–	10,056	–	10,056	(75)	9,981
Profit (loss) for the year	–	–	–	2,392	2,392	(2,322)	70
Total comprehensive income (loss) for the year	–	–	10,056	2,392	12,448	(2,397)	10,051
Transfer to retained deficit	–	–	(6,021)	6,021	–	–	–
Issuance of shares to Supervisory board	1	263	–	–	264	–	264
Non-controlling interests obtained through acquisition	–	–	–	(9,452)	(9,452)	(5,894)	(15,346)
Equity-settled share-based payments	–	–	2,017	–	2,017	–	2,017
Dividend paid to non-controlling interest	–	–	–	–	–	(51)	(51)
Other	–	(8)	–	–	(8)	–	(8)
<b>Balance at December 31, 2012</b>	743	382,176	32,823	(205,015)	210,727	6,818	217,545

The notes are an integral part of these consolidated financial statements.



# Consolidated Statement of Cash Flows

For the year ended December 31	note	2012	2011
In thousands of US Dollars			
<b>Cash flows from operating activities</b>			
Profit for the year		70	8,290
Adjustments to reconcile net profit to net cash flows:			
Non-cash:			
Income tax expense	10	10,808	18,702
Depreciation and amortization	12, 13	31,558	29,625
Amortization of purchase accounting adjustment to inventory		–	235
Asset impairment expense (reversal)	12, 13, 17	9,891	(1,917)
Net finance costs	9	25,786	22,279
Share of (profit) loss of associates and joint ventures	14	(2,353)	20,265
Loss on sale or disposal of property, plant and equipment	12	327	50
Equity-settled share-based payment transactions	25	1,724	3,438
Movement in provisions, pensions and government grants	24, 26, 27	9,088	9,266
Working capital adjustments			
Change in inventories		17,698	(19,963)
Change in trade and other receivables		25,535	(24,749)
Change in prepayments		(8,353)	8,440
Change in trade payables and other liabilities		(26,159)	18,699
Other		1,189	(1,380)
Cash flows from operating activities		96,809	91,280
Finance costs paid	9	(19,123)	(14,593)
Finance costs received	9	522	2,530
Income tax paid, net	10	(12,571)	(34,178)
Net cash flows from operating activities		65,637	45,039
<b>Cash flows used in investing activities</b>			
Proceeds from sale of property, plant and equipment	12	332	609
Acquisition of subsidiaries (net of cash acquired \$133 and \$3,856, respectively)	5	(166)	(29,345)
Acquisition of property, plant and equipment and intangibles	12, 13	(48,109)	(51,922)
Related party loans	36	–	(5,002)
Change in restricted cash	18	(671)	1,369
Other		75	1,569
Net cash flows used in investing activities		(48,539)	(82,722)
<b>Cash flows from financing activities</b>			
Proceeds from issuance of debt	22, 23	72,078	227,511
Payment of transaction costs related to debt issuance	22	–	(10,848)
Repayment of borrowings	22, 23	(35,126)	(188,740)
Acquisition of non-controlling interests	5	(15,291)	(111)
Other		–	12
Net cash flows from financing activities		21,661	27,824
Net increase (decrease) in cash and cash equivalents		38,759	(9,859)
Cash and cash equivalents at January 1		79,571	89,311
Effect of exchange rate fluctuations on cash held		3,309	119
Cash and cash equivalents at December 31	19	121,639	79,571

The notes are an integral part of these consolidated financial statements.

# Notes to the Consolidated Financial Statements

## 1. Reporting entity

The consolidated financial statements of AMG Advanced Metallurgical Group N.V. (herein referred to as “the Company”, “AMG NV” or “AMG”) for the year ended December 31, 2012 were authorized for issuance in accordance with a resolution of the Supervisory Board on March 22, 2013.

AMG is domiciled in the Netherlands. The address of the Company’s registered office is WTC Amsterdam, Toren C, Strawinskylaan 1343, 1077 XX Amsterdam. The consolidated financial statements of the Company as at and for the year ended December 31, 2012 comprise the Company and the companies that comprise its subsidiaries (together referred to as the “Group”) and the Company’s interest in associates and jointly controlled entities.

AMG was incorporated in the Netherlands as a public limited liability company on November 21, 2006. In July 2007, the Company completed an initial public offering (“IPO”) of 9,333,409 shares, which are listed on NYSE Euronext, Amsterdam, the Netherlands.

AMG is organized under three reportable segments: Advanced Materials, Engineering Systems and Graphit Kropfmühl (“GK”).

The subsidiaries that make up these three operating segments are primarily located in Europe, North America and South America. The Advanced Materials segment develops and produces specialty metals, alloys and high performance materials. AMG is a significant producer of specialty metals, such as ferrovanadium, ferronickel-molybdenum, aluminum master alloys and additives, chromium metal and ferrotitanium for Energy, Aerospace, Infrastructure and Specialty Metal and Chemicals applications. Other key products include specialty alloys for titanium and superalloys, coating materials, tantalum and niobium oxides, vanadium chemicals and antimony trioxide. The Engineering Systems segment designs,

engineers and produces advanced vacuum furnace systems and operates vacuum heat treatment facilities, primarily for the Aerospace and Energy (including solar and nuclear) industries. Furnace systems produced by AMG include vacuum remelting, solar silicon melting and crystallization, vacuum induction melting, vacuum heat treatment and high pressure gas quenching, turbine blade coating and sintering. AMG also provides vacuum case-hardening heat treatment services on a tolling basis. GK has historically been a majority controlled, publicly listed subsidiary of AMG. In 2012, AMG completed its squeeze-out of minority shareholders making it a wholly-owned subsidiary. While AMG now owns 100% of the shares, it is still managed by the same operating management. Based on its secure raw material sources in Africa, Asia and Europe, GK is a specialist in the production of silicon metal and the extraction, processing and refining of natural crystalline graphite for a wide range of energy saving industrial applications.

These financial statements represent the consolidated financial statements of the Company. These consolidated financial statements as of December 31, 2012 present the consolidated financial position, results of operations and cash flows of the Company and its subsidiaries.

The parent company financial statements are prepared in accordance with part 9, Book 2, article 362.8 of the Netherlands Civil Code. In accordance with part 9, Book 2, article 402 of the Netherlands Civil Code, the parent company income statement has been condensed.

The consolidated financial statements of the Company include the accounts of all entities in which a direct or indirect controlling interest exists through voting rights or qualifying joint ventures and associates at the reporting dates. No entities in which the Company has less than 50.0% interest are consolidated in the Company’s financial statements. The following table includes all entities in which AMG has any ownership interest.

Name	Country of incorporation	Percentage held (directly or indirectly) by the Company	Percentage held (directly or indirectly) by the Company
		December 31, 2012	December 31, 2011
ABS Apparate-und Behälterbau Staßfurt GmbH	Germany	49	49
ALD C&K Vacuum Technologies (Shanghai) Co., Ltd.	China	65	65
ALD Holcroft Vacuum Technologies Co.	United States	50	50
ALD Industrie-und Montagepark Staaken GmbH	Germany	51	51
ALD Own & Operate GmbH	Germany	100	100
ALD Technologies Polska S.z.o.o	Poland	–	100
ALD Thermal Treatment, Inc.	United States	100	100
ALD Thermo Technologies Far East Co., Ltd.	Japan	100	100
ALD Tratamientos Termicos S.A.	Mexico	100	100
ALD Vacuum Technologies GmbH	Germany	100	100
ALD Vacuum Technologies Inc.	United States	100	100
ALD Vacuum Technologies Ltd.	United Kingdom	100	100
ALD Vacuum Technologies Singapore PTE Ltd.	Singapore	100	100
ALD Vakuumpyje Technologii OOO	Russia	100	100
AMG Advanced Metallurgical Group Investment BV	Netherlands	100	100
AMG Aluminum UK Ltd.	United Kingdom	100	–
AMG Brazilian Holding BV	Netherlands	100	100
AMG Coating Technologies GmbH	Germany	100	100
AMG Conversion Ltd.	Canada	100	100
AMG Dutch Holdings CV	Netherlands	100	100
AMG Euro Holdings CV	Netherlands	100	100
AMG Idealcast Solar Corporation	United States	100	100
AMG Intellifast GmbH	Germany	100	100
AMG Invest GmbH	Germany	100	100
AMG Mining AG	Germany	100	–
AMG Mining Ltd.	United Kingdom	100	100
AMG Vanadium, Inc.	United States	100	100
Benda-Lutz-Alpoco Sp.z o.o.	Poland	51	51
Bogala Graphite Lanka Plc. (a)	Sri Lanka	90.4	88.1
Bostlan S.A.	Spain	25	25
Branwell Graphite Ltd.	United Kingdom	100	88.1
CIF Holding Brazil BV	Brazil	100	–
Companhia Industrial Fluminense Mineracao S.A.	Brazil	100	100
Dynatech Furnaces Private Ltd.	India	70	30
Ecopedras LTA	Portugal	100	100
Edelgraphit GmbH	Germany	100	88.1
Ester-Technologie GmbH	Germany	50.2	50.2
Ester-Separation GmbH	Germany	60	60
Fair Deal Trading (Pvt.) Ltd. (a)	Sri Lanka	90.4	88.1
FNE Forschungsinstitut für Nichteisen-Metalle GmbH	Germany	100	100
Furnaces Nuclear Applications Grenoble S.A.	France	100	100
GfE Fremat GmbH	Germany	100	100
GfE Gesellschaft für Elektrometallurgie mbH	Germany	100	100
GfE Materials Technology Inc.	United States	100	100
GfE Metalle und Materialien GmbH	Germany	100	100
GfE Unterstützungskasse GmbH	Germany	100	100
GK Ancuabe Graphite Mine S.A.	Germany	98	–
GK Asia Ltd. (formerly Mutual Sources Ltd.)	China	100	88.1
GK Bergbau GmbH	Germany	100	–
GK Besucherbergwerk GmbH	Germany	24.9	–
GK Graphit Kropfmühl GmbH	Germany	100	88.1
Grafite Kropfmuehl de Mocambique, Limitada (b)	Mozambique	97.5	88.1
Graphit Kropfmühl AG (merged into AMG Mining AG)	Germany	–	88.1
Graphit Kropfmühl do Brasil Participacoes Ltda.	Brazil	99.9	88.1
Graphit Kropfmühl Mauritius	Germany	100	–

Name	Country of incorporation	Percentage held (directly or indirectly) by the Company	Percentage held (directly or indirectly) by the Company
		December 31, 2012	December 31, 2011
Graphite Týn spol. s r.o.	Czech Republic	100	88.1
Graphitwerk Kropfmühl Beteiligungs GmbH	Germany	100	–
KB Alloys, LLC	United States	100	100
KB Alloys China Holding, LLC	United States	100	100
KBA China Holding, LLC	United States	100	100
Korin Grundstücks-gesellschaft GmbH & Co. Projekt 30 KG	Germany	94.9	94.9
London & Scandinavian Metallurgical Co., Ltd.	United Kingdom	100	100
LSM Brasil S.A.	Brazil	100	100
London & Scandinavian Metallurgical Holdings BV	Netherlands	100	100
LSM (Jiaxing) Co., Ltd.	China	100	100
Metallurg Delaware Holding Company	United States	100	100
Metallurg Europe Ltd.	United Kingdom	100	100
Metallurg European Holdings LLC	United States	100	100
Metallurg Holdings Corporation	United States	100	100
Metallurg Holdings Inc.	United States	100	100
Metallurg, Inc.	United States	100	100
Metallurg International Holdings LLC	United States	100	100
Metallurg Mexico S.A. de C.V.	Mexico	100	100
Metallurg Servicios S.A. de R.L. de C.V.	Mexico	–	100
MG India Pvt. Ltd.	India	100	100
Nanjing Yunhai KB Alloys Co., LTD.	China	45	45
New Jersey Renewables Corporation	United States	100	100
Produits Chimiques de Lucette S.A.S.	France	100	100
Qingdao Kropfmuehl Graphite Co. Ltd.	China	100	88.1
RW Silicium GmbH	Germany	100	88.1
Share Investments (Pvt.) Ltd.	Sri Lanka	100	88.1
Shieldalloy Metallurgical Corporation	United States	100	100
Silmag DA	Norway	50	50
Société Industrielle et Chimique de l'Aisne S.A.S.	France	100	100
Suda Maden A.S.	Turkey	99.99	99.99
Sudamin France S.A.S	France	100	100
Sudamin Holdings SPRL	Belgium	100	100
Sudamin IT S.A.R.L.	France	100	100
Sudamin SPRL	Belgium	100	100
Technologie-und Gründer-zentrum GmbH	Germany	2.5	2.5
The Aluminium Powder Company Ltd.	United Kingdom	100	100
Thermique Industrie Vide	France	56.8	56.8
Timminco Ltd. (c)	Canada	–	41.9
VACUHEAT GmbH	Germany	100	100
VACUHEAT Verwaltungs GmbH	Germany	100	100
Zimbabwe German Graphite Mines, Pvt. Ltd. (d)	Zimbabwe	50	88.1

- (a) In 2011, Bogala Graphite and Fair Deal Trading were 90.4% owned by Graphit Kropfmühl, of which the Company owned 88.1%. Therefore, the Company effectively held 79.6% of these companies. As of December 31, 2012, the company owned 100% of Graphit Kropfmühl.
- (b) Grafite Kropfmuehl de Mocambique, Limitada, a holding company, was 97.5% owned by Graphit Kropfmühl in 2011, of which the Company owned 88.1%. Therefore, the Company effectively held 85.9% of this company. As of December 31, 2012, the company owned 100% of Graphit Kropfmühl.
- (c) In 2011, AMG owned 41.9% of the shares Timminco Ltd. and accounted for it as an associate. It is currently being dissolved through bankruptcy proceedings, and therefore AMG no longer has an ownership stake in Timminco Ltd. Timminco Ltd. also had subsidiaries which are not included above.
- (d) Zimbabwe German Graphite Mines, Pvt. Ltd. was 50.0% owned by Graphit Kropfmühl in 2011, of which the Company owned 88.1%. As of December 31, 2012, the company owned 100% of Graphit Kropfmühl. Therefore, in 2011 the Company effectively held 44.0% of this company. This company is not recognized according to the equity method of accounting in 2012 or 2011 as no decisive influence can be exerted on the business and financial policy of the company due to political reasons.

Please see note 5 for a description of business combinations completed in 2012. Any newly established companies in 2012 are holding companies for future business purposes.

## 2. Basis of preparation

### (A) STATEMENT OF COMPLIANCE

EU law (IAS Regulation EC 1606/2002) requires that the annual Consolidated Financial Statements of the Company for the year ending December 31, 2012 be prepared in accordance with accounting standards adopted and endorsed by the European Union ("EU") further to the IAS Regulation (EC 1606/2002) (further referred to as "IFRS", as endorsed by the EU).

The consolidated financial statements of AMG NV and its subsidiaries have been prepared in accordance with International Financial Reporting Standards ("IFRS") as of December 31, 2012 as adopted by the EU.

### (B) BASIS OF MEASUREMENT

The consolidated financial statements have been prepared on the historical cost basis except for derivative financial instruments, which are measured at fair value. The carrying value of recognized assets and liabilities that are designated as hedged items in fair value hedges that would otherwise be carried at cost are adjusted to record changes in the fair value attributable to the risks that are being hedged in effective hedge relationships. The methods used to measure fair values are discussed further in note 3.

All amounts included in the consolidated financial statements and notes are presented in US Dollars and rounded to the nearest US Dollar in thousands except for share amounts and where otherwise indicated.

Certain amounts in the consolidated statement of cash flows have been restated in order to more clearly reflect the cash and non-cash operating activities of the Company. There has been no adjustments to the total cash flows from operating activities. Certain amounts in the consolidated statement of shareholders' equity have been restated in order to more closely align the IFRS accounts of the Company with the Dutch GAAP requirements of the parent company. This has the impact of reducing retained deficit by \$6,593 in the year ended December 31, 2012 (2011: \$12,614) and increasing other reserves by the same amount. Please see note 20 to the consolidated financial statements and note 9 to the parent company financial statements for additional details.

### (C) USE OF ESTIMATES AND JUDGMENTS

The preparation of financial statements requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised and in any future periods affected.

### Key sources of estimation uncertainty

Critical judgments, key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date are discussed below or in the relevant notes. These are identified as the judgments and assumptions that could have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year

- Note 6 – determination of furnace construction contract revenue
- Note 10 – income tax
- Notes 12 and 13 – measurement of the recoverable amounts of assets and cash-generating units
- Note 14 – associates and joint ventures
- Note 24 – measurement of defined benefit obligations
- Note 25 – measurement of share-based payments
- Note 26 – measurement of provisions
- Note 32 – measurement of financial instruments

### Determination of furnace construction contract revenue

Revenue related to furnace construction contracts is recorded based on the estimated percentage of completion of contracts as determined by management. Revenue is recognized based on an overall engineering design plan and management's estimate of the percentage of the project that has been completed, based on work performed in-house and by sub-suppliers. The determination of the progress made and the level of percentage of completion requires significant management judgment. Total percentage of completion revenue for the year ended December 31, 2012 was \$186,321 (2011: \$177,632).

### Income tax

Uncertainties exist with respect to the interpretation of complex tax regulations and the amount and timing of future taxable income. Given the wide range of international business relationships and the long term nature and complexity of existing contractual agreements, differences arising between the actual results and the assumptions made, or future changes to such assumptions, could necessitate future adjustments to taxable income and expense already recorded. The Company establishes provisions, based on reasonable estimates, for possible consequences of audits by the tax authorities of the respective countries in which it operates. The amount of such provisions is based on various factors such as experience of previous tax audits and differing interpretations of tax regulations by the taxable entity and the responsible tax authority. Such differences of interpretation may arise on a wide variety of issues depending on the conditions prevailing in the respective subsidiary's domicile.

Deferred tax assets are recognized for all unused tax losses to the extent that it is probable that taxable profit will be available against which the losses can be utilized. Significant management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and level of future taxable profits, together with future tax planning strategies. The carrying value of recognized tax losses at December 31, 2012 was \$16,206 (2011: \$11,950). There are significant unrecognized tax losses as described in more detail in note 10.

#### **Measurement of the recoverable amounts of assets and cash-generating units**

##### *Goodwill and long-lived assets*

The determination of whether goodwill or long-lived assets are impaired requires an estimate of the recoverable amount of the cash-generating unit or group of cash-generating units to which the goodwill or long-lived assets have been allocated. The recoverable amount is defined as the higher of a cash-generating unit's fair value less costs to sell and its value in use. The value in use and fair value less costs to sell methodologies require the entity to estimate the future cash flows expected to arise from the cash-generating units or group of cash-generating units and to discount these cash flows with a risk adjusted discount rate. Expected future cash flows are based on management's best estimates of future business conditions but cannot be guaranteed as the Company does not have fixed revenues or costs. The risk adjusted discount rate is estimated using a comparison of peers but can vary based on changes in the debt or equity markets or risk premiums assigned to countries or industries. The carrying amount of goodwill at December 31, 2012 was \$24,751 (2011: \$23,535).

#### **Measurement of associates and joint ventures**

The determination of whether an associate or joint venture is impaired requires an estimate of the recoverable amount of the investment. The recoverable amount is defined as the higher of the investment's fair value less costs to sell and its value in use. Certain associate investments were impaired in the year ended December 31, 2011. The carrying amount of associates and joint ventures at December 31, 2012 was \$7,351 (2011: \$5,085).

#### **Measurement of defined benefit obligations**

The cost of defined benefit pension plans is determined using actuarial valuations. The actuarial valuations involve making assumptions about discount rates, expected rates of return on assets, future salary increases, mortality rates and future pension increases. Assumptions are reviewed at each reporting date. Due to the long term nature of these plans and the complexity of the valuations, such estimates

are subject to significant uncertainty. The net employee liability at December 31, 2012 was \$92,844 (2011: \$90,078).

In determining the appropriate discount rate, management considers the interest rates of corporate bonds in the respective currency with at least a rating of AA, with extrapolated maturities corresponding to the expected duration of the defined benefit obligation.

The mortality rate is based on publicly available mortality tables for the specific country. Future salary increases and pension increases are based on expected future inflation rates for the respective country.

Further details about the assumptions used are given in note 24.

#### **Measurement of share-based payments**

The group measures the initial cost of cash-settled and equity-settled transactions with employees by reference to the fair value of the equity instruments on the date of grant. Estimating fair value requires determining the most appropriate valuation model for a grant of equity instruments, which is dependent on the terms and conditions of the grant. This also requires determining the most appropriate inputs into the valuation model including the expected life of the option, volatility, and dividend yield and making assumptions about them. Equity-settled transactions maintain the same fair value throughout the life of the option, while the fair value of cash-settled transactions are remeasured at each reporting date. The assumptions and model used in determining the fair value of share-based payments are disclosed in note 25.

#### **Measurement of provisions**

Provisions have been recorded with respect to environmental costs and recoveries, restructuring, warranties, cost estimates, partial retirement, restoration costs and other liabilities. These provisions require management's judgment with respect to the amounts recorded and the expected timing of payments. Amounts or timing of payments may change due to changes in circumstances or execution of plans related to these liabilities. As at December 31, 2012, the provisions balance was \$46,242 (2011: \$41,383).

The Company has certain responsibilities related to its mining locations. A provision for future restoration, rehabilitation and decommissioning costs requires estimates and assumptions to be made around the relevant regulatory framework, the magnitude of the possible disturbance and the timing of mining, extent and costs of the required closure and rehabilitation activities. To the extent that the actual future costs differ from these estimates or that management assumptions change, adjustments will be recorded at each reporting date.



If the estimated pre-tax discount rate used in the calculations had been 10% higher than management's estimate, the carrying amount of the provision would have been approximately \$400 lower. See note 26 for additional detail on provisions.

### Measurement of financial instruments

Fair value of non-derivative financial instruments, which is determined for disclosure purposes, is calculated based on the present value of future principal and interest cash flows, discounted at the market rate of interest at the reporting date. Management's judgment is used to determine the appropriate discount rates used for these calculations.

## 3. Significant accounting policies

### (A) BASIS OF CONSOLIDATION

#### (i) Consolidation principles

The consolidated financial statements comprise the financial statements of the Company and its subsidiaries as at December 31, 2012.

Subsidiaries are fully consolidated from the date of acquisition, being the date on which the Company obtains control, and continue to be consolidated until the date when such control ceases. The financial statements of the subsidiaries are prepared for the same reporting period as the parent company using consistent accounting policies. All intra-group balances, transactions, unrealized gains and losses resulting from intra-group transactions and dividends are eliminated in full.

Losses within a subsidiary are attributed to the non-controlling interest even if that results in a deficit balance.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction. If the Company loses control over a subsidiary, it:

- Derecognizes the assets (including goodwill) and liabilities of the subsidiary
- Derecognizes the carrying amount of any non-controlling interest
- Derecognizes the cumulative translation differences, recorded in equity
- Recognizes the fair value of the consideration received
- Recognizes the fair value of any investment retained
- Recognizes any surplus or deficit in profit or loss
- Reclassifies the parent's share of components previously recognized in other comprehensive income to profit or loss or retained earnings, as appropriate

#### (ii) Associates

Associates are those entities in which the Company has significant influence, but not control, over the financial and operating policies. Associates are accounted for using

the equity method ("equity accounted investees"). The consolidated financial statements include the Company's share of the profit and loss and other comprehensive income of equity accounted investees from the date that significant influence commences until the date that significant influence ceases. When the Company's share of losses exceeds its interest in an equity accounted investee, the carrying amount of that interest (including any long term investments) is reduced to nil and the recognition of further losses is discontinued except to the extent that the Company has an obligation or has made payments on behalf of the investee. Profits and losses resulting from transactions between the Company and the associate are eliminated to the extent of the interest in the associate. See note 14 for further details.

#### (iii) Joint Ventures

A joint venture is a contractual arrangement where two or more parties undertake an economic activity that is subject to joint control. A jointly controlled entity is a joint venture that involves the establishment of a separate entity in which each venturer has an interest. The Company recognizes its interest in joint ventures under the equity method. The consolidated financial statements include the Company's share of the profit and loss and other comprehensive income of jointly controlled investees from the date that joint control commences until the date that joint control ceases. When the Company's share of losses exceeds its interest in a jointly controlled investee, the carrying amount of that interest (including any long term investments) is reduced to nil and the recognition of further losses is discontinued except to the extent that the Company has an obligation or has made payments on behalf of the investee.

When the Company contributes or sells assets to the joint venture any portion of gain or loss from the transaction is recognized based on the substance of the transaction. When the Company purchases assets from the joint venture, the Company does not recognize its share of the profits of the joint venture from the transaction until it resells the assets to an independent party.

### (B) FOREIGN CURRENCY

#### (i) Functional and presentation currency

The local currency is the functional currency for the Company's significant operations outside the United States ("US"), except certain operations in the United Kingdom and Brazil, where the US Dollar is used as the functional currency. The determination of functional currency is based on appropriate economic and management indicators.

These consolidated financial statements are presented in US Dollars, which is the Company's functional and presentation currency.

All financial information is presented in US Dollars and has been rounded to the nearest thousand, unless otherwise stated.

#### **(ii) Foreign currency transactions**

Transactions in foreign currencies are translated to the respective functional currencies of the Company's entities at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency rate of exchange at the reporting date. All differences are taken to profit or loss. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as at the dates of the initial transactions. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined. Foreign currency differences arising on retranslation are recognized in profit or loss. Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition are treated as assets and liabilities of the foreign operation and translated at the closing rate.

#### **(iii) Foreign operations**

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on acquisition, are translated to US Dollars at exchange rates at the reporting date. The income and expenses of foreign operations are translated to US Dollars at the average exchange rates calculated at the reporting date. On consolidation, exchange differences arising from the translation of the net investments in foreign operations are taken directly to other comprehensive income.

Since January 1, 2005, the Company's date of transition to IFRS, such differences have been recognized in the foreign currency translation reserve. When a foreign operation is disposed of, in part or in full, the relevant amount in the foreign currency translation reserve is transferred to profit or loss.

The Company treats certain intra-group loan balances, which are not intended to be repaid in the foreseeable future, as part of its net investment. When a foreign entity is sold, such exchange differences are recognized in the income statement as a part of gain or loss on the sale.

The Company has no foreign operations in hyperinflationary economies. The Company does not hedge its net investments in foreign operations.

### **(C) FINANCIAL INSTRUMENTS**

#### **(i) Non-derivative financial instruments**

Non-derivative financial instruments comprise trade and other receivables, cash and cash equivalents, restricted cash, notes receivable, loans and borrowings, short term bank debt, and trade and other payables. The Company does not have any non-derivative financial instruments which are classified as held-to-maturity investments or available-for-sale financial assets.

Trade and other receivables are initially recorded at fair value, which is the invoiced amount, and are subsequently measured at amortized cost. The Company provides an allowance for impairment for known and estimated potential losses arising from sales to customers based on a periodic review of these accounts. Impaired debts are derecognized when it is probable that they will not be recovered.

Cash and cash equivalents comprise cash balances and call deposits with maturities of 90 days or less. For the purpose of the consolidated statement of cash flows, cash and cash equivalents consist of cash and cash equivalents, as defined above, net of outstanding bank drafts.

Restricted cash, which in whole or in part is restricted for specific purposes including guarantees, is included in a separate line item within non-current assets in the statement of financial position. Restricted cash is measured at amortized cost.

Notes receivable are financial instruments with fixed and determinable payments that are not quoted in an active market. They are initially recorded at the fair value of the note plus direct issuance costs, if any. After initial recognition, notes receivable are subsequently measured at amortized cost using the effective interest method. Convertible notes receivable are bifurcated, if necessary, into the note receivable and the derivative instrument. The derivative instrument is valued first at inception, with the remaining balance being attributed to the note. If bifurcated convertible notes receivable are amended, the derivative instrument is valued at amendment, with the remaining balance being attributed to the note.

Loans and borrowings are initially recorded at the fair value of the proceeds received less direct issuance costs. After initial recognition, loans and borrowings are subsequently measured at amortized cost using the effective interest method.

Short term bank debt, trade and other payables are accounted for at amortized cost.

Fair value of non-derivative liabilities, which is determined for disclosure purposes, is calculated based on the present value of future principal and interest cash flows, discounted at the market rate of interest at the reporting date. For finance leases, the market rate of interest is determined by reference to similar lease agreements.

## (ii) Derivative financial instruments

The Company views derivative instruments as risk management tools and does not use them for trading or speculative purposes. The Company uses derivative instruments, primarily forward contracts and swaps to manage certain foreign currency, commodity price and interest rate exposures. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value, with gains or losses that do not qualify for hedge accounting taken directly to profit or loss. Such derivative financial instruments are carried as assets when the fair value is positive and as liabilities when the fair value is negative.

The fair value of commodity purchase contracts that meet the definition of a derivative under IAS 39 are recognized in the income statement in cost of sales. Commodity contracts that are entered into and continue to be held for the purpose of the receipt or delivery of a non-financial item in accordance with the Company's expected purchase, sale or usage requirements are held at fair value.

Any gains or losses arising from changes in the fair value of derivatives are taken directly to the income statement, except for the effective portion of cash flow hedges, which is recognized in other comprehensive income.

For the purpose of hedge accounting, all hedges are classified as:

- cash flow hedges when hedging exposure to variability in cash flows that is either attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction or the foreign currency risk in an unrecognized firm commitment; or
- fair value hedges when hedging the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment (except for foreign currency risk)

At the inception of a cash flow hedge relationship, the Company formally designates and documents the hedge relationship to which the Company wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge. The documentation includes the identification of the hedging instrument, the hedged item or transaction, the nature of the risk being hedged and how the Company will assess the hedge effectiveness in offsetting the exposure to changes in the hedged item's fair value or cash flows attributable to the hedged risk. Such hedges are expected to be highly effective in achieving offsetting changes in fair value or cash flows and are assessed on an ongoing basis to determine that they actually have been highly effective throughout the financial periods for which they were designated.

For cash flow hedges, the effective portion of the gain or loss on the hedging instrument is recognized directly in

other comprehensive income, while any ineffective portion is recognized immediately in the income statement.

Amounts taken to other comprehensive income are transferred to the income statement when the hedged transaction affects the income statement.

For fair value hedges, the change in value of the hedging derivative is recognized immediately in the income statement. The change in the fair value of the hedged item attributable to the risk hedged is recorded as part of the carrying value of the hedged item and is also recorded in the income statement.

The fair value of forward exchange contracts is calculated by reference to current forward exchange rates for contracts with similar maturity profiles. The fair value of interest rate swaps is determined by reference to market values for similar instruments. The fair value of forward commodity contracts is calculated by reference to current forward prices on relevant commodity exchanges for commodity contracts with similar maturity profiles.

If the hedging instrument expires or is sold, terminated or exercised, then hedge accounting is discontinued prospectively. The cumulative gain or loss previously recognized in other comprehensive income remains there until the forecast transaction or firm commitment occurs. If the forecast transaction or firm commitment is no longer expected to occur amounts previously recognized in other comprehensive income are transferred to the income statement.

The Company enters into certain derivatives that economically hedge monetary assets and liabilities that do not qualify for hedge accounting. Any gains or losses arising from changes in fair value of derivatives during the year that do not qualify for hedge accounting are taken directly to the income statement. They are categorized as financial assets or financial liabilities at fair value through profit or loss.

Derivative instruments that are not designated as effective hedging instruments are classified as current or non-current or separated into a current and non-current portion based on an assessment of the facts and circumstances (i.e., the underlying contracted cash flows):

- When the Company will hold a derivative as an economic hedge (and does not apply hedge accounting) for a period beyond 12 months after the reporting date, the derivative is classified as non-current (or separated into current and non-current portions) consistent with the classification of the underlying item.
- Embedded derivatives that are not closely related to the host contract are classified consistent with the cash flows of the host contract.
- Derivative instruments that are designated as, and are effective hedging instruments, are classified consistently with the classification of the underlying

hedged item. The derivative instrument is separated into a current portion and a non-current portion only if a reliable allocation can be made.

#### **(D) DERECOGNITION OF FINANCIAL ASSETS AND LIABILITIES**

##### **Financial assets**

A financial asset (or where applicable, a part of a financial asset or part of a group of similar financial assets) is derecognized when:

- The rights to receive cash flows from the asset have expired
- The Company retains the right to receive cash flows from the asset but has assumed an obligation to pay them in full without material delay to a third party under a pass-through arrangement; or
- The Company retains the right to receive cash flows from the asset and either (a) has transferred substantially all the risks and rewards of the asset, or (b) has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred the asset.

When the Company has transferred its rights to receive cash flows from an asset and has neither transferred nor retained substantially all the risks and rewards of the asset nor transferred control of the asset, the asset is recognized to the extent of the Company's continuing involvement in the asset. In that case, the Company also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Company has retained. Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Company could be required to pay.

##### **Financial liabilities**

A financial liability is derecognized when the obligation under the liability is discharged, canceled or expired.

Where an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in the income statement.

#### **(E) PROPERTY, PLANT AND EQUIPMENT**

##### **(i) Recognition and measurement**

Items of property, plant and equipment are measured at cost less accumulated depreciation and impairment losses.

Cost includes expenditures that are directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labor,

any other costs directly attributable to bringing the asset to a working condition for its intended use, and the costs of dismantling and removing the items and restoring the site on which they are located.

Costs associated with developing mine reserves are recognized in property, plant and equipment when they are established as commercially viable. These costs can include amounts that were previously recognized as intangible assets during the evaluation phase of the mine development.

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of the respective assets. All other borrowing costs are expensed in the period they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

##### **(ii) Subsequent costs**

The cost of replacing part of an item of property, plant and equipment and the costs of major inspections are recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Company and its cost can be measured reliably. The costs of the day-to-day servicing of property, plant and equipment are recognized in profit or loss as incurred.

##### **(iii) Depreciation**

Depreciation is generally recognized in profit or loss on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment. Land and construction in progress are not depreciated. Mining costs are depreciated on a units-of-production basis and are discussed below.

The estimated useful life for the current and comparative periods are as follows:

• mining costs	4–20 years
• land, buildings and improvements	10–50 years
• machinery and equipment	2–20 years
• furniture and fixtures	2–15 years
• finance leases	4–20 years

Depreciation methods, useful lives and residual values are reassessed at the reporting date.

The depreciation of certain mining costs is linked to the production levels. Therefore, these assets are amortized using a units-of-products basis. The Company's mine in Brazil is currently the only mine asset being depreciated

using this basis and approximates a 5 year remaining life of the mine. Other mining assets are depreciated on a straight-line basis ranging from 4-20 years, depending on useful life.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the income statement in the year the asset is derecognized.

#### **(F) BUSINESS COMBINATIONS AND GOODWILL**

Goodwill (negative goodwill) may arise on the acquisition of subsidiaries, associates and joint ventures.

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date fair value and the amount of any non-controlling interest in the acquiree. For each business combination, the acquirer measures the non-controlling interest in the acquiree either at fair value or at the proportionate share of the acquiree's net identifiable assets. Acquisition costs incurred are expensed and included in administrative expenses.

When the Company acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as at the acquisition date.

If the business combination is achieved in stages, the acquisition date fair value of the acquirer's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date through profit or loss. Any contingent consideration to be transferred by the acquirer will be recognized at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration which is deemed to be an asset or liability will be recognized in accordance with IAS 39 either in profit or loss or as a change to other comprehensive income. If the contingent consideration is classified as equity, it should not be remeasured until it is finally settled within equity.

Goodwill is initially measured at cost. Cost being the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interest over the net identifiable assets acquired and liabilities assumed. If this consideration is lower than the fair value of the net assets of the subsidiary acquired, the difference is recognized in profit or loss.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination, from the acquisition date, is allocated to each of the Group's cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units. Where goodwill forms part of a cash-generating unit and part of the operation within that unit is disposed, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal of the operation. Goodwill disposed of in this circumstance is measured based on the relative values of the operation disposed of and the portion of the cash-generating unit retained.

If the Company completes a transaction that does not meet the definition of a business combination due to the acquiree not meeting the definition of a business, the Company:

- identifies and recognizes the individual identifiable assets acquired and liabilities assumed; and
- allocates the cost of the group of assets and liabilities to the individual identifiable assets and liabilities on the basis of their relative fair values at the date of purchase.

Fair value of identifiable assets in a business combination is determined as follows:

##### **(i) Property, plant and equipment**

The fair value of property, plant and equipment recognized as a result of a business combination is based on market values. The market value of property is the estimated amount for which property could be exchanged on the date of valuation between a willing buyer and a willing seller in an arm's length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion. The market value of items of plant and equipment is based on the quoted market prices for similar items.

##### **(ii) Intangible assets**

The fair value of intangible assets acquired in a business combination is the amount for which the asset could be exchanged between knowledgeable, willing parties in an arm's length transaction based on active markets or the discounted cash flows generated by the respective asset.

### (iii) Inventory

The fair value of work in process and finished goods inventory acquired in a business combination is determined based on its estimated selling price in the ordinary course of business less the estimated costs of completion and sale, and a reasonable profit margin based on the effort required to complete and sell the inventory.

### (iv) Trade and other receivables

The fair value of trade and other receivables is estimated as the present value of future cash flows, discounted at the market rate of interest at the acquisition date. For short term trade and other receivables, discounting is not required.

#### *Subsequent measurement*

Goodwill is measured at cost less accumulated impairment losses. In respect of equity accounted investees, the carrying amount of goodwill is included in the carrying amount of the investment.

## **(G) INTANGIBLE ASSETS**

### (i) Patents and technology

The Company has patents for certain manufacturing processes. Patents and technology are carried at cost less any amortization and impairment losses. The patents are being amortized over a life of 10 years.

### (ii) Development costs

Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognized in profit or loss when incurred.

Development costs are capitalized if and only if the Company can meet the following criteria:

- the intangible asset is clearly identified and the related costs are individualized and reliably monitored;
- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- there is a clear intention to complete the intangible asset and use or sell it;
- its ability to use or sell the intangible asset arising from the project;

- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset.

Research and development costs which do not qualify as assets are shown within selling, general and administrative expenses in the consolidated income statement.

Following initial recognition of the development costs as an asset, the asset is carried at cost less accumulated amortization and accumulated impairment losses. Every cost recognized as an asset is amortized on the basis of the expected life of the sales related to the project. The amortization period is reviewed at least annually and amortization expense is recorded in cost of sales.

### (iii) Customer Relationships

Customer relationships that are acquired by the Company are measured at cost less accumulated amortization and accumulated impairment losses. Amortization is recognized in profit or loss on a straight-line basis over the estimated useful lives of the relationships from the date that they are acquired. These intangible assets are amortized over useful lives of 5 years.

### (iv) Mining assets

Mining assets which are included in intangible assets include exploration, evaluation and development expenditures. See significant accounting policies section (J) for additional information on the accounting for mining assets.

### (v) Other intangible assets

Other intangible assets that are acquired by the Company, which have finite useful lives, are measured at cost less accumulated amortization and accumulated impairment losses. Amortization is recognized in profit or loss on a straight-line basis over the estimated useful lives from the date that they are available for use. These intangible assets have useful lives of 3–5 years or rights of use that have lives of 5 years.



A summary of the policies applied to the Company's intangible assets is as follows:

	Patents and technology	Development costs	Customer relationships	Other intangible assets
Useful lives	Finite	Finite	Finite	Finite
Amortization method used	Amortized on a straight-line basis over the period of the patent or technology	Amortized on a straight-line basis over the period of expected future sales from the related project	Amortized on a straight-line basis over the period of expected future sales from the related customer, generally 5 years	Amortized on a straight-line basis over the estimated useful lives of intangible assets, other than goodwill, from the date that they are available for use
Internally generated or acquired	Acquired	Internally generated	Acquired	Acquired

#### (H) LEASED ASSETS

Leases for which the Company assumes substantially all the risks and rewards of ownership are classified as finance leases. Upon initial recognition, the leased asset is measured at an amount equal to the lower of its fair value and the present value of the minimum lease payments. Subsequent to initial recognition, capitalized lease assets are depreciated over the shorter of the estimated useful life of the asset and the lease term if there is no reasonable certainty that the Company will obtain ownership by the end of the lease term.

Minimum lease payments made under finance leases are apportioned between finance expense and the reduction of the outstanding liability. The finance expense is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

The Company also enters into operating leases under which the leased assets are not recognized on the Company's statement of financial position. Payments made under operating leases are recognized in profit or loss on a straight-line basis over the term of the lease. Lease incentives received are recognized as an integral part of the total lease expense over the term of the lease.

#### (i) Inventories

Inventories are measured at the lower of cost or net realizable value. The cost of inventories is determined based on the average cost and specific identification methods, and includes expenditures incurred in acquiring the inventories and bringing them to their existing location and condition. In the case of finished goods inventory and work in process, cost includes materials and labor as well as an appropriate share of production overhead based on normal operating capacity.

Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and necessary selling expenses. The Company estimates the net realizable value of its inventories at least quarterly and adjusts the carrying amount of these inventories as necessary.

Cost of inventories include the transfer from other comprehensive income of gains and losses on qualifying cash flow hedges in respect of purchases of raw materials and production costs, as applicable.

#### (J) MINING ASSETS

##### (i) Exploration, evaluation and development expenditures

Exploration and evaluation expenditures relate to costs incurred on the exploration and evaluation of potential mineral resources. These costs are recorded as intangible assets while exploration is in progress. When commercially recoverable reserves are determined and such development receives the appropriate approvals, capitalized exploration and evaluation expenditures are transferred to construction in progress. Upon completion of development and commencement of production, capitalized development costs as well as exploration and evaluation expenditures are transferred to mining assets in property, plant and equipment and depreciated using the units-of-production method.

##### (ii) Mineral rights

Mineral reserves, resources and rights (together "mineral rights") which can be reasonably valued, are recognized in the assessment of fair values on acquisition. Mineral rights for which values cannot be reasonably determined are not recognized. Exploitable mineral rights are amortized using the units-of-production method over the commercially recoverable reserves.

##### (iii) Deferred stripping costs

Within the Company's mining operations, advanced stripping costs incurred during the production stage of operations are recognized in prepaid inventory using the specific identification approach. This methodology is based on the variability of stripping costs over the course of a stripping campaign. The ability to strip the mine is largely seasonal. These amounts are included in prepaid expenses when the costs are directly attributable to a specific section of ore body that becomes accessible as a result of the stripping campaign. Amortization of

the stripping costs into cost of goods sold occurs as the ore body, to which the stripping has been allocated, is processed, generally within one year.

## **(K) IMPAIRMENT**

### **(i) Financial assets**

The Company assesses, at each reporting date, whether there is any objective evidence that a financial asset or a group of financial assets is impaired. Financial assets are assessed collectively in groups that share similar credit risk characteristics. A financial asset or a group of financial assets is deemed to be impaired if, and only if, there is objective evidence of impairment as a result of one or more events that has occurred after the initial recognition of the asset (an incurred "loss event") and that loss event has an impact on the estimated future cash flows of the financial asset or the group of financial assets that can be reliably estimated. Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganization and when observable data indicates that there is a measurable decrease in the estimated future cash flows.

For financial assets carried at amortized cost, the Company first assesses whether objective evidence of impairment exists individually for financial assets that are individually significant or collectively for financial assets that are not individually significant. If management determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is, or continues to be, recognized are not included in a collective assessment of impairment.

If there is objective evidence that an impairment loss has been incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future expected credit losses that have not yet been incurred). The present value of the estimated future cash flows is discounted at the financial asset's original effective interest rate. If a loan has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate.

The carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognized in the income statement. Loans together with the associated allowance are written off when there is no realistic prospect of future recovery and all collateral has

been realized or has been transferred to the Company. If, in a subsequent year, the amount of the estimated impairment loss increases or decreases because of an event occurring after the impairment was recognized, the previously recognized impairment loss is increased or reduced by adjusting the allowance account. If a future write-off is later recovered, the recovery is credited to finance costs in the income statement.

### **(ii) Non-financial assets**

The Company assesses at each reporting date whether there is any indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, management estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's ("CGU") fair value less costs to sell and its value in use and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, recent market transactions are taken into account, if available, or discounted cash flows are used when applicable for the industry.

The Company bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Company's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of three years. For longer periods, a long term growth rate is calculated and applied to project future cash flows after the third year.

Impairment losses of continuing operations, including impairment on inventories, are recognized in the income statement in expense categories consistent with the function of the impaired asset.

For assets excluding goodwill, an assessment is made at each reporting date whether there is any indication that previously recognized impairment losses may no longer exist or may have decreased. If such indication exists, the Company estimates the asset's or CGU's recoverable amount. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of

the asset does not exceed its recoverable amount, nor exceeds the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in the income statement.

Goodwill is tested for impairment annually (as at December 31) and when circumstances indicate that the carrying value may be impaired. Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognized. Impairment losses relating to goodwill cannot be reversed in future periods.

### **(iii) Associates and joint ventures**

After application of the equity method, the Company determines whether it is necessary to recognize an additional impairment loss on the Company's investment in its associates and joint ventures. The Company determines at each reporting date whether there is any objective evidence that an investment in any associate or joint venture is impaired. If this is the case, the Company calculates the amount of impairment as being the difference between the higher of fair value less cost to sell and value in use of the associate or joint venture and its carrying amount and recognizes the amount in the income statement.

## **(L) EMPLOYEE BENEFITS**

### **(i) Defined contribution plans**

Certain subsidiaries provide defined contribution pension plans for their employees. Obligations for contributions to defined contribution pension plans are recognized as an expense in profit or loss in the period in which the obligation was incurred.

### **(ii) Defined benefit plans**

The Company maintains defined benefit plans for its employees in the United States, Germany, and the United Kingdom.

The Company's net obligation in respect of defined benefit pension plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value, and any unrecognized actuarial net gains (losses), unrecognized past service costs and the fair value of any plan assets are deducted. The discount rate is based on the appropriate corporate bond yields for the maturity dates in the country where the obligation exists. Plan assets are assets that are held by a long term

employee benefit fund or qualifying insurance policies. Plan assets are not available to creditors of the Company nor can they be paid directly to the Company. Fair value is based on market price information. In the case of quoted securities, it is the published bid price. The value of any plan asset recognized is restricted to the sum of any unrecognized actuarial net gains (losses), unrecognized past service costs and the present value of economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. The calculation is performed by a qualified actuary using the projected unit credit method.

### **(ii) Defined benefit plans**

When the benefits of a plan are improved, the portion of the increased benefit relating to past service by employees is recognized in profit or loss on a straight-line basis over the average period until the benefits become vested. To the extent that the benefits vest immediately, the expense is recognized immediately in profit or loss.

All actuarial gains and losses as at January 1, 2005, the date of transition to IFRS, were recognized. Subsequent to January 1, 2005 a corridor approach is used for actuarial gains and losses that arise in calculating the Company's obligation in respect of a plan. To the extent that any cumulative unrecognized actuarial gain or loss exceeds 10 percent of the greater of the present value of the defined benefit obligation and the fair value of plan assets, that portion is recognized in the income statement over the expected average remaining working lives of the employees participating in the plan. Otherwise, the actuarial gain or loss is not recognized.

The Company also has supplemental executive retirement plans ("SERPs") with four current officers and one previous officer of the Company (see note 24). The liability for these plans is accounted for using the same methodology as other defined benefit plans, with more specific assumptions related to the people who are the beneficiaries of each SERP.

### **(iii) Short term benefits**

Short term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid under short term cash bonuses or profit-sharing plans if the Company has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

#### **(iv) Share-based payment transactions**

AMG has share-based compensation plans, which are described in note 25.

##### *Equity-settled plans*

The cost of equity-settled transactions, related to these share-based compensation plans, is measured by reference to the fair value at the date on which they are granted. Estimating the fair value requires determining the most appropriate valuation model for a grant of equity instruments, which is dependent on the terms and conditions of the grant. This also requires determining the most appropriate inputs to the valuation model including the expected life of the option, volatility and dividend yield, and other assumptions. The assumptions and models used are described in note 25.

The cost of these equity-settled transactions is recognized, together with a corresponding increase in equity, over the period in which the service conditions are fulfilled using a graded vesting methodology, ending on the date on which the relevant employees (or other benefactors) become fully entitled to the award ("vesting date"). The cumulative expense recognized for equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired and the Company's best estimate of the number of equity instruments that will ultimately vest. The income statement charge for the period represents the movement in cumulative expense recognized as at the beginning and end of the period.

No expense is recognized for awards that do not ultimately vest, except for equity-settled transactions where vesting is conditional upon a market or non-vesting condition, which are treated as vesting irrespective of whether or not the market or non-vesting condition is satisfied, provided that all other performance and/or service conditions are satisfied.

Where the terms of an equity-settled transaction award are modified, the minimum expense recognized is the expense as if the terms had not been modified, if the original terms of the award are met. An additional expense is recognized for any modification that increases the total fair value of the share-based payment transaction, or is otherwise beneficial to the employee as measured at the date of modification.

Where an equity-settled award is canceled, it is treated as if it vested on the date of cancellation, and any expense not yet recognized for the award is recognized immediately. This includes any award where non-vesting conditions within the control of either the entity or the employee are not met. However, if a new award is substituted for the canceled award, and designated as a replacement award on the date that it is granted, the canceled and new awards are treated as if they were a modification of the

original award, as described in the previous paragraph. All cancellations of equity-settled transaction awards are treated equally.

The dilutive effect of outstanding options is reflected as additional share dilution in the computation of earnings per share, when appropriate (further details are provided in note 21).

##### *Cash-settled plans*

In May 2009, the Annual General Meeting of Shareholders approved and the Company implemented a performance share unit plan ("PSUP") for certain members of the Company's management. Under the PSUP, each manager receives an award of an approved value of performance share units ("PSUs"). The issue price of each PSU is equal to the weighted average share price at which common shares of the Company trade on the NYSE Euronext Amsterdam Stock Exchange during the 10-day period subsequent to the annual earnings release. The PSUs have three-year vesting periods except for PSUs granted in 2009 and 2010, which have transitional vesting provisions. The 2009 PSU grants vest one-third per year over 3 years. One-third of the 2010 PSU grants vest after 2 years and two-thirds of the 2010 grants vest after 3 years. The vesting is subject to certain return on capital employed ("ROCE") performance requirements. The value of the PSUs, when converted to cash, will be equivalent to the market value of the common shares at the time the conversion takes place. The value of the outstanding PSUs, remeasured to fair value as at December 31, 2012 and 2011 was \$371 and \$3,333, respectively.

Estimating the fair value of the PSUs requires determining the most appropriate valuation model for a grant of equity instruments, which is dependent on the terms and conditions of the grant. This also requires determining the most appropriate inputs to the valuation model including the expected life of the option, volatility and dividend yield, and other assumptions. The assumptions and models used are described in note 25.

The fair value of these PSUs is recognized over the period in which the service conditions are fulfilled using a graded vesting methodology ending on the date on which the relevant employees (or other benefactors) become fully entitled to the award ("vesting date"). Since the PSUs are cash-settled, a new fair value is calculated at each reporting date by updating the assumptions used in the valuation model. When the PSUs vest, they are paid out in cash. No expense is recognized for awards that do not ultimately vest. The fair value of the PSUs outstanding is recorded as a liability in the statement of financial position.

Where the terms of a cash-settled transaction award are modified, an additional expense is recognized for any modification that increases the total fair value of the

transaction, or is otherwise beneficial to the employee as measured at the date of modification.

There is no dilutive effect from outstanding PSUs as they are cash-settled rather than equity-settled.

## **(M) PROVISIONS**

Provisions are recognized when:

- the Company has a present obligation (legal or constructive) as a result of a past event;
- it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation; and
- a reliable estimate can be made for the amount of the obligation.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, where appropriate, the risks specific to the liability. Where discounting is used, the change in the provision due to the passage of time is recognized as a finance cost.

### **(i) Environmental remediation costs and recoveries**

Certain subsidiaries of the Company are faced with a number of issues relating to environmental cleanup requirements, largely resulting from historical solid and hazardous waste handling and disposal practices at their facilities. In accordance with the Company's environmental policy and applicable legal requirements, provisions associated with environmental remediation obligations are accrued when such losses are deemed probable and reasonably estimable. Such accruals generally are recognized no later than the completion of the remedial feasibility study and are adjusted as further information develops or circumstances change.

A provision is made for shutdown, restoration and environmental rehabilitation costs in the financial period when the related environmental disturbance occurs, based on the estimated future costs using information available at the reporting date. The provision is discounted using a current market-based pre-tax discount rate and any change in the discount is included in finance costs. The provision is reviewed on an annual basis for changes to obligations, legislation or discount rates that may lead to changes in cost estimates or the expected timeline for payments.

Where the Company expects some or all of an environmental provision to be reimbursed, for example using a trust account, the reimbursement is recognized as a separate asset but only when the reimbursement is virtually certain. The expense relating to any provision is presented in the income statement net of any reimbursement. The subsidiaries of the Company have been required, in certain instances, to create trust funds for the environmental rehabilitation. Once established,

the subsidiaries have a 100% interest in these funds. Rehabilitation and restoration trust funds holding monies committed for use in satisfying environmental obligations are included on a discounted basis within other non-current assets on the statement of financial position, only to the extent that a liability exists for these obligations.

Environmental expense recoveries are generally recognized in profit upon final settlement with the Company's insurance carriers.

Additional environmental remediation costs and provisions may be required if the Company were to decide to close certain of its sites. Certain of the Company's restructuring programs have involved closure of several sites to date. Remediation liabilities are recognized when the site closure has been announced. In the opinion of the Company, it is not possible to estimate reliably the costs that would be incurred on the eventual closure of its continuing sites, where there is no present obligation to remediate, because it is neither possible to determine a time limit beyond which the sites will no longer be operated, nor what remediation costs may be required on their eventual closure.

### **(ii) Restructuring**

A provision for restructuring is recognized when the Company or a subsidiary of the Company has approved a detailed and formal restructuring plan, and the restructuring either has commenced or has been announced publicly. Provisions are not made for future operating costs. Changes in the estimate of costs related to restructuring plans are included in profit or loss in the period when the change is identified.

### **(iii) Warranty**

A provision for warranty is recognized when the Company or a subsidiary of the Company has determined that it has a basis for recording a warranty provision based on historical returns for warranty work. The estimate of warranty-related costs is updated and revised at each reporting date.

### **(iv) Partial retirement**

In an effort to reduce unemployment and create jobs for younger job-seekers, Germany implemented certain regulations in 1996 to enable employees to take early retirement. Although the law is no longer in effect, the Company's German subsidiaries have made provisions for those employees who are eligible per their employment contracts. According to German law, the Company is required to pay a deposit for partial retirements to secure payments to the employees in the case of insolvency. The Company records the related deposits and provisions on a net basis.

#### **(v) Cost estimates**

As part of its process to provide reliable estimations of profitability for long term contracts, the Company makes provisions for cost estimates. These provisions are developed on a contract by contract basis and are based on contractor estimates. The cost estimates are updated and revised at each reporting date.

#### **(vi) Restoration, rehabilitation and decommissioning costs**

Restoration, rehabilitation and decommissioning costs arising from the installation of plant and other site preparation work, discounted to their net present value, are provided for and capitalized at the time such an obligation arises. The costs are charged to the statement of income over the life of the operation through depreciation of the asset and the unwinding of the discount on the provision.

Costs for restoration of subsequent site disturbance, which is created on an ongoing basis during production, are provided for at their net present values and charged to the statement of income as extraction progresses.

### **(N) REVENUE**

#### **(i) Goods sold**

Revenue from the sale of goods is measured at the fair value of the consideration received or receivable. Revenue from product sales to the Company's customers is recognized when the significant risks and rewards of ownership have been transferred to the buyer, recovery of the consideration is probable, the associated costs and possible return of goods can be estimated reliably, and there is no continuing management involvement with the goods.

Transfer of risks and rewards usually occurs when title and risk of loss pass to the customer. In the case of export sales, title may not pass until the product reaches a foreign port.

#### **(ii) Furnace construction contracts**

Certain furnace construction contracts are reported using the percentage of completion ("POC") method. Cumulative work and services performed to date, including the Company's share of profit, is reported on a pro rata basis according to the percentage completed. The percentage of completion is measured as the ratio of contract costs incurred for work performed so far to total contract costs (cost-to-cost method). Contracts are reported in trade receivables and advance payments, as "gross amount due to / from customers for/from contract work (POC)". If cumulative work performed to date (contract costs plus contract net profit) of contracts in progress exceeds progress payments received, the difference is recognized as an asset and included in trade and other receivables in

the consolidated statement of financial position. If the net amount after deduction of progress payments received is negative, the difference is recognized as a liability and included in advance payments in the consolidated statement of financial position. Anticipated losses on specific contracts are estimated taking account of all identifiable risks and are accounted for using the POC method. Contract income is recognized according to the income stipulated in the contract and/or any change orders confirmed in writing by the client.

#### **(iii) Commissions**

In certain instances, the Company arranges sales for which the supplier invoices the customer directly. In such cases, the Company receives commission income in its role as agent, which is recognized when the supplier passes title to the customer. The Company assumes no significant credit or other risk with such transactions. When the Company acts in the capacity of an agent rather than as the principal in a transaction, the revenue recognized is the net amount of commission made by the Company.

### **(O) FINANCE INCOME AND EXPENSES**

Finance income comprises interest income on funds invested, interest recognized on loans to related parties, interest recognized on notes receivable, accretion of convertible notes receivable, changes in the discount on provisions, foreign currency gains and income gains on derivatives and hedging instruments. Interest income is recognized as it is earned using the effective interest method.

Finance expenses comprise interest expense on borrowings, finance charges on finance leases, changes in the discount on provisions, foreign currency losses, losses on derivatives and hedging instruments, and any loss recorded on debt extinguishment. All borrowing costs are recognized in profit or loss using the effective interest method.

### **(P) GOVERNMENT GRANTS**

Certain subsidiaries receive government grants related to early retirement provisions and workforce creation. Government grants are recognized when there is reasonable assurance that the grant will be received and all attached conditions will be complied with. There are two types of grants. For grants that relate to expense items, they are recognized as income over the period necessary to match the grant on a systematic basis to the costs for which they are intended to compensate. For grants that relate to investment in property, they are recognized as a liability and the liability is then reduced as money is spent on capital expansion.



## **(Q) INCOME TAX EXPENSE**

Income tax expense comprises current and deferred tax. Income tax expense is recognized in profit or loss except to the extent that it relates to items recognized through other comprehensive income, in which case it is recognized in equity.

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. These amounts are calculated using tax rates enacted or substantively enacted at the reporting date, in the countries where the Company generates taxable income. Current income tax relating to items recognized through other comprehensive income is recognized in equity and not in the income statement.

Deferred tax is provided using the liability method on temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- where the deferred tax liability arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- in respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences, carryforwards of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carryforwards of unused tax credits and unused tax losses can be utilized except:

- where the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- in respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

The carrying amount of deferred tax assets is reviewed at each reporting date and adjusted to the extent that it has become probable or is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are reassessed at each reporting date and are recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognized outside profit or loss is recognized outside profit or loss. Deferred tax items are recognized in correlation to the underlying transaction either in other comprehensive income or directly in equity.

Deferred tax assets and deferred tax liabilities are offset, if a legally enforceable right exists to set off current tax assets against current income tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, would be recognized subsequently if new information about facts and circumstances changed. The adjustment would either be treated as a reduction to goodwill (as long as it does not exceed goodwill) if it was incurred during the measurement period or in profit or loss.

## **Sales tax**

Revenues, expenses and assets are recognized net of the amount of sales tax except:

- where the sales tax incurred on a purchase of assets or services is not recoverable from the taxation authority, in which case the sales tax is recognized as part of the cost of acquisition of the asset or as part of the expense item as applicable; and
- receivables and payables that are stated with the amount of sales tax included.

The net amount of sales tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the statement of financial position.

Additional income taxes that arise from the distribution of dividends are recognized at the same time as the liability to pay the related dividend is recognized.

## (R) SEGMENT REPORTING

IFRS 8 defines an operating segment as: a component of an entity (a) that engages in business activities from which it may earn revenues and incur expenses (including revenues and expenses relating to transactions with other components of the same entity), (b) whose operating results are regularly reviewed by the entity's chief operating decision maker to make decisions about resources to be allocated to the segment and assess its performance, and (c) for which discrete financial information is available.

## (S) NEW AND AMENDED STANDARDS

The accounting policies adopted are consistent with those of the previous financial year, except for the following amendments to IFRS effective as of January 1, 2012:

- IFRS 7 *Financial Instruments: Disclosures – Enhanced Derecognition Disclosure Requirements*

The adoption of the standard is described below:

- IFRS 7 *Financial Instruments: Disclosures – Enhanced Derecognition Disclosure Requirements*: The amendment requires additional disclosure about financial assets that have been transferred but not derecognized to enable the user of the Company's financial statements to understand the relationship with those assets that have not been derecognized and their associated liabilities. In addition, the amendment requires disclosures about the entity's continuing involvement in derecognized assets to enable the users to evaluate the nature of, and risks associated with, such involvement. The amendment is effective for annual periods beginning on or after July 1, 2011. The Company does not have any assets with these characteristics so there has been no effect on the presentation of its financial statements.

## (T) STANDARDS ISSUED BUT NOT YET EFFECTIVE

The standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Company's financial statements are disclosed below. The Company intends to adopt these standards, if applicable, when they become effective.

- IFRS 7 *Disclosures – Offsetting Financial Assets and Financial Liabilities – Amendments to IFRS 7*: These amendments require an entity to disclose information about rights to set-off and related arrangements (e.g., collateral agreements). The disclosures would provide users with information that is useful in evaluating the effect of netting arrangements on an entity's financial position. The new disclosures are required for all recognized financial instruments

that are set off in accordance with IAS 32 *Financial Instruments: Presentation*. The disclosures also apply to recognized financial instruments that are subject to an enforceable master netting arrangement or similar agreement, irrespective of whether they are set off in accordance with IAS 32. These amendments will not impact the Company's financial position or performance and become effective for annual periods beginning on or after January 1, 2013.

- IFRS 9 *Financial Instruments: Classification and Measurement*: IFRS 9, as issued, reflects the first phase of the IASB's work on the replacement of IAS 39 and applies to classification and measurement of financial assets and financial liabilities as defined in IAS 39. The standard was initially effective for annual periods beginning on or after January 1, 2013, but *Amendments to IFRS 9 Mandatory Effective Date of IFRS 9 and Transition Disclosures*, issued in December 2011, moved the mandatory effective date to January 1, 2015. In subsequent phases, the IASB will address hedge accounting and impairment of financial assets. The adoption of the first phase of IFRS 9 will have an effect on the classification and measurement of the Company's financial assets, but will not have an impact on classification and measurements of financial liabilities. The Company will quantify the effect in conjunction with the other phases, when the final standard including all phases is issued.
- IFRS 10 *Consolidated Financial Statements*, IAS 27 *Separate Financial Statements*: IFRS 10 replaces the portion of IAS 27 *Consolidated and Separate Financial Statements* that addresses the accounting for consolidated financial statements. It also addresses the issues raised in SIC-12 *Consolidation – Special Purpose Entities*. IFRS 10 establishes a single control model that applies to all entities including special purpose entities. The changes introduced by IFRS 10 will require management to exercise significant judgment to determine which entities are controlled and therefore are required to be consolidated by a parent, compared with the requirements that were in IAS 27. Based on the preliminary analyses performed, IFRS 10 is not expected to have any impact on the currently held investments of the Company. This standard becomes effective for annual periods beginning on or after January 1, 2014. The implementation of this guidance is not expected to have an impact on the Company.
- IFRS 11 *Joint Arrangements*: IFRS 11 replaces IAS 31 *Interests in Joint Ventures* and SIC-13 *Jointly-controlled Entities – Non-monetary Contributions by Venturers*. IFRS 11 removes the option to account for jointly controlled entities ("JCEs") using proportionate consolidation. Instead, JCEs that meet the definition

of a joint venture must be accounted for using the equity method. The application of this new standard is not expected to have any impact on the currently held investments of the Company. This standard becomes effective for annual periods beginning on or after January 1, 2014, and is to be applied retrospectively for joint arrangements held at the date of initial application. The implementation of this guidance is not expected to have an impact on the Company.

- **IFRS 12 *Disclosure of Interests in Other Entities*:** IFRS 12 includes all of the disclosures that were previously in IAS 27 related to consolidated financial statements, as well as all of the disclosures that were previously included in IAS 31 and IAS 28. These disclosures relate to an entity's interests in subsidiaries, joint arrangements, associates and structured entities. A number of new disclosures are also required, but have no impact on the Company's financial position or performance. This standard becomes effective for annual periods beginning on or after January 1, 2014.
- **IFRS 10-12 *Transition Guidance*:** The amendments clarify the transition guidance in IFRS 10 Consolidated Financial Statements and also provide additional transition relief in IFRS 10, IFRS 11 *Joint Arrangements* and IFRS 12 *Disclosure of Interests in Other Entities*. The transition guidance becomes effective for financial years beginning on or after January 1, 2013.
- **IFRS 10, IFRS 12 and IAS 27 *Investment Entities*:** The amendments provide an exception to the consolidation requirements in IFRS 10 and require investment entities to measure particular subsidiaries at fair value through profit or loss, rather than consolidate them. The amendments also set out disclosure requirements for investment entities. The amendments become effective for financial years beginning on or after January 1, 2014.
- **IFRS 13 *Fair Value Measurement*:** IFRS 13 establishes a single source of guidance under IFRS for all fair value measurements. IFRS 13 does not change when an entity is required to use fair value, but rather provides guidance on how to measure fair value under IFRS when fair value is required or permitted. The implementation of this guidance is not expected to have an impact on the Company. This standard becomes effective for annual periods beginning on or after January 1, 2013.
- **IAS 1 *Presentation of Items of Other Comprehensive Income – Amendments to IAS 1*:** The amendments to IAS 1 change the grouping of items presented in other comprehensive income ("OCI"). Items that could be reclassified (or "recycled") to profit or loss at a future point in time (for example, actuarial gains and losses on defined benefit plans and revaluation of land and

buildings) would be presented separately from items that will never be reclassified (for example, net gain on hedge of net investment, exchange differences on translation of foreign operations, net movement on cash flow hedges and net loss or gain on available-for-sale financial assets). The amendment affects presentation only and has no impact on the Company's financial position or performance. The amendment becomes effective for annual periods beginning on or after July 1, 2012, and will therefore be applied in the Company's first annual report after becoming effective. The amended standard becomes effective for financial years beginning on or after July 1, 2012.

- **IAS 12 *Income Taxes (Amendment) – Deferred Taxes: Recovery of Underlying Assets*:** The amendment clarified the determination of deferred tax on investment property measured at fair value and introduces a rebuttable presumption that deferred tax on investment property measured using the fair value model in IAS 40 should be determined on the basis that its carrying amount will be recovered through sale. It includes the requirement that deferred tax on non-depreciable assets that are measured using the revaluation model in IAS 16 should always be measured on a sale basis. The amendment is effective for annual periods beginning on or after January 1, 2013 and has been no effect on the Company's financial position, performance or its disclosures.
- **IAS 19R *Employee Benefits (Revised)*:** The IASB has issued numerous amendments to IAS 19. These range from fundamental changes such as removing the corridor mechanism and the concept of expected returns on plan assets to simple clarifications and re-wording. The Company currently only recognizes the net cumulative unrecognized actuarial gains and losses of the previous period, which exceeded 10% of the higher of the defined benefit obligation and the fair value of the plan assets. As a consequence, the Company's statement of financial position does not reflect a significant part of the unrecognized net actuarial gains and losses. As a result of the adoption of the amendments in IAS 19, the Company will recognize actuarial gains and losses in the period in which they occur in total in other comprehensive income. The following adjustments are the anticipated future impacts that implementation of this standard will have on the financial statements.

*As of January 1, 2012:*

- Increase in employee benefit liability: \$26,288
- Decrease in deferred tax liability: \$5,258
- Net decrease in opening retained earnings: \$21,030

As of and for the year ended December 31, 2012:

- Net increase in employee benefit liability: \$51,352
- Net decrease in deferred tax liability: \$8,619
- Net expense recognized in other comprehensive income: \$42,733
- Net increase in tax expense: \$322
- Net increase in profit after tax: \$4,349

The effect on earnings per share related to the restatement in 2012 will be \$0.16

The amended standard becomes effective for financial years beginning on or after January 1, 2013.

- *IAS 27 Separate Financial Statements (as revised in 2011)*: As a consequence of the new IFRS 10 and IFRS 12, what remains of IAS 27 is limited to accounting for subsidiaries, jointly controlled entities, and associates in separate financial statements. The revised standard will have no impact on the Company's financial position and performance. The revised standard becomes effective for financial years beginning on or after January 1, 2014.
- *IAS 28 Investments in Associates and Joint Ventures (as revised in 2011)*: As a consequence of the new IFRS 11 *Joint Arrangements*, and IFRS 12 *Disclosure of Interests in Other Entities*, IAS 28 *Investments in Associates*, has been renamed IAS 28 *Investments in Associates and Joint Ventures*, and describes the application of the equity method to investments in joint ventures in addition to associates. The revised standard becomes effective for annual periods beginning on or after January 1, 2014. The implementation of this guidance is not expected to have an impact on the Company.
- *IAS 32 Offsetting Financial Assets and Financial Liabilities – Amendments to IAS 32*: These amendments clarify the meaning of "currently has a legally enforceable right to set-off". The amendments also clarify the application of the IAS 32 offsetting criteria to settlement systems (such as central clearing house systems) which apply gross settlement mechanisms that are not simultaneous. These amendments are not expected to impact the Company's financial position or performance and become effective for annual periods beginning on or after January 1, 2014.
- *IFRIC 20 Stripping Costs in the Production Phase of a Surface Mine*: This interpretation applies to waste removal (stripping) costs incurred in surface mining activity, during the production phase of the mine. The interpretation addresses the accounting for the benefit from the stripping activity. The interpretation is effective for annual periods beginning on or after January 1, 2013. The new interpretation will not have an impact on the Company as the guidance is in line with the Company's current accounting policies.

## Annual Improvements May 2012

These improvements will not have an impact on the Company, but include:

- *IAS 1 Presentation of Financial Statements*: This improvement clarifies the difference between voluntary additional comparative information and the minimum required comparative information.
- *IAS 16 Property Plant and Equipment*: This improvement clarifies that major spare parts and servicing equipment that meet the definition of property, plant and equipment are not inventory.
- *IAS 32 Financial Instruments, Presentation*: This improvement clarifies that income taxes arising from distributions to equity holders are accounted for in accordance with IAS 12 *Income Taxes*.
- *IAS 34 Interim Financial Reporting*: The amendment aligns the disclosure requirements for total segment assets with total segment liabilities in interim financial statements. This clarification also ensures that interim disclosures are aligned with annual disclosures.

These improvements are effective for annual periods beginning on or after January 1, 2013.

## 4. Segment Reporting

For management purposes, the Company is organized under three separate reportable segments: Advanced Materials, Engineering Systems and Graphit Kropfmühl ("GK"). Advanced Materials produces specialty metals, alloys and chemicals and has major production facilities in the United Kingdom, United States, Germany, Brazil, Turkey and France. The Engineering Systems Division provides specialty engineering services through its development and manufacturing of vacuum furnace systems and has production facilities that are located in Germany, France, Singapore, Mexico and the United States. GK produces specialty graphite and silicon metal and is located mainly in Germany, Czech Republic, China, Zimbabwe and Sri Lanka.

The management reporting format is determined by reportable segments as the operating results for each segment are organized and managed separately according to the nature of the products and services provided. Each segment represents a strategic business unit that offers different products and serves different markets.

**Advanced Materials** – This division manufactures and sells high-quality specialty metals, alloys and metallic chemicals which are essential to the production of high-performance aluminum and titanium alloys, superalloys, steel and certain non-metallic materials for various applications in the Energy, Aerospace, Infrastructure,

Specialty Metals and Chemicals end markets. Within Advanced Materials, seven entities are aggregated to create the one operating segment.

**Engineering Systems** – This division is the leading global supplier of processes and services supplying technologically advanced vacuum furnace systems to customers in the aerospace, energy (including solar and nuclear), transportation, electronics, superalloys and specialty steel industries. Core specialties of the Engineering Systems Division are the development of processes and the design of plants, which are made to concept by partners in the supplier industry. Engineering Systems has three operating units and those three entities are aggregated to create one operating segment.

**Graphit Kropfmühl (“GK”)** – This division’s operations are mainly in Germany with its own secured and controlled raw material resources for graphite in Asia, Africa and Europe. GK manufactures silicon metal which is used in the Energy and Specialty Metals and Chemicals end markets. It also specializes in the extraction, processing and refining of natural crystalline graphite for a wide

range of energy saving industrial applications. In 2012, GK became a wholly-owned subsidiary through a squeeze-out of its minority shareholders. GK has two entities which are aggregated to create one operating segment.

AMG headquarters costs and assets are allocated sixty percent to Advanced Materials and forty percent to Engineering Systems in 2012 and 2011 based on an estimation of services provided to the segments. Other and eliminations includes intersegment eliminations as well as the accounting for the Company’s investment in Timminco, since this is not allocable to any segment.

Management monitors the operating results of its business units separately for the purpose of making decisions about resource allocation and performance assessment. Segment performance is evaluated based on operating profit or loss and is measured consistently with operating profit or loss in the consolidated financial statements. The Company’s headquarters costs, financing (including finance costs and finance income) and assets are managed on a group basis and are allocated to operating segments.

Transfer prices between reportable segments are on an arm’s length basis in a manner similar to transactions with third parties.

<b>Year ended December 31, 2012</b>	Advanced Materials	Engineering Systems	GK	Other and eliminations	Total
<b>Revenue</b>					
Revenue from external customers	791,329	273,789	150,484	–	1,215,602
Intersegment revenue	751	1,268	–	(2,019)	–
Total revenue	792,080	275,057	150,484	(2,019)	1,215,602
<b>Segment results</b>					
Depreciation and amortization	15,241	9,743	6,574	–	31,558
Asset impairment	3,032	6,294	565	–	9,891
Environmental	1,636	–	136	–	1,772
Restructuring	413	5,738	–	–	6,151
Operating profit (loss)	28,902	(2,933)	8,342	–	34,311
<b>Statement of financial position</b>					
Segment assets	720,566	385,487	112,454	(277,937)	940,570
Investments in associates and joint ventures	1,416	5,935	–	–	7,351
Total assets	721,982	391,422	112,454	(277,937)	947,921
Segment liabilities	413,290	328,624	33,177	(183,801)	591,290
Employee benefits	44,051	33,129	13,649	2,015	92,844
Provisions	30,443	10,019	5,780	–	46,242
Total liabilities	487,784	371,772	52,606	(181,786)	730,376
<b>Other information</b>					
Capital expenditures for expansion – tangible assets	22,021	4,040	6,261	–	32,322
Capital expenditures for maintenance – tangible assets	8,162	760	2,172	–	11,094
Capital expenditures – intangible assets	2,147	610	1,936	–	4,693
Intangible assets acquired	–	652	–	–	652

Year ended December 31, 2011	Advanced Materials	Engineering Systems	GK	Other and eliminations <sup>(a)</sup>	Total
<b>Revenue</b>					
Revenue from external customers	871,939	313,830	165,537	–	1,351,306
Intersegment revenue	600	1,620	–	(2,220)	–
Total revenue	872,539	315,450	165,537	(2,220)	1,351,306
<b>Segment results</b>					
Depreciation and amortization	15,924	9,158	4,778	–	29,860
Asset impairment	11,865	3,055	72	–	14,992
Reversal of asset impairment	–	–	(16,909)	–	(16,909)
Environmental	5,175	–	711	–	5,886
Restructuring	1,976	550	–	–	2,526
Bargain purchase gain	(5,361)	–	–	–	(5,361)
Operating profit (loss)	19,639	20,424	37,014	(7,541)	69,536
<b>Statement of financial position</b>					
Segment assets	667,802	371,866	123,340	(267,296)	895,712
Investments in associates and joint ventures	1,273	3,812	–	–	5,085
Total assets	669,075	375,678	123,340	(267,296)	900,797
Segment liabilities	379,327	297,427	51,206	(179,242)	548,718
Employee benefits	44,985	30,892	12,848	1,353	90,078
Provisions	23,227	12,772	5,384	–	41,383
Total liabilities	447,539	341,091	69,438	(177,889)	680,179
<b>Other information</b>					
Capital expenditures for expansion – tangible assets	18,758	9,067	6,345	–	34,170
Capital expenditures for maintenance – tangible assets	9,600	1,099	2,538	–	13,237
Capital expenditures – intangible assets	2,383	1,543	589	–	4,515
Intangible assets acquired	4,439	5,384	–	–	9,823

(a) Other and eliminations column includes the Company's investment in Timminco and all related Timminco transactions.



## Geographical information

Geographical information for the Company is provided below. Revenues are based on the shipping location of the customer while non-current assets are based on the physical location of the assets.

	2012		2011	
	Revenues	Non-current assets	Revenues	Non-current assets
Germany	284,990	133,288	307,496	131,931
US	281,408	70,940	287,214	58,382
Canada	14,475	221	18,269	303
UK	54,435	24,945	61,724	22,699
Brazil	48,578	45,987	54,262	39,837
France	44,773	19,947	60,411	17,470
Norway	5,890	–	24,737	–
Italy	39,503	–	57,864	–
China	81,664	4,235	95,009	4,125
Japan	37,761	24	39,543	26
Mexico	27,138	16,656	23,237	14,890
Russia	29,399	–	21,591	–
Austria	34,058	–	39,098	48
Belgium	17,372	25	19,566	21
Sweden	18,437	–	20,264	–
Netherlands	10,789	70	15,376	190
South Korea	21,034	–	16,165	–
Czech Republic	13,398	2,321	8,925	2,253
Other Countries	150,500	26,795	180,555	27,369
Total	1,215,602	345,454	1,351,306	319,544

Non-current assets for this purpose consist of property, plant and equipment, goodwill, intangible assets and other non-current assets.

## 5. Acquisitions

### Acquisition of additional shares of Graphit Kropfmühl

During the twelve months ended December 31, 2012, the Company acquired \$15,291, including transaction costs, (2011: \$111) of additional shares in Graphit Kropfmühl ("GK") which were recorded as the acquisition of non-controlling interests ("NCI"). Upon obtaining additional ownership interests, no additional goodwill was recognized and the transaction was measured as an equity transaction.

The following is the calculation of the equity transaction completed in the year ended December 31, 2012, using the weighted average price of shares acquired:

Non-controlling interest at acquisition	5,839
Transfer to AMG (11.9%)	(5,839)
Remaining non-controlling interest	–
Adjustment to equity:	
Consideration for shares	14,358
Acquisition costs	933
Total fair value of consideration	15,291
Change to NCI (as per above)	(5,839)
Dilution in AMG equity from purchase of non-controlling interest	9,452

### Acquisition of Dynatech Furnaces Private Ltd.

On June 24, 2010, the Company acquired a 30.0% interest in Dynatech Furnaces Private Ltd. ("Dynatech"), an Indian engineering company which specializes in the design, manufacturing and maintenance of vacuum furnaces for \$419. Dynatech is the largest vacuum heat treatment furnace manufacturer in India. Dynatech has been in

business since 1985 with a manufacturing and assembly facility in Ambarnath, near Mumbai. The Company had significant influence after the initial acquisition and therefore treated its investment as an associate. The Company acquired an additional 40.0% interest in Dynatech as of August 20, 2012 for \$299. The acquisition of Dynatech expands the capacity and reach of the Engineering Systems segment.

There was a loss of \$194 recognized from remeasuring the 30.0% equity interest in Dynatech held by the Company prior to the business combination. The loss was recognized on the share of loss from associates line in the income statement. Upon acquisition of the additional 40.0% interest, Dynatech's results of operations are consolidated into AMG's financial statements.

The purchase price was allocated to the following categories:

	Fair value recognized on acquisition
Property, plant and equipment	348
Intangible assets	241
Other long term assets	102
Cash	133
Prepayments	144
Trade receivables	1,258
Inventories	124
	2,350
Trade payables	468
Accrued expenses and other current liabilities	1,143
Debt	752
Deferred taxes	72
Other noncurrent liabilities	98
	2,533
Total identifiable net assets at 100% of fair value	(183)
Non-controlling interest measured at equity value	55
Fair value of consideration, satisfied by \$718 cash in tranches, offset by loss on revaluation of \$194	524
Goodwill arising on acquisition	652
Consideration for 40.0%, satisfied by cash in 2012	299
Fair value of initial 30.0% of shares acquired in 2011	225
Cash flows on acquisition:	
Net cash acquired with the subsidiary	133
Cash paid in 2012	299
Net cash outflow on consolidation	(166)

At the date of acquisition, the gross amount of trade receivables was \$1,258 and the fair value of trade receivables was \$1,258. The estimated contractual cash flows not expected to be collected at the acquisition date was nil.

The revenues and loss before tax of Dynatech for the year ended December 31, 2012, including the period prior to the acquisition of the second tranche of shares, are \$2,932 and (\$183), respectively. The revenues and loss before tax of Dynatech for the year ended December 31, 2012, excluding the period prior to the acquisition, are \$1,641 and (\$267), respectively.

The Company incurred transaction related costs of \$18 in conjunction with the acquisition of Dynatech, which are included in cash flows from operating activities and selling, general and administrative expenses on the consolidated income statement.

With respect to the acquisition of Dynatech, very few intangible assets could be identified which required valuation. Dynatech is a start-up furnace manufacturer that will benefit and be able to grow based on the existing operational knowledge of the current Engineering Systems management. Goodwill was created on this transaction as this was a strategic purchase based on Dynatech's geographical location. It allows AMG to have a presence in and access to the large and growing Indian market for engineering furnaces.

#### Acquisition of KB Alloys, LLC

On February 18, 2011, the Company acquired 100% of the LLC interests of KB Alloys, LLC ("KB") from CHS Capital LLC for \$24,376 in cash. KB is the North American market leader in the production of aluminum master alloys and grain refiners. The combination of KB with AMG's aluminum master alloys businesses establishes AMG as the world's largest producer of master alloys for the aluminum industry. KB is included in the Advanced Materials segment and will expand the Company's product offering while assuring security of supply for customers.

The purchase price was allocated to the following categories:

	Fair value recognized on acquisition
Property, plant and equipment	17,121
Intangible assets	2,187
Other long term assets	1,260
Cash	89
Prepayments	217
Trade receivables	9,452
Inventories	9,781
Derivative financial instruments	83
	40,190
Trade payables	5,518
Accrued expenses and other current liabilities	1,163
Debt	1,414
Deferred tax liability	1,010
Other noncurrent liabilities	1,348
	10,453
Total identifiable net assets at fair value	29,737
Bargain purchase gain	5,361
Consideration, satisfied by cash	24,376

Cash flows on acquisition:	
Net cash acquired with the subsidiary	89
Cash paid in 2011	24,376
Net cash outflow	24,287

The fair value of the net assets acquired was in excess of the consideration paid by the Company, resulting in a "bargain purchase gain." Upon the determination that the Company was going to recognize a gain related to the bargain purchase, the Company reassessed its valuation assumptions utilized as part of the acquisition accounting. No adjustments to the acquisition accounting valuations were identified as a result of management's reassessment. The bargain purchase gain is included in other income in the consolidated income statement for the year ended December 31, 2011. KB Alloys was acquired from a private equity company which had owned the asset for over ten years and required an exit. Aluminum master alloys are typically a lower margin business but the acquisition is expected to allow the Company to more efficiently serve its markets. AMG acquired the business as part of an industry consolidation effort. The bargain purchase was the result of these circumstances as well as the appreciated value of certain real estate assets owned by KB Alloys.

At the date of acquisition, the gross amount of trade receivables was \$9,461 and the fair value of trade receivables was \$9,452. The estimated contractual cash flows not expected to be collected at the acquisition date was \$9.

The revenues and profit before tax of KB Alloys for the year ended December 31, 2011, including the period prior to the acquisition, are \$87,454 and \$489, respectively. The revenues and profit before tax of KB Alloys for the year ended December 31, 2011, excluding the period prior to the acquisition, are \$76,504 and \$1,447, respectively.

The Company incurred transaction related costs of \$456 in conjunction with the acquisition of KB Alloys which are included in cash flows from operating activities and selling, general and administrative expenses on the consolidated income statement.

#### Acquisition of MG India

On February 17, 2011, the Company acquired 100% of the interests of MG India for \$3,163 in cash. MG India is an Indian trading company, specifically focused on metal trading. It is a part of the Advanced Materials segment and complements a similar business that exists within that segment already. There were very limited tangible assets acquired with respect to the business.

The purchase price was allocated to the following categories:

	Fair value recognized on acquisition
Property, plant and equipment	84
Other long term assets	77
Cash	601
Prepayments	42
Trade receivables	247
	1,051
Trade payables	4
Accrued expenses and other liabilities	136
	140
Total identifiable net assets at fair value	911
Goodwill arising on acquisition	2,252
Consideration, satisfied by cash	3,163

Cash flows on acquisition:	
Net cash acquired with the subsidiary	601
Cash paid in 2011	3,163
Net cash outflow	2,562

At the date of acquisition, the gross amount of trade receivables was \$247 and the fair value of trade receivables was \$247. The estimated contractual cash flows not expected to be collected at the acquisition date was nil.

The commissions and profit before tax of MG India for the year ended December 31, 2011, including the period prior to the acquisition, are \$1,507 and \$947, respectively. The commissions and profit before tax of MG India for the year ended December 31, 2011, excluding the period prior to the acquisition, are materially the same.

The Company incurred transaction related costs of \$118 in conjunction with the acquisition of MG India, which are included in cash flows from operating activities and selling, general and administrative expenses on the consolidated income statement.

With respect to the acquisition of MG India, no intangibles could be identified which required valuation. MG India is a trading company with monthly purchase orders and a continually changing customer base. Therefore, all excess purchase price has been treated as goodwill. Goodwill was created on this transaction as the purchase was geographically strategic. It allows AMG to have a presence in India which will allow it to access the large and growing Indian market.

#### Acquisition of Thermique Industrie Vide

On March 31, 2010, the Company acquired a 30.0% interest in Thermique Industrie Vide ("TIV"), a French engineering company which specializes in the design, manufacturing and maintenance of vacuum furnaces for \$617. The Company had significant influence after the initial acquisition and therefore treated its investment as an associate. The Company acquired an additional 26.8% interest in TIV as of September 30, 2011 for \$911. The acquisition of TIV expands the capacity and reach of the Engineering Systems segment.

There was a gain of \$382 recognized from remeasuring the equity interest in TIV held by the Company prior to the business combination. The gain was recognized on the share of loss from associates line in the income statement. Effective October 1, 2011, TIV's results of operations are consolidated into AMG's financial statements.

The purchase price was allocated to the following categories:

	Fair value recognized on acquisition
Property, plant and equipment	46
Intangible assets	179
Other long term assets	41
Cash	3,166
Prepayments	629
Trade receivables	3,189
Inventories	46
	7,296
Trade payables	1,124
Accrued expenses and other current liabilities	2,836
Debt	84
Deferred taxes	51
Other noncurrent liabilities	278
	4,373
Total identifiable net assets at fair value	2,923
Non-controlling interest measured at fair value	(1,213)
Goodwill arising on acquisition	221
Total consideration, satisfied by cash in tranches	1,931
Consideration for 26.8%, satisfied by cash in 2011	911
Fair value of initial 30.0% of shares acquired in 2010	1,020

Cash flows on acquisition:	
Net cash acquired with the subsidiary	3,166
Cash paid in 2011	911
Net cash inflow on consolidation	(2,255)

At the date of acquisition, the gross amount of trade receivables was \$3,189 and the fair value of trade receivables was \$3,189. The estimated contractual cash flows not expected to be collected at the acquisition date was nil.

The revenues and profit before tax of TIV for the year ended December 31, 2011, including the period prior to the acquisition, are \$11,116 and \$624, respectively. The revenues and profit before tax of TIV for the year ended December 31, 2011, excluding the period prior to the acquisition, are \$3,333 and \$107, respectively.

The Company incurred transaction related costs of \$43 in conjunction with the acquisition of TIV, which are included in cash flows from operating activities and selling, general and administrative expenses on the consolidated income statement.

## Acquisition of business of Intellifast GmbH

On October 5, 2011, the Company acquired all of the assets and assumed certain liabilities of Intellifast GmbH ("Intellifast"), a subsidiary of Safeguard International. The total purchase price was \$8,019. Intellifast provides an engineering solution for bolt identification, clamp load controlled bolt assembly, and clamp load documentation using coded transducers. Intellifast is managed by and included within the Engineering Systems group as its products are engineering-focused.

The purchase price was provisionally allocated to the following categories:

	Fair value recognized on acquisition
Property, plant and equipment	2,574
Intangible assets	4,984
Trade receivables	278
Inventories	183
	8,019
Trade payables	234
Amounts owed to subsidiary of the Company	3,034
	3,268
Total identifiable net assets at fair value	4,751
Goodwill arising on acquisition	–
Consideration, satisfied by cash	4,751

Cash flows on acquisition:	
Net cash acquired with the subsidiary	–
Cash paid in 2011	4,751
Net cash outflow	4,751

At the date of acquisition, the gross amount of trade receivables was \$278 and the fair value of trade receivables was \$278. The estimated contractual cash flows not expected to be collected at the acquisition date was nil.

The revenues and loss before tax of Intellifast for the year ended December 31, 2011, including the period prior to the acquisition, are \$3,085 and (\$1,691), respectively. The revenues and loss before tax of Intellifast for the year ended December 31, 2011, excluding the period prior to the acquisition, are \$652 and (\$695), respectively.

The Company incurred transaction related costs of \$74 in conjunction with the acquisition of Intellifast, which are included in cash flows from operating activities and selling, general and administrative expenses in the consolidated income statement.

## 6. Revenue

	2012	2011
Sales of goods	1,214,098	1,349,293
Rendering of services (commissions)	1,504	2,013
Total	1,215,602	1,351,306

For construction contracts, the following has been recognized using the percentage of completion revenue recognition method:

	2012	2011
Contract revenue recognized	186,321	177,632
Contract expenses recognized	154,089	137,743
Recognized profits	32,232	39,889
Contract costs incurred and recognized profits	233,397	246,881
Progress billings and advances received	206,921	223,804
Net amount due from customers	26,476	23,077
Gross amount due from customers for contract work (note 16)	53,465	53,281
Gross amount due to customers for contract work (shown as advance payments in consolidated statement of financial position)	(26,989)	(30,204)
Net amount due from customers	26,476	23,077

## 7. Other income

	Note	2012	2011
Insurance proceeds	i	233	2,784
Grant income	ii	41	53
Gains from asset sales	iii	81	602
Rental income	iv	204	227
Sale of scrap	v	218	340
Bargain purchase gain	vi	–	5,361
Other miscellaneous income	vii	495	703
Total		1,272	10,070

In 2012, other income of \$1,272 consisted of: (i) insurance proceeds of \$233 related to a German property insurance claim; (ii) government grant income of \$41 associated with Graphit Kropfmühl; (iii) income from asset sales of \$81; (iv) rental income of \$204 at two subsidiaries which rent out unused space; (v) income from the sale of scrap of \$218; and (vii) other miscellaneous income of \$495.

In 2011, other income of \$10,070 consisted of: (i) insurance proceeds of \$2,784 related to a Brazilian property insurance claim from 2010; (ii) government grant income of \$53 associated with Graphit Kropfmühl; (iii) income from asset sales of \$602; (iv) rental income of \$227 at two subsidiaries which rent out unused space; (v) income from the sale of scrap of \$340; (vi) income from a bargain purchase of \$5,361; and (vii) other miscellaneous income of \$703.

## 8. Personnel expenses

	Note	2012	2011
Wages and salaries		157,826	160,956
Contributions to defined contribution plans	24	3,160	2,737
Expenses related to defined benefit plans	24	9,165	9,013
Social security and other benefits		33,407	32,497
Performance share units	25	391	5,871
Equity-settled share-based payments	25	1,724	3,438
Total		205,673	214,512
Included in the following lines of the consolidated income statement:			
Cost of sales		127,502	125,217
Selling, general and administrative expenses		78,171	89,295
Total		205,673	214,512

## 9. Finance income and expense

	2012	2011
Interest income on bank deposits	476	495
Interest income on notes receivable	–	1,260
Interest income on escrow deposits	104	261
Accretion of convertible note	–	1,643
Finance income on derivatives	318	951
Other	153	847
Finance income	1,051	5,457
Foreign exchange loss	581	1,366
Interest expense on loans and borrowings	12,479	10,441
Amendment fees	2,856	282
Interest expense on interest rate swap	2,220	1,482
Amortization of loan issuance costs	1,946	1,277
Finance costs on derivatives	1,665	142
Guarantees	1,311	1,343
Extinguishment of debt	1,292	3,902
Discount on provisions	501	389
Commitment/unutilized fees	335	247
Accounts receivable factoring	92	–
Interest on employee profit sharing	93	284
Finance lease expense	82	54
Valuation of derivative portion of convertible debt	–	4,267
Interest on other liabilities including tax and other fiscal liabilities	1,112	2,097
Other	272	163
Finance expense	26,256	26,370
Net finance costs	25,786	22,279



On October 9, 2012, the Company amended and restated its credit facility in order to adjust certain provisions for the strategic plans of the Company. Included in the amendments was a change to the Tangible Net Worth to Total Assets covenant. Also, in 2012, the Company utilized an accordion feature in its credit facility to increase the term loan to €100,850 and the revolver to \$243,000. Fees related to these amendments were \$2,856 and are included in finance expense. See note 22 for additional details.

The Company acquired the remaining minority shares of its previously majority-controlled entity, Graphit Kropfmühl ("GK"), in the fourth quarter of 2012. The acquisition of the remaining outstanding shares of GK led to a requirement that it become a party to the Company's current credit facility. Becoming a party to the credit facility required that GK repay the majority of its historical debt. This repayment led to the incurrence of certain penalties on the debt and

interest rate swaps. These penalties were recorded as extinguishment of debt of \$1,292 and are included in finance expense in the year ended December 31, 2012.

On April 28, 2011, the Company entered into a five-year \$300 million multicurrency term loan and revolving credit facility with Commerzbank AG and Lloyds TSB Bank plc. The Company used the proceeds of the credit facility to repay its previous \$275 million term loan and revolving credit facility. The Company incurred \$3,902 in extinguishment of debt costs primarily due to the write-off of unamortized debt issuance costs from the credit facility that was refinanced.

As referenced in note 32, AMG entered into a convertible note which was bifurcated into a note and convertible equity option. Changes in the value of the option were recognized through finance expense in the year ended December 31, 2011 and amounted to \$4,267.

## 10. Income tax

Significant components of income tax expense for the years ended:

	2012	2011
Current tax expense		
Current period	9,841	23,317
Adjustment for prior periods	259	(479)
Total current taxation charges for the year	10,100	22,838
Deferred tax expense		
Origination and reversal of temporary differences	(5,784)	(15,241)
Changes in previously unrecognized tax losses, tax credits and unrecognized temporary differences	6,181	14,739
Changes in previously recognized tax losses, tax credits and recognized temporary differences for changes in enacted tax rates	256	(678)
Adjustment for prior periods	55	(2,956)
Total deferred taxation for the year	708	(4,136)
Total income tax expense reported in the income statement	10,808	18,702

The deferred tax expense related to the net gain on revaluation of cash flow hedges in the amount of \$2,029 is the only tax charged or credited through comprehensive income during the year ended December 31, 2012. In the

year ended December 31, 2011, a deferred tax benefit of \$3,315 was recorded through comprehensive income related to the net loss on revaluation of cash flow hedges.

### Reconciliation of effective tax rate

A reconciliation of income tax expense applicable to accounting profit before income tax at the weighted average statutory income tax rate of 28.99% (2011: 34.35%) to the Company's effective income tax rate for the years ended is as follows:

	2012	2011
Profit before income tax from continuing operations	10,878	26,992
Income tax using the Company's weighted average tax rate	3,153	6,081
Non-deductible expenses	(954)	(1,976)
Current year losses for which no deferred tax asset was recognized and changes in unrecognized temporary differences	5,180	14,918
Recognition of previously unrecognized tax losses, tax credits and temporary differences	(7,133)	(178)
Derecognition of previously recognized tax losses, tax credits and temporary differences	8,431	–
Changes in previously recognized tax losses, tax credits and recognized temporary differences for changes in enacted tax rates	(418)	(678)
Under (over) provided in prior periods	244	(3,435)
State and local taxes	2,009	3,190
Other	296	780
Income tax expense reported in consolidated income statement	10,808	18,702
Included in the following lines in the consolidated income statement:		
Income tax expense	10,808	18,702
Goodwill adjustments relating to deferred tax asset	–	–

The weighted average statutory income tax rate is the average of the statutory income tax rates applicable in the countries in which the Company operates, weighted by the profit (loss) before income tax of the subsidiaries in the respective countries as included in the consolidated accounts. Some entities have losses for which no deferred tax assets have been recognized.

During the year ended December 31, 2012, the income tax benefits related to the current year losses of certain US, German, British, Dutch, Mexican and Canadian entities were not recognized. During the year ended December 31, 2011, the income tax benefits related to the current years losses of certain US, German, Dutch (including losses from a Norwegian joint venture), Mexican and Canadian entities were not recognized. In total, \$5,180 and \$14,918 were not recognized in 2012 and 2011, respectively, as it is not probable that these amounts will be realized.

During the year 2012, income tax benefits related to previously unrecognized tax losses and temporary differences related to U.S., Mexican and German entities were recognized. In total \$7,133 and \$178 were recognized in 2012 and 2011 through increases to the net deferred tax assets of each respective entity. The income tax benefits were recognized since it is probably the amounts will be realized. As it is not probably the benefits of certain net operating losses and temporary differences would be

realized, \$8,431 of previously recognized net operating losses and temporary differences of Brazilian, Mexican and Belgian entities were unrecognized in 2012.

The main factors considered in assessing the realizability of deferred tax benefits were improved profitability, higher forecast profitability and the indefinite carryforward period of the tax losses. After assessing these factors, the Company determined that it is probable that the deferred tax benefit of the tax losses and temporary differences will be realized.

Also during the years ended December 31, 2012 and 2011, the net recognized deferred tax assets/(liabilities) were adjusted for changes in the enacted tax rates in the United Kingdom and Brazil. The net recognized deferred tax assets/(liabilities) were also adjusted to reflect accurate tax rates. The impact of the tax rate changes was a reduction of income tax expense of \$418 (2011: \$678).

There were no income tax consequences attached to the payment of dividends in either 2012 or 2011 by AMG to its shareholders, as no dividend payments were made.

### Deferred tax assets and liabilities

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, as well as tax loss and tax credit carryforwards.

Deferred tax assets are recognized to the extent it is probable that the temporary differences, unused tax

losses and unused tax credits will be realized. The realization of deferred tax assets is reviewed each reporting period and includes the consideration of historical operating results, projected future taxable income exclusive of reversing temporary differences and carryforwards, the scheduled reversal of deferred tax liabilities and potential tax planning strategies.

### Recognized deferred tax assets and liabilities

Deferred tax assets and liabilities have been recognized in respect of the following items:

	Consolidated statement of financial position				Consolidated income statement	
	Assets		Liabilities			
	2012	2011	2012	2011	2012	2011
Inventories	42,760	35,917	649	–	(5,238)	(1,294)
Long term contracts	–	–	52,809	47,610	4,004	(2,073)
Prepays and other current assets	6	1,007	103	290	808	742
Property, plant and equipment	291	2,011	11,932	9,061	4,432	3,328
Deferred charges and non-current assets	720	554	4,136	4,162	(243)	(1,004)
Accruals and reserves	6,002	8,598	2,029	1,007	2,310	1,473
Environmental liabilities	452	239	294	1,459	(1,384)	929
Retirement benefits	6,261	6,159	5	9	35	(230)
Tax loss and tax credit carryforwards	16,206	11,950	66	129	(4,016)	(6,007)
Tax assets and liabilities	72,698	66,435	72,023	63,727		
Set off of tax	(43,921)	(37,293)	(43,921)	(37,293)		
Net tax assets and liabilities	28,777	29,142	28,102	26,434		
Deferred tax (benefit) provision					708	(4,136)

### Unrecognized deferred tax assets

The net deferred tax assets and liabilities are fully recognized for each of the jurisdictions in which we operate with the exception of the following: (1) a German subsidiary continues to only recognize a portion of its net operating losses but the recognition has increased slightly from 44% recognition in 2011 to 45% recognized in 2012; (2) a US subsidiary continues to carry a full valuation allowance for U.S. Federal and state tax purposes with the exception of state deferred taxes for a certain portion of its business; (3) certain Dutch holding companies and operating companies in Germany and Mexico do not recognize benefits for their loss carryforward deferred tax assets because management has determined that they are not able to forecast taxable income for these respective entities.

Certain deferred tax assets have not been recognized in respect of tax loss carryforwards and temporary

differences as they may not be used to offset taxable profits elsewhere in the Company and they have arisen in subsidiaries that have been loss-making for some time.

At December 31, 2012 there were gross unrecognized tax loss carryforwards of \$103,167 from US operations which expire through 2032, \$19,336 from German operations which do not expire, \$16,140 from Canadian operations which expire through 2033, \$52,222 from Dutch operations which expire through 2021, \$14,283 from Brazil which do not expire and \$928 from Mexican operations which expire in 2022. At December 31, 2011 there were gross unrecognized tax loss carryforwards of \$104,147 from US operations which expire through 2031, \$21,131 from German operations which do not expire, \$15,580 from Canadian operations which expire through 2032, \$133,239 from Dutch operations which expire through 2020 and \$575 from Mexican operations which expire in 2021.

Deferred tax assets and liabilities have not been recognized in respect of the following items:

	Assets	
	2012	2011
Inventories	(12)	254
Prepays and other current assets	(4)	(1)
Property, plant and equipment	1,207	(1,238)
Accruals and provisions	5,328	5,340
Deferred charges and non-current assets	17,857	16,986
Environmental liabilities	4,815	4,882
Retirement benefits	9,505	9,166
Tax loss and tax credit carryforwards	67,688	86,312
Net tax assets – unrecognized	106,384	121,701

## 11. Non-recurring items

Operating profit is adjusted for non-recurring items. Non-recurring items comprise income and expense items that, in the view of management, do not arise in the normal course of business and items that, because of their nature and/or size, should be presented separately to enable a better analysis of the results.

In the years ended December 31, 2012 and 2011, operating profit was adjusted for non-recurring items which arose during the year.

Operating profit includes the non-recurring items noted in the following reconciliation:

	2012	2011
Operating profit	34,311	69,536
Asset impairment expense (reversal)	9,891	(1,917)
Environmental expense	1,772	5,886
Restructuring expense	6,151	2,526
Timminco related write-offs	–	7,541
Bargain purchase gain	–	(5,361)
Adjusted operating profit	52,125	78,211

## 12. Property, plant and equipment

	Mining Costs	Land, buildings and improvements	Machinery and equipment	Furniture and fixtures	Construction in progress	Finance leases	Total
<b>Balance at January 1, 2011</b>	26,869	102,310	305,237	19,582	24,285	1,480	479,763
Additions	–	9,907	12,402	3,002	22,096	–	47,407
Acquisition	–	9,664	9,328	94	739	–	19,825
Retirements and transfers	1,070	6,448	(637)	(816)	(19,753)	(21)	(13,709)
Effect of movements in exchange rates	(590)	(2,847)	(5,494)	(460)	24	(39)	(9,406)
<b>Balance at December 31, 2011</b>	27,349	125,482	320,836	21,402	27,391	1,420	523,880
<b>Balance at January 1, 2012</b>	27,349	125,482	320,836	21,402	27,391	1,420	523,880
Additions	2,797	2,341	10,186	2,226	34,473	–	52,023
Retirements and transfers	2,554	13,397	25,795	(406)	(45,670)	3,681	(649)
Effect of movements in exchange rates	291	2,166	5,374	123	(31)	137	8,060
<b>Balance at December 31, 2012</b>	32,991	143,386	362,191	23,345	16,163	5,238	583,314
<b>Depreciation and impairment</b>							
<b>Balance at January 1, 2011</b>	(4,896)	(40,133)	(194,796)	(11,235)	–	(91)	(251,151)
Depreciation for the year	(967)	(3,763)	(19,536)	(2,387)	–	(160)	(26,813)
Retirements and transfers	–	(36)	9,749	1,569	–	21	11,303
Impairments	–	–	(6,561)	–	(7,283)	–	(13,844)
Reversal of impairment	–	75	16,834	–	–	–	16,909
Effect of movements in exchange rates	111	935	2,001	241	–	14	3,302
<b>Balance at December 31, 2011</b>	(5,752)	(42,922)	(192,309)	(11,812)	(7,283)	(216)	(260,294)
<b>Balance at January 1, 2012</b>	(5,752)	(42,922)	(192,309)	(11,812)	(7,283)	(216)	(260,294)
Depreciation for the year	(1,284)	(4,031)	(20,792)	(2,571)	–	(162)	(28,840)
Retirements and transfers	230	323	2,157	715	–	–	3,425
Impairments	–	(110)	(5,667)	–	–	–	(5,777)
Effect of movements in exchange rates	20	(763)	(2,680)	(126)	–	(10)	(3,559)
<b>Balance at December 31, 2012</b>	(6,786)	(47,503)	(219,291)	(13,794)	(7,283)	(388)	(295,045)
<b>Carrying amounts</b>							
At January 1, 2011	21,973	62,177	110,441	8,347	24,285	1,389	228,612
At December 31, 2011	21,597	82,560	128,527	9,590	20,108	1,204	263,586
<b>At January 1, 2012</b>	21,597	82,560	128,527	9,590	20,108	1,204	263,586
<b>At December 31, 2012</b>	26,205	95,883	142,900	9,551	8,880	4,850	288,269

### MINING COSTS

Mining costs include assets related to the Company's tantalum and graphite mines. During the years ended December 31, 2012 and 2011, \$1,284 and \$967 of these costs have been depreciated.

### PROPERTY, PLANT AND EQUIPMENT UNDER CONSTRUCTION

During the years ended December 31, 2012 and 2011, the subsidiaries of the Company embarked on several different expansion projects as well as certain required maintenance projects. Costs incurred up to December 31, 2012, which are included in construction in progress, totaled \$8,880 (2011: \$20,108).

### BORROWING COSTS

The Company capitalized borrowing costs of \$1,272 during 2012 (2011: \$936) primarily related to the continued development of its asset purchase in Turkey as well as the design and construction of a new vanadium roasting facility in the United States. In 2012, borrowing costs were also capitalized for a furnace in Germany and geological exploration in Brazil. The Company used a rate of 4.72% (2011: 4.60%) for its capitalization which is its current average cost of borrowing. This amount is included in additions in the table.

### PROPERTY, PLANT AND EQUIPMENT INCLUDED IN PAYABLES

At December 31, 2012, the Company had \$8,606 of property, plant and equipment included in payables. This amount is included in additions in the table.

## FINANCE LEASES

At December 31, 2012, the Company had \$4,850 (2011: \$1,204) of finance leases for equipment and software. A portion of this balance relates to an asset that was previously leased under an operating lease. The lease was amended in 2012 to become a finance lease and therefore this amount is treated as a transfer in the table. See note 22 for additional information.

## DEPRECIATION OF PROPERTY, PLANT AND EQUIPMENT

Depreciation expense for the year ended December 31, 2012 was \$28,840 (2011: \$26,813). Depreciation expense is recorded in the following line items in the consolidated income statement:

	2012	2011
Cost of sales	24,718	23,481
Selling, general and administrative expenses	4,122	3,332
Total	28,840	26,813

## SALE OF EQUIPMENT

Certain equipment was sold in the years ended December 31, 2012 and 2011. In those years, the Company received proceeds of \$332 and \$609, respectively. The proceeds were less than the book value of the assets and losses on disposal of equipment were \$327 and \$50 in 2012 and 2011, respectively.

## IMPAIRMENT TESTING

Impairment losses were recorded at certain locations in 2012 and 2011 due to the discontinued use of certain assets. In 2011, a reversal of impairment was recorded within the Graphit Kropfmühl operating segment due to changes in the outlook for that company.

In the year ended December 31, 2012, impairment charges of \$5,777 were taken, primarily at an Engineering Systems location in the United States, which was focused on solar silicon development. The operation was shut down as of August 31, 2012 due to its lack of profitability and the fact that its primary function could be performed at a different location. In 2011 and 2012, the solar silicon market was virtually eliminated outside China and therefore, the assets of the operation had scrap value, if any at all. In the year ended December 31, 2011, asset impairments in the amount of \$7,283 were recorded due to the impairment of two construction in progress projects in the Americas. These construction in progress projects were being

completed within the Advanced Materials segment. The assets were deemed to be unrecoverable due to changes in the capital expansion plans. Additional charges of \$6,561 were recorded on equipment at a subsidiary in Canada due to the overall slowdown of the solar market. All asset impairment charges are included in the asset impairment expense line of the consolidated income statement.

The Company reversed an impairment of fixed assets in the year ended December 31, 2011. The original impairment was recorded in 2008 and related to the fair value of the fixed assets recorded upon the acquisition of GK and the subsequent change in the outlook for the acquired company due to the significant deterioration of the global economy. This reversal was \$16,909 was based on a value-in-use calculation and is recorded as income in the asset impairment line in the consolidated income statement. A deferred tax expense of \$4,600 was also recorded as a result of this reversal, equal to the deferred tax liability created with the step-up in the assets. In the year ended December 31, 2012, an evaluation of the recoverability of assets deemed that all assets remain recoverable.

A fair value less costs to sell methodology using discounted cash flows was used for determining the recoverable value of GK's assets. This methodology is permitted under IAS 36 when it is commonly used in the industry, as is the case with mining. The discounted future cash flows were based on the following key assumptions:

- Cash flows were projected based on a 3-year plan and also using a long term model for mining at a certain location. The mining model was based on current mine exploration reports and management's best estimates of pricing and costs for GK's products.
- The growth rate of 2% was used to extrapolate cash flow projections beyond the period covered by the most recent business plans. Management believes that this growth rate does not exceed the long term average growth rate for the silicon or graphite industries as these products are being used in emerging technologies.
- Revenue projections are based on an internal 3-year business plan.
- Discount rates of 9.44% and 8.55% were applied in determining the recoverable amount of the unit for the year ended December 31, 2012 and 2011, respectively.
- No impairment was required based on the excess of fair value less costs to sell over carrying value which amounted to \$3,596.



Sensitivities related to the value in use calculation for Graphit Kropfmühl would imply the following:

- A 1% increase in the discount rate would have created an impairment of \$7,974.
- Using a 1% growth rate would have created an impairment of \$5,925.

An impairment test was also performed relative to the Company's investment in a mining concession in Turkey. A fair value less costs to sell methodology using discounted cash flows was also used for the Turkish assets. The discounted future cash flows were based on the following key assumptions:

- Cash flows were projected based on a long term model for mining for this location which was based on current mine exploration reports and management's best estimates of pricing and costs for antimony metal.
- The growth rate of 2% was used to extrapolate cash flow projections beyond the period covered by the most

recent business plans. Management believes that this growth rate does not exceed the long term average growth rate for antimony as it is a scarce resource.

- Discount rate of 13.1% was applied in determining the recoverable amount of the unit for the year ended December 31, 2012.
- No impairment was required based on the excess of fair value less costs to sell over carrying value which amounted to \$7,396.

Neither a 1% change in the growth rate or the discount rate would imply impairment.

#### **SECURITY**

At December 31, 2012, properties with a carrying amount of \$189,414 (2011: \$134,664) are pledged as collateral to secure certain bank loans of subsidiaries.

### 13. Goodwill and intangible assets

Cost	Goodwill	Customer relationships	Supply contracts	Capitalized development costs	Mining assets	Other intangible assets	Total intangible assets
<b>Balance at January 1, 2011</b>	31,384	9,040	3,946	1,961	2,286	16,065	33,298
Acquisitions	2,473	7,133	–	–	–	217	7,350
Additions	–	–	–	1,381	2,933	201	4,515
Disposals, reversals and transfers	–	–	–	–	672	274	946
Effect of movements in exchange rates	(885)	(338)	(99)	(82)	(317)	(357)	(1,193)
<b>Balance at December 31, 2011</b>	32,972	15,835	3,847	3,260	5,574	16,400	44,916
<b>Balance at January 1, 2012</b>	32,972	15,835	3,847	3,260	5,574	16,400	44,916
Acquisitions	652	–	–	–	–	–	–
Additions	–	–	–	50	3,039	1,603	4,692
Disposals, reversals and transfers	–	–	–	849	–	–	849
Effect of movements in exchange rates	779	311	88	99	324	974	1,796
<b>Balance at December 31, 2012</b>	34,403	16,146	3,935	4,258	8,937	18,977	52,253
<b>Amortization and impairment</b>							
<b>Balance at January 1, 2011</b>	(9,680)	(9,040)	(3,946)	(463)	(1,639)	(12,912)	(28,000)
Amortization	–	(635)	–	(432)	(93)	(1,652)	(2,812)
Impairment	–	–	–	–	(72)	–	(72)
Effect of movements in exchange rates	243	245	99	10	28	143	525
<b>Balance at December 31, 2011</b>	(9,437)	(9,430)	(3,847)	(885)	(1,776)	(14,421)	(30,359)
<b>Balance at January 1, 2012</b>	(9,437)	(9,430)	(3,847)	(885)	(1,776)	(14,421)	(30,359)
Amortization	–	(1,399)	–	(257)	(298)	(764)	(2,718)
Impairment	–	(3,634)	–	(480)	–	–	(4,114)
Effect of movements in exchange rates	(215)	(335)	(88)	(64)	(49)	(555)	(1,091)
<b>Balance at December 31, 2012</b>	(9,652)	(14,798)	(3,935)	(1,686)	(2,123)	(15,740)	(38,282)
<b>Carrying amounts</b>							
At January 1, 2011	21,704	–	–	1,498	647	3,153	5,298
At December 31, 2011	23,535	6,405	–	2,375	3,798	1,979	14,557
At January 1, 2012	23,535	6,405	–	2,375	3,798	1,979	14,557
At December 31, 2012	24,751	1,348	–	2,572	6,814	3,237	13,971

Intangible assets are comprised of customer relationships, supply contracts, capitalized development costs, mining assets and other intangible assets. In prior years, mining assets were included in other intangible assets, but have been separated for presentation in the current year due to the growth in the balance. For goodwill, there is no amortization recorded and instead, impairment tests are performed. The Company performs goodwill impairment tests annually in accordance with IFRS guidelines.

The other intangibles amount represents certain licenses and registrations, including software licenses and REACH environmental registrations.

During 2012, the Company acquired a controlling interest in a company. The purchase price allocation for this acquisition resulted an additional \$652 of goodwill. See note 5 for additional details.

During 2011, the Company acquired three companies as well as a controlling interest in a fourth company. The purchase price allocation for these acquisitions resulted in the creation of new customer relationship assets of \$7,133 as well as additional goodwill of \$2,473. See note 5 for more details.

## RESEARCH COSTS

Research costs are expensed as incurred. Development costs are expensed until they meet the following criteria: technical feasibility; both the intention and ability to complete for internal use or as an external sale; probable generation of future economic benefits; and marketability existence. Research and development expenses are included in selling, general and administrative expenses and were \$5,687 and \$8,129 in the years ended December 31, 2012 and 2011, respectively.

## AMORTIZATION OF INTANGIBLE ASSETS

Amortization expense for year ended December 31, 2012 was \$2,718 (2011: \$2,812). Amortization expense is recorded in the following line items in the consolidated income statement:

	2012	2011
Cost of sales	659	1,809
Selling, general and administrative expenses	2,059	1,003
Total	2,718	2,812

For year ended December 31, 2012, impairment expense of \$3,634 was recorded related to customer relationships and \$480 related to development costs for the Company's subsidiary Intellifast. Due to impairment indicators, impairment tests were performed for this cash generating unit. The recoverable amount was based on a value in use calculation determined using the discounted cash flow method.

- Cash flows were projected based on a 5-year business plan.
- Revenue projections are based on an internal business model.
- An after-tax discount rate of 12.57% was applied. This was derived from a group of comparable companies (peer group) and has been compared to external advisor reports for reasonableness.

For year ended December 31, 2011, impairment expense of \$72 was recorded related to exploration costs in Brazil.

## IMPAIRMENT TESTING FOR CASH-GENERATING UNITS CONTAINING GOODWILL

For the purpose of impairment testing, goodwill and indefinite-lived intangible assets are allocated to the Company's operating divisions that represent the lowest level within the Company at which the goodwill is monitored for internal management purposes. Sudamin and LSM are included in the Advanced Materials segment,

while ALD is included in the Engineering Systems segment. Graphit Kropfmühl is included in its similarly named segment.

The aggregate carrying amounts of goodwill allocated to each unit are as follows:

	2012	2011
Sudamin cash-generating unit (France and India)	12,641	12,360
LSM cash-generating unit (UK)	1,510	1,510
ALD cash-generating unit (Germany, India and France)	10,559	9,637
Graphit Kropfmühl cash-generating unit (Germany)	41	28
Goodwill at cash-generating units	24,751	23,535

## Key assumptions

The calculations of value in use and fair value less costs to sell are most sensitive to the following assumptions:

- Global metals pricing
- Discount rate
- Growth rate used to extrapolate cash flows beyond the business plan period

Global metals pricing – Estimates are obtained from published indices. The estimates are evaluated and are generally used as a guideline for future pricing.

Discount rates – Discount rates reflect the current market assessment of the time value of money and the risks specific to the asset, based on a comparable peer group.

Growth rate assumptions – Rates are based on management's interpretation of published industry research. As most businesses follow economic trends, an inflationary factor was utilized. The businesses that are not mining based used a 1% growth rate as an inflationary factor. The mine-based businesses used a 2% growth rate due to the scarcity of the materials and their growing demand for certain applications.

It is possible that the key assumptions related to metals pricing that were used in the business plans will differ from actual results. However, management does not believe that any possible change in pricing will cause the carrying amount to exceed the recoverable amount. The values assigned to the key assumptions represent management's assessment of future trends in the metallurgical industry and are based on both external sources and internal sources (historical data).

For the impairment tests for Sudamin, LSM and ALD's cash-generating units, the recoverable amounts are the higher of the fair value less costs to sell or the value in use. The value in use was determined using the

discounted cash flow method. For Sudamin, the fair value less costs to sell was also determined using discounted cash flows, as this is an acceptable methodology used in mining operations. In 2012 and 2011, the carrying amounts of the Sudamin, LSM and ALD units were determined to be lower than their recoverable amounts and no impairment losses were recognized.

1) Sudamin's fair value less costs to sell was determined by discounting the future cash flows and was based on the following key assumptions:

- Cash flows were projected based on actual operating results and the long term mining business plans, due to the long term nature of mining businesses. Metal prices used in the projections are based on current pricing and market pricing reports at the time the plan is prepared.
- The growth rate of 2% was used to extrapolate cash flow projections beyond the period covered by the most recent business plans. Management believes that this growth rate does not exceed the long term average growth rate for antimony as it is a scarce resource.
- Revenue projections are based on an internal business model.
- After-tax discount rates of 11.27% and 9.61% were applied in determining the recoverable amount of the unit for the years ended December 31, 2012 and 2011, respectively. The discount rates were derived from a group of comparable companies (peer group) and have been compared to external advisor reports for reasonableness.

Sudamin's value exceeds its carrying value at December 31, 2012 by \$4,186 (2011: \$2,420).

Sensitivities related to the fair value less costs to sell calculation for Sudamin would imply the following:

- A 1% increase in the discount rate would have created an impairment of \$6,720.
- Using a 1% growth rate would have created an impairment of \$5,191.

2) LSM's value in use was determined by discounting the future cash flows generated from the continuing use of the unit and was based on the following key assumptions:

- Cash flows were projected based on actual operating results and the 3-year business plan, which covers the next three calendar years following the impairment test date. Metal prices used in the projections are generally at current market prices at the time the plan is prepared.

- The growth rate of 1% was used to extrapolate cash flow projections beyond the period covered by the most recent business plans. Management believes that this growth rate does not exceed the long term average growth rate for the metallurgical industry in the UK.
- Revenue projections are based on an internal 3-year business plan.
- After-tax discount rates of 9.54% and 7.30% were applied in determining the recoverable amount of the unit for the years ended December 31, 2012 and 2011, respectively. The discount rates were derived from a group of comparable companies (peer group) and have been compared to external advisor reports for reasonableness.

LSM's value in use exceeds its carrying value at December 31, 2012 by \$10,575 (2011: \$72,597).

Sensitivities related to the value in use calculation for LSM would imply the following:

- A 1% increase in the discount rate would have created an impairment of \$966.
- Assuming no growth would have reduced the excess value in use from \$10,575 to \$1,444.

3) ALD's value in use was determined by discounting the future cash flows generated from the continuing use of the unit and was based on the following key assumptions:

- Cash flows were projected based on actual operating results and the 3-year business plan, which covers the next three calendar years following the impairment test date.
- The growth rate of 1% was used to extrapolate cash flow projections beyond the period covered by the most recent business plans. Management believes that this growth rate does not exceed the long term average growth rate for the metallurgical industry.
- Revenue projections are based on an internal 3-year business plan.
- After-tax discount rates of 8.87% and 7.29% were applied in determining the recoverable amount of the unit for the years ended December 31, 2012 and 2011, respectively. The discount rates were derived from a group of comparable companies (peer group) and have been compared to external advisor reports for reasonableness.
- ALD's value in use exceeds its carrying value at December 31, 2012 by \$81,511 (2011: \$203,369). Due to the amount of excess value in use, no sensitivities were performed for this unit.

## 14. Associates and joint ventures

The Company's share of income in its associates and joint ventures for 2012 was \$2,353 (2011: (\$20,265)).

### Acquisition of Dynatech Furnaces Private Ltd.

On June 24, 2010, ALD GmbH entered into a share purchase contract to make an investment of \$419 to purchase 30.0% ownership in Dynatech Furnaces Private Ltd. ("Dynatech") from its current ownership. In 2011, the Company accounted for this investment as an associate. The Company acquired an additional 40.0% interest in Dynatech on August 20, 2012 for \$299. There was a loss of \$194 recognized from remeasuring the equity interest in Dynatech held by the Company prior to the business combination. The loss was recognized on the share of loss from associates line in the income statement. Effective August 20, 2012, Dynatech's results of operations are consolidated into AMG's financial statements. See note 5 for additional information.

### ACQUISITION OF THERMIQUE INDUSTRIE VIDE

On March 31, 2010, the Company acquired a 30.0% interest in Thermique Industrie Vide ("TIV"), a French engineering company which specializes in the design, manufacturing and maintenance of vacuum furnaces for \$617. In 2010, TIV was accounted for as an associate. The Company acquired an additional 26.8% interest in TIV on September 30, 2011 for \$943. As of September 30, 2011, TIV's results of operations are consolidated into AMG. See note 5 for additional information.

### TIMMINCO LTD.

During the year ended December 31, 2011, AMG's ownership percentage of Timminco was reduced to 41.9%. Impairment tests for the Company's 41.9% equity investment in Timminco were based on its fair value less costs to sell. During 2011, the Company recorded its share of losses of Timminco of \$9,563. At December 31, 2011, the remaining carrying amount was determined to be higher than the investment's recoverable amount

and an impairment in the amount of \$8,143 was booked. This impairment charge was based on management's assessment of Timminco's ability to continue as a going concern. Timminco filed for protection from its creditors in Canada on January 3, 2012 and all trading of its shares outstanding stopped on that date.

### IMPAIRMENT OF EQUITY INVESTMENT IN BOSTLAN S.A. ("BOSTLAN")

Impairment tests for LSM's 25.0% equity investment in Bostlan, an entity located in Spain, were based on its value in use. During 2011, the Company recorded its share of income of Bostlan of \$241. At December 31, 2011, the remaining carrying amount was determined to be higher than the investment's recoverable amount and an impairment in the amount of \$2,680 was booked. The carrying amount of this individual asset as of December 31, 2012 and 2011 was nil, as the value in use calculations did not indicate any value should be recorded for the investment.

Bostlan's value in use was determined by discounting the future cash flows generated from the continuing use of the asset and was based on the following key assumptions:

- Cash flows were projected based on actual operating results and the 3-year business plan, covering the next three years following the impairment test date.
- The growth rate of 1% was used to extrapolate cash flow projections beyond the period covered by the most recent business plans. Management believes that this growth rate does not exceed the long term average growth rate for the metallurgical industry in Spain.
- Revenue projections are based on an internal 3-year business plan.
- After-tax discount rates of 11.79% and 10.56% were applied in determining the recoverable amount of the asset for the years ended December 31, 2012 and 2011, respectively. The discount rates were derived from a group of comparable companies (peer group) and have been compared to external advisor reports for reasonableness.

Summary financial information for associates, adjusted for the percentage ownership held by the Company:

2012	Country	Ownership	Total Assets	Total Liabilities	Net Equity (deficit)	Revenues	Expense	Recognized profit (loss)	Carrying Amount
Bostlan S.A.	Spain	25.0%	7,566	4,553	3,013	13,881	13,881	–	–
ALD Holcroft Vacuum Technologies Co.	United States	50.0%	3,984	2,273	1,711	7,147	6,778	369	838
ABS Apparáté und Behälterbrau Staßfurt GmbH	Germany	49.0%	4,287	842	3,445	7,134	5,221	1,913	5,097
Silmag DA	Norway	50.0%	95	2,419	(2,324)	–	–	–	–
Dynatech Furnaces Private Ltd.*	India	30.0%	670	778	(108)	378	449	(71)	–
Nanjing Yunhai KB Alloys Co LTD	China	45.0%	2,026	417	1,609	5,041	4,899	142	1,416
Total								2,353	7,351
2011									
Bostlan S.A.	Spain	25.0%	10,109	6,928	3,181	15,496	17,935	(2,439)	–
ALD Holcroft Vacuum Technologies Co.	United States	50.0%	3,299	2,819	480	4,142	3,984	158	450
ABS Apparáté und Behälterbrau Staßfurt GmbH	Germany	49.0%	4,645	1,501	3,144	7,966	8,513	(547)	3,060
Silmag DA	Norway	50.0%	89	2,249	(2,160)	–	–	–	–
Timminco Ltd.	Canada	41.9%	50,346	33,520	16,826	37,416	55,122	(17,706)	–
Thermique Industrie Vide**	France	30.0%	2,139	1,297	842	2,335	1,953	382	–
Dynatech Furnaces Private Ltd.	India	30.0%	486	705	(219)	375	515	(140)	302
Nanjing Yunhai KB Alloys Co LTD	China	45.0%	1,690	327	1,363	3,658	3,631	27	1,273
Total								(20,265)	5,085

For the entities which are joint ventures, additional financial information is as follows:

	Current assets	Non-current assets	Total Assets	Current liabilities	Non-current liabilities	Total Liabilities
2012						
ALD Holcroft Vacuum Technologies Co.	3,909	75	3,984	2,270	3	2,273
Silmag DA	95	–	95	2,419	–	2,419
2011						
ALD Holcroft Vacuum Technologies Co.	3,264	35	3,299	2,819	–	2,819
Silmag DA	89	–	89	2,249	–	2,249

\* The Company acquired an additional 40.0% of Dynatech Furnaces Private Ltd. on August 20, 2012 and the entity was consolidated as of this date. The results shown in the table represent eight months of 30.0% ownership activity prior to consolidation. See note 5 for additional information.

\*\* The Company acquired an additional 26.8% of Thermique Industrie Vide on September 30, 2011 and the entity was consolidated as of this date. The results shown in the table represent nine months of 30.0% ownership activity prior to consolidation. See note 5 for additional information.



## 15. Inventories

	2012	2011
Raw materials	88,671	97,457
Work in process	37,882	41,773
Finished goods	82,078	86,119
Other	2,900	3,538
Total	211,531	228,887

Other inventory primarily includes spare parts that are maintained for operations.

In 2012, raw materials, changes in finished goods and work in process contributed to cost of sales by \$749,017 (2011: \$856,420). In the year ended December 31, 2012, the net adjustment to net realizable value amounted to a write-down of \$5,451 (2011: \$10,604) which was included in cost of sales. The net realizable value write-downs were related to obsolescence in solar products as well as inventory costing adjustments due to variability in metals pricing.

Inventory in the amount of \$154,884 (2011: \$167,451) is pledged as collateral to secure the bank loans of certain subsidiaries (see note 22).

## 16. Trade and other receivables

	2012	2011
Trade receivables, net of allowance for doubtful accounts	123,767	134,822
Notes receivable, net of allowance for doubtful accounts	–	–
Gross amount due from customers for contract work (POC)	183,728	181,292
Less: progress payments received	(130,263)	(128,011)
Net POC receivables	53,465	53,281
Total	177,232	188,103

At December 31, 2012 and 2011, trade receivables include receivables from customers who have received direct shipments or services from the Company and receivables from customers who have utilized inventory on consignment. Amounts billed to percentage of completion customers are also included in the trade and other receivables line item in the statement of financial position. The carrying amount of trade receivables approximates their fair value due to their short term nature. Trade receivables are generally non-interest bearing and are generally on 30-90 day terms.

Notes receivable represent amounts due within one year. Notes receivable are shown at their net realizable value. During the year ended December 31, 2011, a provision of \$3,333 was made against a note receivable from a Korean company when it filed for bankruptcy protection. See note 32 for additional information on notes receivable.

At December 31, 2012, receivables in the amount of \$164,826 (2011: \$181,919) are pledged as collateral to secure the term loan and multicurrency credit facility of the Company and the credit facilities of certain subsidiaries (see note 22).

As at December 31, the analysis of trade receivables that were past due but not impaired is as follows:

	Past due but not impaired						
	Total	Neither past due nor impaired	< 30 days	30-60 days	60-90 days	90-120 days	> 120 days
2012	177,232	150,808	19,721	3,333	1,316	528	1,526
2011	188,103	155,211	23,247	5,931	828	428	2,458

At December 31, 2012, trade receivables are shown net of an allowance for impairment of \$3,828 (2011: \$3,930) arising from customer unwillingness or inability to pay.

Impairment losses in the amount of \$383 and \$1,713 were recorded in the years ended December 31, 2012 and December 31, 2011, respectively.

Movements in the provision for impairment of receivables were as follows:

	2012	2011
At January 1	3,930	3,130
Charge for the year	383	1,713
Amounts written off	(85)	(642)
Amounts recovered / collected	(454)	(221)
Foreign currency adjustments	54	(50)
At December 31	3,828	3,930

### FACTORING OF RECEIVABLES

The Company maintains an accounts receivable facility for €5,000 with credit insurance company Coface in Germany. The discount rate under this facility is the equivalent of 3-month-EURIBOR plus 8.0% all in. The Company sold receivables in the amount of \$5,747 to Coface in exchange for cash proceeds of \$5,747, which are included in cash flows from operating activities during the year ended December 31, 2012. During 2012, the Company incurred costs of \$9 in conjunction with the sale of these receivables of which \$5 are included in finance expense and \$4 included in selling, general and administrative expenses on the consolidated income statement.

The Company also maintains an accounts receivable facility in the US with CitiBank. The discount rate under this facility

is the equivalent of LIBOR plus 3.75%. The Company sold receivables in the amount of \$8,360 in exchange for cash proceeds of \$8,273 which are included in cash flows from operating activities during the year ended December 31, 2012. The Company incurred costs of \$87 in conjunction with the sale of these receivables which are included in finance expense on the consolidated income statement.

Under these facilities, the Company continues to collect the receivables from the customer but retains no interest in the receivables, therefore, the Company has derecognized the receivables. The facility agreements do not permit the Company to transfer the receivables to any other institution and the Company is not permitted to repurchase the transferred receivables. The transfer of receivables provides additional liquidity to the Company.

## 17. Other assets

Other assets are comprised of the following:

	2012	2011
Prepaid taxes (income and indirect)	26,925	23,577
Prepaid inventory	10,107	7,646
Pension prepayments	5,829	5,509
Supplier prepayments	858	1,323
Insurance	3,900	4,375
Environmental trusts	4,081	4,283
Deposits	1,828	1,834
Officers life insurance	622	598
Maintenance and subscriptions	471	419
Prepaid tooling and parts	915	594
Other miscellaneous assets	2,993	2,892
Total	58,529	53,050
Thereof:		
Current	40,066	35,184
Non-current	18,463	17,866

Prepaid inventory includes inventory purchased for specific percentage of completion contracts as well as deferred stripping costs related to mining activities.

An equity security investment was deemed to be non-recoverable in the year ended December 31, 2011 and an impairment loss of \$759 was recorded for the remaining book value. An additional impairment loss of \$317 was recorded in 2011 for prepaid inventory related to Timminco, which filed for CCAA protection from its creditors (see note 36 for additional information on Timminco CCAA information). Both impairment losses in 2011 were recorded in the asset impairment line of the consolidated income statement.

## 18. Restricted cash

Restricted cash at December 31, 2012 is \$11,888 (2011: \$11,074) and is comprised of \$3,463 (2011: \$3,378) security deposits to secure leasing activities and \$8,425 (2011: \$7,677) which provides security to financial institutions who issue letters of credit or other forms of credit on behalf of the Company. These letters of credit serve two primary purposes: to provide financial backing for advance payments made by our customers of the Engineering Systems Division and to provide financial assurance to banks, vendors and regulatory agencies to whom the Company is obligated. Additional restricted cash of \$19 was related to import and export allowances in the year ended December 31, 2011.

## 19. Cash and cash equivalents

	2012	2011
Bank balances	104,004	65,463
Call deposits	17,635	14,108
Total	121,639	79,571

Bank balances earn interest at floating rates based on daily bank deposit rates. Call deposits have maturities of approximately three months or less depending on the immediate cash needs of the Company, and earn interest at the respective short term rates.

At December 31, 2012, the Company had \$50,794 of available liquidity (2011: \$59,047) on undrawn committed borrowing facilities.

The above chart is also representative of the consolidated statement of cash flows, cash and cash equivalents with no bank overdrafts as of December 31, 2012 (2011: nil).

## 20. Capital and reserves

### SHARE CAPITAL

At December 31, 2012, the Company's authorized share capital was comprised of 65,000,000 ordinary shares (2011: 65,000,000) with a nominal share value of €0.02 (2011: €0.02) and 65,000,000 preference shares (2011: 65,000,000) with a nominal share value of €0.02 (2011: €0.02).

At December 31, 2012, the issued and outstanding share capital was comprised of 27,551,269 ordinary shares (2011: 27,519,929), with a nominal value of €0.02 (2011: €0.02) which were fully paid. No preference shares were outstanding at December 31, 2012 (2011: nil). The nominal value of the outstanding shares as of December 31, 2012 was \$728 (2011: \$711) as compared to the value using historical exchange rates which was \$743 (2011: \$742).

The preference shares carry equal voting rights as ordinary shares and are entitled, if distribution to shareholders is permitted, to a fixed dividend equal to EURIBOR for deposit loans of one year increased with maximum of 400 basis points as determined by the Management Board of the Company and subject to approval by the Supervisory Board. AMG's dividend policy is to retain future earnings to finance the growth and development of its business. Payment of future dividends to shareholders will be at the discretion of the Management Board subject to the approval of the Supervisory Board after taking into account various factors. Additionally, payment of future dividends or other distributions to shareholders may be made only if the Company's shareholders' equity exceeds the sum of the issued share capital plus the reserves required to be maintained by law.

A rollforward of the total shares outstanding is noted as follows:

<b>Balance at January 1, 2011</b>	27,503,885
Shares issued to Supervisory Board	16,044
<b>Balance at December 31, 2011</b>	27,519,929
Shares issued to Supervisory Board	31,340
<b>Balance at December 31, 2012</b>	27,551,269

### SUPERVISORY BOARD REMUNERATION

During the years ended December 31, 2012 and 2011, 31,340 and 16,044 shares were issued, respectively, as compensation to its Supervisory Board members for services provided in 2012 and 2011. These shares were awarded as part of the remuneration policy approved by the Annual General Meeting.

## Other reserves

	Share-based payment reserve	Foreign currency translation reserve	Net unrealized gains (losses) reserve	Legal reserve participations	Capitalized development expenditures reserve	Total
<b>Balance at January 1, 2011</b>	41,741	(8,215)	2,632	15,268	1,498	52,924
Currency translation differences	–	(6,839)	–	–	–	(6,839)
Movement on cash flow hedges	–	–	(21,538)	–	–	(21,538)
Tax effect on net movement on cash flow hedges	–	–	3,315	–	–	3,315
Transfer to retained deficit	–	–	–	(5,029)	877	(4,152)
Equity-settled share-based payments	3,061	–	–	–	–	3,061
<b>Balance at December 31, 2011</b>	44,802	(15,054)	(15,591)	10,239	2,375	26,771
<b>Balance at January 1, 2012</b>	44,802	(15,054)	(15,591)	10,239	2,375	26,771
Currency translation differences	–	3,258	–	–	–	3,258
Movement on cash flow hedges	–	–	8,827	–	–	8,827
Tax effect on net movement on cash flow hedges	–	–	(2,029)	–	–	(2,029)
Transfer to retained deficit	–	–	–	(6,218)	197	(6,021)
Equity-settled share-based payments	2,017	–	–	–	–	2,017
<b>Balance at December 31, 2012</b>	46,819	(11,796)	(8,793)	4,021	2,572	32,823

### SHARE-BASED PAYMENT RESERVE

The share-based payment reserve is comprised of the value of equity-settled share-based payments provided to employees (and outside consultants), including key management personnel, as part of their remuneration. Refer to note 25 for details regarding these plans.

### FOREIGN CURRENCY TRANSLATION RESERVE

The translation reserve comprises all foreign currency differences arising from the translation of the financial statements of foreign subsidiaries. There are two primary functional currencies used within the Company: the US Dollar and the Euro. There are additional functional currencies used at small companies within the organization with limited impact to the consolidated financial statements which are listed below:

- British Pound Sterling
- Chinese Renminbi
- Czech Koruna
- Hong Kong Dollar
- Indian Rupee
- Japanese Yen
- Mexican Peso
- Mozambican Metical
- Polish Zloty
- Turkish Lira
- Singapore Dollar
- Sri Lankan Rupee

Resulting translation adjustments were reported in foreign currency translation reserve through other comprehensive income.

The Company did not record any share of comprehensive income related to associates or joint ventures in the years ended December 31, 2012 and 2011.

### NET UNREALIZED GAINS (LOSSES) RESERVE

The net unrealized gains (losses) reserve comprises the effective portion of the cumulative net change in the fair value of cash flow hedging instruments related to hedged transactions that have not yet occurred. For further discussion of the cash flow hedges and the amounts that were realized in the income statement, see note 32.

### RESTRICTIONS ON DISTRIBUTIONS

Certain restrictions apply on equity of the Company due to Dutch legal requirements. Legal reserve participations and capitalized development expenditures reserve have been restated, along with retained deficit, to align with Dutch GAAP requirements. Please see note 9 in the parent company financial statements for additional details.

### DIVIDENDS

No dividends have been paid or proposed in the years ended December 31, 2012 and 2011.

## 21. Earnings per share

### BASIC EARNINGS PER SHARE

Basic earnings per share amounts are calculated by dividing net profits for the year attributable to ordinary equity holders of the parent by the weighted average of ordinary shares outstanding during the year. As of December 31, 2012 and 2011, the calculation of basic earnings per share is performed using the weighted average shares outstanding for 2012 and 2011, respectively.

### DILUTED EARNINGS PER SHARE

Diluted earnings per share are calculated by dividing the net profit attributable to the ordinary equity holders of the parent by the weighted average number of ordinary shares outstanding during the year plus the weighted average number of ordinary shares that would be issued on the conversion of all the dilutive potential ordinary shares into ordinary shares. The only category of potentially dilutive shares at December 31, 2012 and 2011 are the Company's

share options. The diluted earnings per share calculation includes the number of shares that could have been acquired at fair value given the exercise price attached to the outstanding options. The calculated number of shares is then compared with the number of shares that would have been issued assuming the exercise of the share options. In years when there is a net loss attributable to shareholders, the dilutive effect of potential shares is not taken into effect.

Earnings	2012	2011
Net profit attributable to equity holders for basic and diluted earnings per share	2,392	5,160
<b>Number of shares (in 000's)</b>		
Weighted average number of ordinary shares for basic earnings per share	27,522	27,506
Dilutive effect of share-based payments	26	180
Weighted average number of ordinary shares adjusted for effect of dilution	27,548	27,686

## 22. Loans and borrowings

This note provides information about the contractual terms of the Company's interest-bearing loans and borrowings. For more information about the Company's exposure to interest rate and foreign currency risk, see note 31.

Non-current	Effective interest rate	Maturity	2012	2011
€100,850 Term Loan	EURIBOR+2.625%	04/2013–04/2016	122,611	78,450
\$243,000 Revolving Credit Facility	EURIBOR/LIBOR+2.625%	04/2016	133,563	119,123
€13,225 GK SPK Passau	3.75%–5.85%	06/2013–03/2018	–	4,281
€3,600 GK SPK Passau	2.45%	03/2017	3,638	–
€4,000 GK Unicredit	5.08%–5.85%	09/2013–09/2014	–	1,504
€413 GK Unicredit	6.58%	12/2014	186	–
€1,400 GK Landesbank	4.65%	03/2017	–	1,017
€2,200 GFE bank loan	4.95%	12/2023	1,800	1,893
€3,466 GFE subsidiary debt	4.70%	03/2023	1,007	1,354
€125 ALD subsidiary debt	5.00%–12.00%	12/2013–12/2015	50	–
\$2,275 CIF Mining subsidiary debt	6.75%–9.30%	01/2014–07/2014	1,042	2,000
Finance lease obligations	4.60%–11.90%	07/2014–06/2015	1,656	826
Total			265,553	210,448

Current	Effective interest rate	Maturity	2012	2011
€100,850 Term Loan	EURIBOR+2.625%	04/2013–04/2016	6,608	–
\$243,000 Revolving Credit Facility	3.15%	12/2013	6,608	–
€13,225 GK SPK Passau	3.75%–5.85%	06/2013–03/2018	–	1,717
€3,600 GK SPK Passau	2.45%	03/2017	1,119	–
€4,000 GK Unicredit	5.08%–6.58%	09/2013–12/2014	–	1,275
€413 GK Unicredit	6.58%	12/2014	186	–
€1,400 GK Landesbank	4.65%	03/2017	–	226
€245 GK Bank of China	8.50%	12/2012	–	316
€2,200 GfE bank loan	4.95%	12/2023	136	127
€3,466 GfE subsidiary debt	4.05%–6.30%	06/2013–03/2023	395	455
€10,000 ALD subordinated loan	8.04%	08/2012	–	12,864
€125 ALD subsidiary debt	5.00%–12.00%	12/2013–12/2015	28	78
\$2,275 CIF Mining subsidiary debt	6.75%–9.30%	01/2014–07/2014	1,069	–
Finance lease obligations	4.60%–11.90%	07/2014–06/2015	4,184	378
Total			20,333	17,436

#### TERM LOAN AND REVOLVING CREDIT FACILITY

On April 28, 2011, the Company entered into a five-year multicurrency term loan and revolving credit facility with Commerzbank AG and Lloyds TSB Bank plc. The credit facility was initially composed of a €64,200 term loan and a \$214,200 revolving credit facility ("revolving credit facility"). The company used the proceeds of the revolving credit facility to repay its existing \$275,000 term loan and multicurrency revolving credit facility which was due to expire in August 2012. The new revolving credit facility's borrowing costs are generally consistent with those in the debt facility that was refinanced. The new facility is structured to be able to increase borrowing capacity using an incremental term loan and revolving facility feature under certain conditions. In 2012 and 2011, the Company utilized the accordion feature in its revolving credit facility to increase the term loan and revolver capacities to €100,850 and \$243,000, respectively, as of December 31, 2012. Fees related to the amendment and utilization of the accordion feature in 2012 were \$1,644 and are included in finance expense. The five-year facility extends the term of the Company's primary debt agreements to April 2016. Instalment payments for the term loan begin in 2013. With respect to the previous credit facility, the Company incurred a loss on extinguishment of \$3,902 in 2011.

Borrowings under the revolving credit facility may be used for general corporate purposes of the Company. As of December 31, 2012, \$143,610 was borrowed (excluding letters of credit) under the revolving credit facility (2011: \$123,949). At December 31, 2012, there was unused availability (including unused letters of credit) of \$50,794 (2011: \$59,047).

Interest on the revolving credit facility is based on current LIBOR (or in the case of any loans denominated in Euros, EURIBOR) plus a margin. The margin is dependent on the leverage ratio. At December 31, 2012, the margin was 2.625 (2011: 2.75). To mitigate risk, the Company entered into an interest rate swap for €64,200 to fix the interest rate on the initial term loan at 5.62%. The Company also used an interest rate swap for \$95,000 of the revolving credit facility to fix the interest rate at 4.85%.

The revolving credit facility is subject to several affirmative and negative covenants including, but not limited to, the following:

- EBITDA to Net Finance Charges: Not to be less than 4.00:1
- Net Debt to EBITDA: Not to exceed 3.00:1
- Tangible Net Worth to Total Assets: Not be less than 17.5% for 2012, 20.0% for Q1 and Q2 2013, 22.5% for Q3 and Q4 2013, 25.0% for 2014 and after

On October 9, 2012, the Company amended and restated the revolving credit facility in order to adjust certain provisions for the strategic plans of the Company. Included in the amendments was a change to the Tangible Net Worth to Total Assets covenant. Previously, the minimum ratio for this covenant was 20.0% for 2012, 22.5% for 2013 and 25.0% thereafter. The amendment decreased the minimum ratio to 17.5% for the remainder of 2012 and 20.0% for Q1 and Q2 2013. All other covenants remained unchanged. Fees related to this amendment were \$1,212 and are included in finance expense.

EBITDA, Net Finance Charges, Net Debt, Tangible Net Worth and Total Assets are defined in the revolving credit facility agreement. The Company met all debt covenants during both years ended December 31, 2012 and 2011 at

the balance sheet date. Based on constant monitoring of its forecasts and its covenant calculations, the Company determined that it should seek a change to its debt covenants. Therefore, with the concurrence of its banking group, the Company amended its revolving credit facility in March 2013 to lower the minimum Tangible Net Worth to Total Assets ratio for an additional four quarters. The amended minimum ratios are as follows: 20.0% for 2013, 22.5% for Q1 and Q2 2014, and 25.0% thereafter.

Mandatory repayment of the revolving credit facility is required upon the occurrence of (i) a change of control or (ii) the sale of all or substantially all of the business and/or assets of the Company whether in a single transaction or a series of related transactions.

#### **DEBT ISSUANCE COSTS**

In connection with the term loan which commenced in 2011, the Company incurred issuance costs of \$10,848 which were deducted from the proceeds of the debt from the term loan. These amounts are shown net against the outstanding term loan balance and are amortized using the effective interest method using a rate of 5.94% for the costs associated with the US dollar dominated debt and a rate of 7.08% for the costs associated with the Euro denominated debt. The balance of unamortized costs which is net against the book value of debt was \$7,493 as of December 31, 2012 [2011: \$9,329].

#### **GRAPHIT KROPFMÜHL DEBT**

The Company acquired the outstanding minority shares of its previously majority-controlled entity, Graphit Kropfmühl, in the fourth quarter of 2012. The acquisition of the remaining outstanding shares led to a requirement that it become a party to the Company's current revolving credit facility. Becoming a party to the revolving credit facility required the repayment of the majority of its historical debt. This repayment led to the incurrence of certain penalties on the debt and interest rate swaps. These repayment penalties of \$1,292 were recorded as extinguishment of debt in finance expense in the year ended December 31, 2012.

The loans held prior to the refinancing of Graphit Kropfmühl included a government subsidized loan agreement with Bayrische Landesbank and various other loan agreements with HypoVereinsbank, Unicredit and Sparkasse Passau. The loans carried various interest rates and those with floating interest rates were fixed using interest rate swaps. Certain debt remained after the refinancing of the Company. The remaining debt includes capital lease instruments and limited credit facilities for its operations in Sri Lanka. The weighted average interest rates for the leases and facilities are 5.76% and 2.75%, respectively.

#### **FINANCE LEASE OBLIGATIONS**

As of December 31, 2012, subsidiaries had five capital leases outstanding to finance machinery with a balance of \$5,840. Monthly payments under these leases are \$73. The leases mature from 2013 through 2017. As of December 31, 2011, subsidiaries had four capital leases outstanding to finance machinery. Monthly payments under these leases were \$33. The leases mature from 2012 through 2015.

The Company built two heat treatment modules in 2006 and sold the modules to Bank of America. Subsequently, Bank of America and the Company entered a leasing agreement according to which Bank of America leased the modules to the Company. The lease term started on October 1, 2006 and ended on October 1, 2012. At the end of the lease term the Company exercised its right to prolong the lease agreement. The lease agreement was prolonged on the same lease payment conditions for another year and will end on October 1, 2013. Furthermore, the lease prolongation agreement includes a purchase clause. According to this clause the Company is obliged to purchase the lease objects at the end of the extended lease term for \$2,950. The Company therefore recorded the transaction as a capital lease obligation. The balance as of December 31, 2012 of \$3,538 is included in the current finance lease obligations line in the table.

#### **DEBT REPAYMENTS**

The Company made capital lease and debt repayments of \$24,966 during 2012. In conjunction with the Company completing the squeeze-out of non-controlling interests in Graphit Kropfmühl ("GK"), a majority of GK's external credit facilities, in the amount of \$10,501, were paid down through additional borrowings on the revolving credit facility. The Company previously had a Subordinated Loan Agreement ("ALD subordinated loan") with HSBC Trinkhaus & Burkhardt KGaA. The principal amount of the subordinated loan is nil as of December 31, 2012 [2011: \$12,864] as it was repaid in full in August 2012. The subordinated loan had an interest rate of 7.27% and an effective rate of 8.04%. CIF Mining and GfE paid \$1,665 to various banks and the remaining repayments relate to capital lease and other debt repayments.

The Company made capital lease and debt repayments of \$188,740 during 2011. The largest repayment was \$182,878 which was used to refinance the 2007 term loan and revolver. In order to complete the refinancing, it was also necessary for KB Alloys to repay \$1,435 and close out the credit facility they maintained prior to their acquisition by AMG. GK and GfE also repaid \$3,508 and \$494, respectively, to various banks. The remaining \$425 relates to capital lease and other debt repayments.



## 23. Short term bank debt

The Company's Brazilian subsidiaries maintain short term secured and unsecured borrowing arrangements with various banks. Borrowings under these arrangements are included in short term debt on the consolidated statement of financial position and aggregated \$28,856 at December 31, 2012 (2011: \$31,759) at a weighted average interest rate of 6.74% (2011: 6.29%).

Graphit Kropfmühl ("GK") maintains short term unsecured credit facilities with various banks to fund short term operating activities and capital projects. This short term debt carries fixed interest rates. The balance of these facilities at December 31, 2012 was \$109 at a fixed interest rate of 12%. In 2011, GK maintained short term secured and unsecured credit facilities with various banks to fund short term operating activities and capital projects. This short term debt carried both fixed and floating interest rates in 2011. The balance of these facilities at December 31, 2011 was \$8,978 at a weighted average interest rate of 3.38%.

Dynatech maintains a short term unsecured borrowing arrangement with ICICI Bank Limited, Mumbai. Borrowings under this arrangement are included in short term debt on the consolidated statement of financial position and was \$993 at December 31, 2012 at a fixed interest rate of 11.5%.

During the year ended December 31, 2012, the Company made short term debt repayments in the amount of \$10,160.

## 24. Employee benefits

### DEFINED CONTRIBUTION PLANS

Tax qualified defined contribution plans are offered which cover substantially all of the Company's salaried and hourly employees at US subsidiaries. All contributions, including a portion that represents a company match, are made in cash into mutual fund accounts in accordance with the participants' investment elections. The assets of the plans are held separately from the assets of the subsidiaries under the control of trustees. When employees leave the plans prior to vesting fully in the Company contributions, the contributions or fees payable by the Company are reduced by the forfeited contributions.

In Europe, the employees are members of state-managed retirement benefit plans operated by the governments in the countries where the employees work. The subsidiaries are required to contribute a specified percentage of payroll costs to the retirement benefit scheme to fund the benefits. The only obligation of the subsidiaries with respect to the retirement benefit plan is to make the specified contributions.

The total expense as of December 31, 2012 recognized in the consolidated income statement of \$3,160 (2011: \$2,737) represents contributions paid and payable to these plans.

### DEFINED BENEFIT PLANS

#### US plans

##### *Metallurg plans*

Tax-qualified, noncontributory defined benefit pension plans cover certain salaried and hourly employees at US subsidiaries. The plans generally provide benefit payments using a formula based on an employee's compensation and length of service. These plans are funded in amounts equal to the minimum funding requirements of the US Employee Retirement Income Security Act. Substantially all plan assets are invested in cash and short term investments or listed stocks and bonds.

On June 1, 2005, Metallurg entered into a Supplemental Executive Retirement Plan ("SERP") with Eric E. Jackson, its President and Chief Operating Officer. This SERP was amended in May 2010. Pursuant to the terms of the SERP and its amendments, Mr. Jackson will earn additional retirement benefits for continued service with the Company. The maximum retirement benefit payment under the SERP is equal to 50% of the final three year average compensation reduced by Mr. Jackson's retirement benefits under the Company's defined contribution plan as well as reduced by benefits determined in accordance with Metallurg's US defined benefit plan and payable from age 65 until age 88. The maximum retirement benefit payment will also be reduced in the case of the commencement of benefit payments prior to age 65 as a result of Mr. Jackson's early termination and/or early retirement.

On May 20, 2010, the Company entered into an additional Supplemental Executive Retirement Plan ("2010 SERP") with William Levy, its Chief Financial Officer. Pursuant to the terms of the 2010 SERP, Mr. Levy will earn additional retirement benefits for continued service with the Company. The maximum retirement benefit payment under the 2010 SERP is equal to 50% of the final three year average compensation reduced by retirement benefits as determined in accordance with the Company's defined contribution plan and payable from age 65 until age 88. Pension expense related to the SERPs in 2012 totaled \$483 (2011: \$423). Under the terms of the SERPs, Metallurg has no obligation to set aside, earmark or entrust any fund or money with which to pay the obligations thereto. However, the amounts are guaranteed by AMG.

On April 1, 2007, Metallurg entered into an additional Supplemental Executive Retirement Plan ("Executive SERP") with Heinz Schimmelbusch and Arthur Spector, its Chief Executive Officer and former Deputy Chairman, respectively. Pursuant to the terms of the agreements, these officers earn additional retirement benefits for continued service with the Company. The maximum retirement benefit under these Executive SERP agreements

is 50% of their final average compensation with a maximum per annum of \$600 and \$500 for Dr. Schimmelbusch and Mr. Spector, respectively. One-third of the benefit was recorded as of April 7, 2007 and the remaining two-thirds were accrued ratably on the first day of each of the following twenty-four months. Pension expense related to the Executive SERP in 2012 totaled \$936 (2011: \$710). Under the terms of the Executive SERP, Metallurg has no obligation to set aside, earmark or entrust any fund or money with which to pay the obligations thereto. However, the amounts are guaranteed by AMG. Mr. Spector initiated payments from his Executive SERP on November 1, 2010.

#### Actuarial assumptions

Principal actuarial assumptions at the reporting date (expressed as weighted averages) are as follows:

	2012	2011
	% per annum	% per annum
Expected return on plan assets at January 1	7.50	8.00
Inflation	N/A	N/A
Salary increases	N/A	N/A
Rate of discount at December 31	3.81	4.63
Taxable wage base increases	N/A	N/A
IRC Section 401(a)(17) and 415 limits increases	N/A	N/A

The actual return on plan assets for the year ending December 31, 2012 was 15.1% and the actual return on plan assets for the year ending December 31, 2011 was 0.02%. The investment strategy of the subsidiaries is to achieve long term capital appreciation, while reducing risk through diversification in order to meet the obligations of the plans. The expected return on plan assets assumption, reviewed annually, reflects the average rate of earnings expected on the funds invested using weighted average historical returns of approximately 9.9% for equities, 4.5% for debt, 6.6% for other and 2.75% for cash. The overall expected rate of return on assets is determined based on the market expectations prevailing on that date, applicable to the period over which the obligation is to be settled. The expectation used for 2012 was 7.5% (2011: 8.0%) for the Metallurg plans.

Assumptions regarding future mortality are based on published statistics and the RP-2000 Combined Healthy Mortality table. The valuation was prepared on a going-plan basis. The valuation was based on members in the Plan as of the valuation date and did not take future members into account. No provision has been made for contingent liabilities with respect to non-vested terminated members who may be reemployed. No provisions for future expenses were made.

Medical cost trend rates are not applicable to these plans.

The best estimate of contributions to be paid to the plans for the year ending December 31, 2013 is \$854.

#### KB Alloys plan

KB Alloys (which was acquired on February 18, 2011) has a tax-qualified, noncontributory defined benefit pension plan covering certain hourly paid employees. The plan provides benefit payments using a formula based on an employee's compensation and length of service. The plan is funded in amounts equal to the minimum funding requirements of the US Employee Retirement Income Security Act. Substantially all plan assets are invested in cash and short term investments or listed stocks and bonds.

#### Actuarial assumptions

Principal actuarial assumptions at the reporting date are presented as follows:

	2012	2011
	% per annum	% per annum
Expected return on plan assets at January 1, 2012 and February 18, 2011	7.50	7.50
Inflation	N/A	N/A
Salary increases	N/A	N/A
Rate of discount at December 31	4.15	5.00
Taxable wage base increases	N/A	N/A
IRC Section 401(a)(17) and 415 limits increases	N/A	N/A

The actual return on plan assets for the year ending December 31, 2012 was 10.6% (2011: (0.5%)). The investment strategy of the subsidiaries is to achieve long term capital appreciation, while reducing risk through diversification in order to meet the obligations of the plans. The expected return on plan assets assumption, reviewed annually, reflects the average rate of earnings expected on the funds invested using weighted average historical returns of approximately 8.0% for equities and 2.5% for debt. The overall expected rate of return on assets is determined based on the market expectations prevailing on that date, applicable to the period over which the obligation is to be settled. The expectation used for 2012 was 7.5% (2011: 7.5%) for the KB Alloys plan.

Assumptions regarding future mortality are based on published statistics and the RP-2000 Healthy Mortality table. The valuation was prepared on a going-plan basis. The valuation was based on members in the Plan as of the valuation date and did not take future members into account. No provisions for future expenses were made.

Medical cost trend rates are not applicable to this plan.

The best estimate of contributions to be paid to the plans for the year ending December 31, 2013 is \$239.

## European plans

### LSM plans

The Company sponsors the LSM 2006 Pension Plan and the LSM Additional Pension Plan, which are defined benefit arrangements. LSM's defined benefit pension plans cover all eligible employees in the UK.

Benefits under these plans are based on years of service and the employee's compensation. Benefits are paid either from plan assets or, in certain instances, directly by LSM.

Substantially all plan assets are invested in listed stocks and bonds. The expected return on bonds is determined by reference to UK long dated gilt and bond yields at the reporting date. The expected rate of return on equities have been determined by setting an appropriate risk premium above gilt/bond yields having regard to market conditions at the reporting date. The expected long term return on cash is equal to bank base rates at the reporting date.

The expected long term rates of return on plan assets are as follows:

	2012	2011
	% per annum	% per annum
Equities	8.50	8.40
Bonds	2.80-4.70	4.20-5.40
Cash	2.00	2.00
Other	2.80	3.90
Overall expected rate of return for LSM plans	4.59	6.09

The actual return on plan assets for the year ending December 31, 2012 was 6.3% (2011: 9.5%) for the primary plan and 2.4% (2011: 11.1%) for the additional defined benefit plan.

### Actuarial assumptions

	2012	2011
	% per annum	% per annum
Inflation	2.90	3.00
Salary increases	N/A	N/A
Rate of discount at December 31	4.40	4.70
Allowance for pension payment increases of the Retail Prices Index ("RPI") or 5% p.a. if less	2.80	2.90
Allowance for revaluation of deferred pensions of RPI or 5% p.a. if less	2.90	3.00
Allowance for commutation of pension for cash at retirement	nil	nil

Assumptions regarding future mortality are based on published statistics and PNxA00 mortality tables.

The best estimate of contributions to be paid to the primary plan for the year ending December 31, 2013 is

\$1,141. In the Additional Pension Plan, only payments for expenses to run the plan, together with the levy for the Pension Protection Fund, are expected to be made in 2013.

### ALD plans

ALD has defined benefit plans that cover employees in Germany. The benefits are based on years of service and average compensation.

On March 30, 2010, the Company entered into an additional Supplemental Executive Retirement Plan ("German SERP") with Dr. Reinhard Walter, President of Engineering Systems. Pursuant to the terms of the German SERP, Dr. Walter will earn additional retirement benefits for continued service with the Company. The maximum retirement benefit payment under the German SERP is \$315 per annum reduced by retirement benefits as determined in accordance with the Company's ALD plans and payable from age 65 until age 88. The maximum retirement benefit payment will also be reduced in the case of the commencement of benefit payments prior to age 65 as a result of early termination and/or early retirement. Pension expense related to the German SERP in 2012 totaled \$615 (2011: \$1,083). Dr. Walter is no longer a member of the Company's board effective October 2, 2012. The pension expense in 2012 includes an amount to bring the defined benefit obligation up to an agreed upon value of \$2,015, as per his severance agreement. Dr. Walter is expected to receive the value of this SERP with payments beginning in June 2013 and ending in December 2014.

Under the terms of the German SERP, the Company has no obligation to set aside, earmark or entrust any fund or money with which to pay the obligations thereto. However, the amounts are guaranteed by AMG.

### Actuarial assumptions

Principal actuarial assumptions at the reporting date are presented as follows:

	2012	2011
	% per annum	% per annum
Expected return on plan assets at January 1	N/A	N/A
Inflation	N/A	N/A
Salary increases	2.00	2.00
Rate of discount at December 31	3.60	5.35
Pension payments increases	1.75	1.75

Assumptions regarding future mortality are based on published statistics and mortality tables ("Richttafeln 2005G").

The best estimate of contributions to be paid to the plans, including the German SERP, for the year ending December 31, 2013 is approximately \$2,691.

### GfE plans

GfE has two defined benefit plans that cover all of the employees who were considered plan participants prior to 2005. Both plans have been closed to new participants – one was closed in 1992 and the other was closed in 2005. The plan benefits are funded by insurance contracts which are managed by Swiss Life Group. Benefits are paid by the insurance contracts and are based on years of service and average compensation.

An additional defined benefit plan covers two former managing directors from a previous acquisition. The plan benefits are funded by insurance contracts. Benefits are paid by the insurance contracts and are based on individual agreements with the managing directors.

### Actuarial assumptions

Principal actuarial assumptions at the reporting date are presented as follows:

	2012	2011
	% per annum	% per annum
Inflation	2.25	2.25
Salary increases	3.00	3.00
Rate of discount at December 31	3.20	5.40
Pension payments increases	2.25	2.25

Assumptions regarding future mortality are based on published statistics and mortality tables ("Richttafeln 2005G").

The following are employee benefits disclosures for plans aggregated by geographical location into the North American and European groups.

	US plans		European plans	
	2012	2011	2012	2011
Present value of unfunded obligations	16,316	14,103	2,431	2,665
Present value of funded obligations	36,637	33,530	217,441	180,767
Total present value of obligations	52,953	47,633	219,872	183,432
Fair value of plan assets	(25,592)	(22,390)	(108,866)	(97,818)
Unrecognized actuarial losses	(13,977)	(11,932)	(37,375)	(14,356)
Net liability for defined benefit obligations	13,384	13,311	73,631	71,258

GfE plan assets consist of insurance contracts, and the expected long term rates of return are 4.5% (2011: 4.5%).

The best estimate of contributions to be paid to GfE's plans for the year ending December 31, 2013 is approximately \$2,340.

### Graphit Kropfmühl ("GK") plans

GK has two defined benefit plans that cover all of the employees in Germany. The plan benefits are not funded. Benefits are paid by insurance contracts and are based on years of service and average compensation.

### Actuarial assumptions

Principal actuarial assumptions at the reporting date are presented as follows:

	2012	2011
	% per annum	% per annum
Inflation	2.00	1.20
Salary increases	2.00	3.00
Rate of discount at December 31	3.50	5.50
Pension payment increases	2.00	1.20

Assumptions regarding future mortality are based on published statistics and mortality tables ("Heuback 2005G").

The best estimate of contributions to be paid to GK's plans for the year ending December 31, 2013 is approximately \$1,153.

## Movement in employee benefits

	US plans		European plans	
	2012	2011	2012	2011
<b>Recognized liability for defined benefit obligations at January 1</b>	13,311	12,660	71,258	71,154
Expense recognized in profit and loss	2,370	1,563	6,795	7,450
Amortization of vested past service costs	–	–	–	(11)
Benefits paid directly by the employer	(393)	(392)	(3,849)	(3,995)
Defined benefit obligation from KB Alloys acquisition	–	1,348	–	–
Transfers	–	–	(1,105)	–
Employer contributions	(1,904)	(1,868)	(1,237)	(1,240)
Effect of movements in foreign exchange rates	–	–	1,769	(2,100)
Net liability for defined benefit obligations at December 31	13,384	13,311	73,631	71,258
Asset for defined benefit obligations at December 31(a)	149	144	5,680	5,365
<b>Liability for defined benefit obligations at December 31</b>	13,533	13,455	79,311	76,623

(a) Included in other non-current assets in the Statement of Financial Position

Plan assets consist of the following:

	US plans		European plan	
	2012	2011	2012	2011
Equity securities and ownership of equity funds	14,350	12,504	24,592	11,283
Debt securities	10,319	9,056	76,962	76,677
Cash	484	442	3,990	6,716
Other	439	388	3,322	3,142
Total	25,592	22,390	108,866	97,818

## Movement in present value of defined benefit obligations

	US plans		European plans	
	2012	2011	2012	2011
<b>Present value of defined benefit obligations at January 1</b>	47,633	38,619	183,432	177,900
Benefits paid directly by the employer or from the plan assets	(2,194)	(2,038)	(9,053)	(8,853)
Past service cost	–	–	–	720
Current service costs and interest	2,792	2,766	10,998	12,047
Defined benefit obligation from KB Alloys acquisition	–	4,285	–	–
Transfers	–	–	(1,105)	–
Unrecognized actuarial losses	4,722	4,001	28,226	5,430
Effect of movements in foreign exchange rates	–	–	7,374	(3,812)
<b>Present value of defined benefit obligations at December 31</b>	52,953	47,633	219,872	183,432

## Movement in fair value of plan assets

	US plans		European plans	
	2012	2011	2012	2011
<b>Fair value of plan assets at January 1</b>	22,390	19,160	97,818	95,812
Employer contributions	1,904	1,868	1,237	1,240
Benefits paid from the plan assets	(1,801)	(1,646)	(5,204)	(4,858)
Fair value of plan assets from KB Alloys acquisition	–	2,937	–	–
Expected return on plan assets	1,688	1,727	4,925	5,499
Unrecognized actuarial gains (losses)	1,411	(1,656)	5,380	1,843
Effect of movements in foreign exchange rates	–	–	4,710	(1,718)
<b>Fair value of plan assets at December 31</b>	25,592	22,390	108,866	97,818

## Expense recognized in profit or loss

	US plans		European plans	
	2012	2011	2012	2011
Current service costs	602	502	2,097	2,720
Past service costs	–	–	–	720
Interest on obligation	2,190	2,264	8,901	9,327
Expected return on plan assets	(1,688)	(1,727)	(4,925)	(5,499)
Recognized actuarial losses	1,266	524	722	193
Amortization of vested past service cost	–	–	–	(11)
Expense recognized in profit and loss	2,370	1,563	6,795	7,450

The expense is recognized in the following line items in the income statement:

	US plans		European plans	
	2012	2011	2012	2011
Cost of sales	349	234	2,294	2,401
Selling, general and administrative expenses	2,021	1,329	4,501	5,049
Total	2,370	1,563	6,795	7,450

Amounts for the current and previous four periods are as follows:

### North American Plans

	2012	2011	2010	2009	2008
Defined benefit obligation	52,953	47,633	38,619	34,060	31,488
Plan assets	25,592	22,390	19,160	17,127	14,991
Deficit	(27,361)	(25,243)	(19,459)	(16,933)	(16,497)
Experience adjustments on plan liabilities	44	105	116	59	474
Experience adjustments on plan assets	1,292	(1,458)	1,017	2,190	6,875

### European Plans

	2012	2011	2010	2009	2008
Defined benefit obligation	219,872	183,432	177,900	180,131	146,640
Plan assets	108,866	97,818	95,812	93,076	77,433
Deficit	(111,006)	(85,614)	(82,088)	(87,055)	(69,207)
Experience adjustments on plan liabilities	(5,317)	(11,541)	10,988	(6,567)	(26,073)
Experience adjustments on plan assets	9,764	364	1,149	15,360	(50,411)

A one percentage point change in the assumed discount rate would have the following effects:

2012	Increase	Decrease
Effect on the aggregate current service costs and interest cost	(1,549)	1,606
Effect on defined benefit obligation	(31,177)	31,957

## 25. Share-based payments

### EQUITY-SETTLED SHARE-BASED PAYMENTS

On May 13, 2009, the Annual General Meeting approved an option plan for the Management Board, the 2009 AMG Option Plan ("2009 Plan"). Each option issued under the 2009 Plan entitles the holder to acquire shares at a future date at a price equal to the fair market value of the share at the date on which the option was granted. One half of the options granted to each option holder on any date will vest on each of the third and fourth anniversaries of the grant date. The vesting is subject to performance conditions related to return on capital employed and share price appreciation. The options expire on the tenth anniversary of their grant date.

On June 26, 2007, the Management Board established the AMG Option Plan ("2007 Plan"), which is eligible to members of the Management Board, Supervisory Board, employees, and consultants of the Company. Each option issued under the plan entitles the holder to acquire shares at a future date at a price equal to the fair market value of the share at the date on which the option was granted. One quarter of the options granted to each option holder on any date will vest on each of the first four anniversaries of the grant date. This vesting is not subject to any performance conditions. The options expire on the tenth anniversary of their grant date.

Total grants under the 2009 Plan during 2012 were 279,634 (2011: 119,244). During the years ended December 31, 2012

and 2011, there were no grants exercised, expired or forfeited. All options under the 2009 Plan are equity-settled, in accordance with IFRS 2, by award of options to acquire ordinary shares or award of ordinary shares. The fair value of these awards has been calculated at the date of grant of the award. The fair value, adjusted for an estimate of the number of awards that will eventually vest, is expensed using a graded vesting methodology. The fair value of the options granted was calculated using a black-scholes model. The assumptions used in the calculation are set out below.

During the year ended December 31, 2012 and 2011, there were no options granted or exercised under the 2007 Plan. Expired or forfeited options under this plan were nil (2011: 11,250). All options under the 2007 Plan are equity-settled, in accordance with IFRS 2, by award of options to acquire ordinary shares or award of ordinary shares. The fair value of these awards has been calculated at the date of grant of the award. The fair value, adjusted for an estimate of the number of awards that will eventually vest, is expensed using a graded vesting methodology.

During the year ended December 31, 2012, AMG recorded compensation from equity-settled share-based payment transactions of \$1,724 (2011: \$3,438) of which \$1,693 is included in selling and administrative expenses and \$31 is included cost of goods sold (\$3,341 and \$97, respectively in 2011) in the income statement.

### Movements

	2012		2011	
	Number of options (in 000s)	Weighted average exercise price (in €)	Number of options (in 000s)	Number of options (in 000s)
In thousands of options				
<b>Outstanding at January 1</b>	2,650	21.90	2,542	22.25
Granted during the year	279	6.44	119	15.09
Forfeited or expired during the year	–	–	(11)	29.50
Exercised during the year	–	–	–	–
<b>Outstanding at December 31</b>	2,929	20.42	2,650	21.90
<b>Exercisable at December 31</b>	2,326	23.40	2,052	23.15

2,326,297 options were exercisable as of December 31, 2012 (2011: 2,052,333).

At December 31, 2012, the number of common shares subject to options outstanding and exercisable was as follows:

Price range	Outstanding options	Weighted average exercise price (in €)	Weighted average remaining life (in years)	Exercisable options	Weighted average exercisable price (in €)
€6.44 to €9.84	1,015,034	7.90	7.4	531,297	8.32
€12.70 to €24.00	1,354,244	21.21	5.1	1,235,000	21.80
€29.45 to €40.50	500,000	38.83	5.4	500,000	38.83
€44.00 to €64.31	60,000	61.06	5.4	60,000	61.06



At December 31, 2011, the number of common shares subject to options outstanding and exercisable was as follows:

Price range	Outstanding options	Weighted average exercise price (in €)	Weighted average remaining life (in years)	Exercisable options	Weighted average exercisable price (in €)
€7.99 to €9.84	735,400	8.46	7.6	439,833	8.00
€12.70 to €24.00	1,354,244	21.21	6.1	1,175,000	22.27
€29.45 to €40.50	500,000	38.83	6.4	392,500	38.41
€44.00 to €64.31	60,000	61.06	6.4	45,000	61.06

The maximum number of options that can be granted under either the 2007 Plan or the 2009 Plan is 10% of total shares outstanding up to a maximum of 50,000,000. As of December 31, 2012, total shares outstanding under the 2007 Plan were 2,234,833 and the total options outstanding under the 2009 Plan were 694,445.

### Assumptions

The following table lists the inputs into the binomial model used to calculate the fair value of the share-based payment options that were granted in 2012 and 2011 under the 2009 Plan:

	2012	2011
Exercise price	€6.44	€15.09
Share price at date of grant	€6.44	€15.09
Contractual life (years)	10	10
Dividend yield	nil	nil
Expected volatility	70.15%	71.12%
Risk-free interest rate	1.11%	2.28%
Expected life of option (years)	3–4	3–4
Weighted average share price	€7.10	€11.19
Expected departures	10%	10%

The expected volatility was calculated using the average historical share volatility of the Company's peers (over a period equal to the expected term of the options). The expected volatility reflects the assumption that the calculated volatility of the Company's peers would be indicative of future trends, which may not be the actual outcome. The expected life is the time at which options are expected to vest, however this also may not be indicative of exercise patterns that may occur. The 2007 Plan options vest in four equal tranches on the first, second, third and fourth anniversaries of the grant date, and therefore continued employment is a non-market condition for options to vest. The 2009 Plan options vest 50% each on the third and fourth anniversary of the grant date. There are performance requirements for vesting of these options. The risk free rate of return is the yield on zero coupon two and five-year Dutch government bonds.

AMG's option expense is recorded in the share-based payment reserve (refer to note 20). The cumulative amount recorded in the share-based payment reserve in

shareholders' equity was \$46,819 as of December 31, 2012 (2011: \$44,802).

### Cash-settled share-based payments

In May 2009, the Annual General Meeting approved a remuneration policy that utilizes cash-settled share-based payments as a part of compensation. In the year ended December 31, 2012, the Company issued 325,627 performance share units ("PSUs") to certain employees which are cash-settled. 159,069 PSUs were issued in the year ended December 31, 2011. In the year ended December 31, 2012, 263,172 PSUs were paid out and the total number of PSUs outstanding as of December 31, 2012 was 673,669. Fair value of those PSUs is determined using the black-scholes method using the following assumptions:

	2012	2011
Contractual life (years)	1-3	1-3
Dividend yield (%)	nil	nil
Expected volatility (%)	21.91%–46.45%	49.12–59.82%
Risk-free interest rate (%)	.065%	0.18%
Expected life of option (years)	1-3	1-3

The liability for cash-settled share-based payments has been rolled forward as noted below:

	Value of liability
Balance as at January 1, 2011	3,681
Current year expense	5,871
Vesting and payments on second tranche 2009 grant	(6,156)
Currency / other	(63)
Balance as at December 31, 2011	3,333
Balance as at January 1, 2012	3,333
Current year expense	391
Vesting and payments on third tranche 2009 and first tranche 2010 grants	(3,525)
Currency / other	172
Balance as at December 31, 2012	371

Due to the total shareholder return performance of the Company relative to its peers, only one tranche of PSUs carried any fair value at December 31, 2012. The fair value of these PSUs was €6.49. At December 31, 2011, PSUs had a fair value range of €7.10 – €7.53.

## 26. Provisions

	Environmental remediation costs and recoveries	Restructuring	Warranty	Cost estimates	Partial retirement	Restoration costs	Other	Total
<b>Balance at January 1, 2011</b>	15,496	1,306	12,203	4,923	2,265	4,586	532	41,311
Provisions made during the period	2,640	2,526	2,090	2,443	653	3,246	1,806	15,404
Provisions used during the period	(1,477)	(923)	(1,312)	(1,557)	(1,912)	(23)	(194)	(7,398)
Increase due to discounting	291	–	–	–	–	98	–	389
Currency, transfers and reversals	1,220	(254)	(6,465)	(2,612)	123	(187)	(148)	(8,323)
<b>Balance at December 31, 2011</b>	18,170	2,655	6,516	3,197	1,129	7,720	1,996	41,383
<b>Balance at January 1, 2012</b>	18,170	2,655	6,516	3,197	1,129	7,720	1,996	41,383
Provisions made during the period	793	6,151	2,120	1,934	1,238	979	473	13,688
Provisions used during the period	(29)	(4,090)	(870)	(1,130)	(752)	(30)	(282)	(7,183)
Increase due to discounting	110	–	–	–	–	391	–	501
Currency, transfers and reversals	116	75	(3,555)	(863)	864	2,532	(1,316)	(2,147)
<b>Balance at December 31, 2012</b>	19,160	4,791	4,211	3,138	2,479	11,592	871	46,242
Non-current	17,515	–	–	–	810	7,720	974	27,019
Current	655	2,655	6,516	3,197	319	–	1,022	14,364
<b>Balance at December 31, 2011</b>	18,170	2,655	6,516	3,197	1,129	7,720	1,996	41,383
Non-current	17,537	–	–	–	2,380	11,592	343	31,852
Current	1,623	4,791	4,211	3,138	99	–	528	14,390
<b>Balance at December 31, 2012</b>	19,160	4,791	4,211	3,138	2,479	11,592	871	46,242

### ENVIRONMENTAL REMEDIATION COSTS AND RECOVERIES

The Company makes provisions for environmental cleanup requirements, largely resulting from historical solid and hazardous waste handling and disposal practices at its facilities. Environmental remediation provisions exist at the following sites and are discounted according to the timeline of expected payments. Due to timing and low interest rates, the undiscounted and discounted liability amounts do not differ significantly, except for with respect to the 1,000 year liabilities in the United States.

Reversals of environmental expense in the amount of \$873 were recorded in the year ended December 31, 2012. This was primarily due to the capitalization of certain costs related to the REACH legislation, as these costs are now included in intangible assets. In prior years, restoration costs were included in environmental remediation costs and recoveries, but have been segregated in the current period due to the growth in balance.

#### Cambridge, OH USA

The largest issues at the Cambridge, Ohio site relate to a 1997 permanent injunction consent order ("PICO") entered into with the State of Ohio and Cyprus Foote Mineral Company, the former owner of the site. While AMG's US subsidiary and Cyprus Foote are jointly liable, the Company has agreed to perform and be liable for the remedial obligations. The site contains two on-site slag piles that

are the result of many years of production. According to the PICO guidelines, these slag piles were capped in 2009, thereby lowering the radioactive emissions from the piles.

The PICO also required 1,000 years of operations and maintenance expenses ("O&M") through the year 3009 at the site. The Company has reserved for ongoing O&M which is expected to cost \$44,562 on an undiscounted basis. Other environmental items requiring provision include: wetlands remediation, stormwater remediation and limited groundwater remediation. These projects are expected to create cash outflows of \$529, on an undiscounted basis, and are expected to be completed within the next 20 years. Discount rates of 0.16%-2.95% (depending on the expected timing of payments) were used in determining the liabilities recorded.

#### Newfield, NJ USA

Another one of the Company's US subsidiaries has entered into administrative consent orders with the New Jersey Department of Environmental Protection ("NJDEP") under which the US subsidiary must conduct remediation activities at the Newfield facility. Since the initial administrative consent order was signed in 1997, many of the obligations have been completed.

Similar to the Cambridge, Ohio facility, Newfield also conducted operations that created a substantial slag pile with low-level radioactive materials. After the production

that created this slag ceased, the Nuclear Regulatory Commission ("NRC") was notified and preparation of the decommissioning plan commenced. This plan has been through several iterations of technical review with the NRC. Based on the current version of the plan, the costs to cap the slag pile are estimated to be \$7,263 and are expected to be paid over the next 3 to 5 years, subject to various court challenges as discussed in more detail in note 35. Until the capping is completed, the US subsidiary is required to pay the NRC for its oversight costs. The expected undiscounted cash flows related to oversight are \$3,850, with payments expected to begin and end within the next five years. In addition, operations and maintenance for the site will be required for 1,000 years subsequent to the capping, estimated to cost \$49,700 on an undiscounted basis. Discount rates of 0.16%-2.95% (depending on the expected timing of payments) were used in determining the liabilities recorded.

#### Remediation trust funds

The Company's US subsidiaries have established trust funds to accumulate funds for future environmental remediation payments. Amounts are paid out from the trust fund following completion and approval of rehabilitation work. The contributions to the trust funds were placed with investment banks which are responsible for making investments in equity and money market instruments. The trust funds are to be used according to the terms of the trust deed which require that these funds be used for the 1,000 year O&M at the sites. The assets are not available for general use. The trust funds are discounted and are shown within other non-current assets in the consolidated statement of financial position. The discounted values of the trust funds at December 31, 2012 are \$3,481 (2011: \$3,678). The undiscounted amounts in the trust funds as of December 31, 2012 are \$5,350 (2011: \$5,207).

#### Sao Joao del Rei, Brazil

The aluminum plant facility in Brazil has waste from its operations that has accumulated over time. Management has been in negotiations with the Brazilian government on the best way to dispose of the waste material. These plans were finalized in 2012 and the company is currently looking for vendors to perform the removal and disposal, which should occur in 2013. The liability for removal of material as at December 31, 2012 was \$713 (2011: \$450).

#### Nazareno, Brazil

Brazilian authorities have made certain demands with respect to the operations and the related environmental impacts of the tantalum mine in Brazil. These obligations

were recorded in the year ended December 31, 2012 with environmental expense of \$1,032. Payments of \$135 against this provision and additional payments are expected throughout 2013 and 2014. The total provision for meeting the Brazilian authorities' demands as of December 31, 2012 was \$897.

#### Pocking, Germany

In the year ended December 31, 2011, a new environmental remediation liability was identified with respect to the silicon metal operation and its waste storage and an expense in the amount of \$599 recorded. As of December 31, 2012, this liability is valued at \$588 (2011: \$556). Payments are not expected to occur on this provision until 2015.

#### Nuremberg, Germany

A provision for sewer rehabilitation in Germany has been recorded. Over time, damage to the sewer lines from the plant in Nuremberg has occurred. Management is working with German authorities in order to clean up the leakage from the sewer and repair the line to cease any future leakage. In the year ended December 31, 2011, an additional expense in the amount of \$1,750 was recorded. The expected liability for continued work on the sewer rehabilitation project is \$1,663 (2011: \$1,742). Payments for this project are expected to occur over the next two to three years with spending taking place in a relatively consistent pattern over those years. Discount rates of 3.69%-4.08% (depending on the expected timing of payments) were used in determining the liabilities recorded.

#### RESTRUCTURING

During the year ended December 31, 2012, the Company recorded a restructuring provision in the amount of \$6,151 (2011: \$2,526). The largest portions of the severance related to the mining and aluminum businesses where high level executives were terminated as a means to cut costs. Severance was also recorded with respect to a solar business in the United States, which was shut down during the year ended December 31, 2012. Additional restructuring costs included lease termination penalties and shut-down costs for offices and production facilities. In the year ended December 31, 2011, the restructuring expense was primarily related to the Company's Silmag joint venture. The management of this joint venture determined that it would terminate the joint venture arrangement. This termination triggered the recognition of a value added tax liability (since the operation took advantage of a start-up Company exemption and is no longer qualified for this exemption) as well as certain

other costs related to the clean-up of the joint venture site. Amounts paid related to current and previous years' restructurings were \$4,090 (2011: \$923).

#### **WARRANTY**

Engineering Systems offers certain warranties related to their furnace operations. These warranties are only provided on certain contracts and the provisions are made on a contract by contract basis. Each contractual warranty is expected to be utilized or derecognized within 12 months. The provisions for these warranties are based on the historical return percentages. There were \$1,700 of additional provisions during 2012 (2011: \$1,600) and payments of \$861 (2011: \$1,123).

Two German subsidiaries provide for warranties for certain products. The provision is based on actual claims made by customers. There were \$420 of additional provisions during 2012 (2011: \$490) and payments of \$9 (2011: \$189).

#### **COST ESTIMATES**

Engineering Systems builds a project cost provision on its percentage of completion contracts. The provision is developed on a contract by contract basis. The amounts recorded as a provision are the result of the expected total project costs and are based on historical percentages. Over the life of the percentage of completion contracts, the provision for project cost is utilized or derecognized depending on actual performance of the contracts. A provision of \$1,934 was recorded in 2012 (2011: \$2,443) related to projects that are currently in process while \$1,130 (2011: \$1,557) of provisions were used.

#### **PARTIAL RETIREMENT**

In an effort to reduce unemployment and create jobs for younger job-seekers, Germany implemented certain regulations in 1996 to enable employees to take early retirement. Although the law is no longer in effect, the Company's German subsidiaries have made provisions for those employees who are eligible per their employment contracts. During 2012, there were additional provisions of \$1,238 (2011: \$653) and payments of \$752 (2011: \$1,912).

#### **RESTORATION, REHABILITATION AND DECOMMISSIONING COSTS**

Rehabilitation provision represents the accrued cost required to provide adequate restoration and rehabilitation upon the completion of extraction activities. These amounts will be settled when rehabilitation is undertaken, generally at the end of the project's life, which is five years.

##### **Hauzenberg, Germany**

A recultivation provision is recorded on Graphit Kropfmühl's books as it relates to its graphite mine in Germany. This mine was previously closed and the company was in negotiations with the German authorities on the plan to close the site and the timeline. However, in June 2012, this mine was re-opened. The total restoration liability for this mine is \$4,936 as of December 31, 2012 (2011: \$4,300).

##### **Nazareno, Brazil**

In the year ended December 31, 2012, a Brazilian subsidiary recorded an expense of \$844 (2011: \$3,135) related to an asset retirement obligation at its mine. In addition, a gross up of the asset and the provision was recorded in the amount of \$2,422. Significant mining took place during the year ended December 31, 2012 in order to keep up with higher demand. The revision in the provision is based on a review of the current mine landscape and the requirements of the Brazilian government to recultivate the area that was mined. As of December 31, 2012, the total provision amount was \$6,656 (2011: \$3,420).

#### **OTHER**

Other is comprised of additional accruals including certain guarantees made to various customers.

## 27. Government grants

<b>Balance at January 1, 2011</b>	817
Provisions made during the period	613
Provisions used during the period	(53)
Repayments during the period	(618)
Currency and reversals	7
<b>Balance at December 31, 2011</b>	766
<b>Balance at January 1, 2012</b>	766
Provisions made during the period	–
Provisions used during the period	(41)
Repayments during the period	(192)
Currency and reversals	(6)
<b>Balance at December 31, 2012</b>	527
Non-current	732
Current	34
<b>Balance at December 31, 2011</b>	766
Non-current	472
Current	55
<b>Balance at December 31, 2012</b>	527

Graphit Kropfmühl ("GK") has government grant obligations related to retention of personnel and its capital investment in the state of Bavaria, Germany. According to the grants received, GK is expected to create or maintain a certain number of employees over the course of the grant. The liability for the grant is reduced as money is spent on capital expansion. As of December 31, 2012, the current and non-current portions of the grants were \$40 and \$370, respectively. As of December 31, 2011, the current and non-current portions of the grants were \$19 and \$616, respectively. During the year ended December 31, 2012, GK failed to meet requirements established for the government grants, this resulted in repayments of government grants in the amount of \$192 (2011: \$618).

LSM has a government grant given by the Welsh Assembly Government for the Anglesey plant to help safeguard jobs in the area. According to the grant received, LSM is expected to maintain a certain number of employees over the course of the grant and required to produce or improve products, processes or launch a service. The grants funds will be used for a capital project that will introduce a new product. The liability for the grant is reduced as money is spent on capital expansion. As of December 31, 2012, the current and non-current portions of the grant were \$15 and \$102, respectively. As of December 31, 2011, the current and non-current portions of the grant were \$15 and \$116, respectively.

## 28. Deferred revenue

One of the Company's subsidiaries entered into a sales contract with a long term customer with significant prepayments. The sales contract required the customer to pay \$5,000 upon signing with an additional prepayment due upon shipment of the first contractual quantities. Shipments are not expected to begin to this customer until the second half of 2013. The deferred revenue liability will be reduced using a prescribed formula over the course of the five-year contract based on the tonnage shipped.

The Company also received payments of \$257 which relate to expected future deliveries of products to customers in Brazil and Germany and are expected to be provided within the next year.

<b>Balance at January 1, 2012</b>	
Deferred during the year	5,257
Released to the income statement	–
<b>Balance at December 31, 2012</b>	5,257
Non-current	2,724
Current	2,533
<b>Balance at December 31, 2012</b>	5,257

## 29. Other liabilities

Other liabilities are comprised of the following:

	2012	2011
Accrued bonus	11,371	12,267
Accrued interest	4,079	3,578
Accrued professional fees	6,007	5,162
Accrued employee payroll expenses	5,677	4,679
Accrual for performance share units	371	3,333
Accruals for operational costs	6,295	4,947
Claims	512	1,693
Fiscal contingency	7,104	4,380
Sales commission	2,063	1,376
Other benefits and compensation	8,157	7,726
Taxes, other than income	9,734	6,220
Other miscellaneous liabilities	4,254	5,588
<b>Total</b>	<b>65,624</b>	<b>60,949</b>
Thereof:		
Non-current	6,690	9,276
Current	58,934	51,673

### 30. Trade and other payables

	2012	2011
Trade payables	106,279	115,649
Trade payables – percentage of completion	19,063	12,844
Total	125,342	128,493

The Company has limited exposure to payables denominated in currencies other than the functional currency, and where significant exposure exists enters into appropriate foreign exchange contracts.

- Trade payables are generally non-interest bearing and are normally settled on 30 or 60 day terms with the exception of payables related to percentage of completion contracts that settle between one month and twelve months. Other payables are non-interest bearing and have an average term of six months.
- Interest payable is normally settled quarterly or semi-annually throughout the financial year.
- For terms and conditions relating to related parties, refer to note 36.

### 31. Financial risk management objectives and policies

The Company's principal financial liabilities, other than derivatives, are comprised of loans and borrowings, short term bank debt and trade payables. The main purpose of these financial instruments is to provide capital for the Company's operations, including funding working capital, capital maintenance and expansion. The Company has various financial assets such as trade and other receivables and (restricted) cash, which arise directly from its operations.

The Company enters into derivative financial instruments, primarily interest rate swaps, foreign exchange forward contracts and commodity forward contracts. The purpose of these instruments is to manage interest rate, currency and commodity price risks. The Company does not enter into any contracts for speculative purposes.

The Supervisory Board has overall responsibility for the establishment of the Company's risk management framework while the Management Board is responsible for oversight and compliance within this framework. The Company's risk management policies are established to identify and analyze the risks faced by the Company, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Company's activities.

The main risks arising from the Company's financial instruments are: credit, liquidity and market risks.

### CREDIT RISK

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Company's receivables from customers.

The Company's exposure to credit risk with respect to trade and other receivables is influenced mainly by the individual characteristics of each customer. The demographics of the Company's customer base, including the default risk of the industry and country in which customers operate, has less of an influence on credit risk. No single customer accounts for more than 10% of the Company's revenue and geographically, there are no concentrations of credit risk. The Company trades only with creditworthy third parties. It is the Company's policy that all customers who wish to trade on credit terms are subject to credit verification procedures which ensure their creditworthiness. In addition, receivable balances are monitored on an ongoing basis to ensure that the Company's exposure to impairment losses is not significant. Collateral is generally not required for trade receivables, although the Company's percentage of completion contracts do often require advance payments. The Company's maximum exposure is the carrying amount as discussed in note 16.

With respect to credit risk arising from the other financial assets of the Company, which comprise cash and cash equivalents and certain derivative instruments, the Company's exposure to credit risk arises from the default of the counterparty, with a maximum exposure equal to the carrying amount of the instruments. The Company's Treasury function monitors the location of cash and cash equivalents and the counterparties to hedges and monitors the strength of those banks. Bank strength is presented to the Supervisory Board at least annually. This review is set to minimize the concentration of risks and therefore mitigate potential financial loss through counterparty failure.

During 2011, the Company utilized MF Global as a broker for the purchase and sale of derivative contracts which were employed to reduce exposure to fluctuations in the price of aluminum. On October 31, 2011, MF Global filed a Chapter 11 petition at the U.S. Bankruptcy Court in the Southern District of New York. All contracts with the Company were liquidated as of November 1, 2011. As of December 31, 2012, the Company had \$183 on deposit with MF Global in customer-segregated accounts that remain frozen pending final resolution by the bankruptcy trustee. While the Company's exposure at this time is not considered material, management is unable to predict when, or to what extent, these remaining funds will be returned. The Company did not incur any material losses during the year related to the global financial crisis.



## LIQUIDITY RISK

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they fall due. The Company's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Company's reputation.

The Company monitors cash flows at varying levels. At the Company level, this monitoring is done on a bi-weekly basis. However, at certain subsidiaries, this type of monitoring is done daily. Typically the Company ensures that it has sufficient cash on demand to meet expected

operational expenses for a period of eight weeks, including the servicing of financial obligations. In addition, the Company maintains the following lines of credit:

- \$243,000 revolving credit facility with a syndicate of banks that is secured by the assets of the material subsidiaries of the Company. Interest is payable at a base rate plus a spread based on a coverage ratio.

The following table summarizes the maturity profile of the Company's financial liabilities at December 31, 2012 based on contractual undiscounted payments. The financial derivatives obligations are presented on a net basis for balances where it is appropriate to net the obligation position within a subsidiary for the respective period.

2012	Contractual cash flows	< 3 months	3–12 months	2014	2015	2016	2017	> 2019
Term loan / revolver	276,883	3,304	9,911	8,259	4,956	250,453	–	–
Cash interest on term loan	17,605	–	5,153	5,153	5,153	2,146	–	–
Fixed rate loans and borrowings	10,655	535	2,392	2,622	1,398	1,382	549	1,777
Cash interest on loans and borrowings	1,160	78	197	220	172	133	98	262
Financial derivatives	14,982	959	6,299	3,095	3,082	1,547	–	–
Financial lease liabilities	6,171	434	3,979	720	490	416	132	–
Trade and other payables	125,342	103,251	22,091	–	–	–	–	–
Short term bank debt	29,958	13,524	16,434	–	–	–	–	–
Accruals and other liabilities	44,952	27,727	8,598	4,408	1,097	1,051	387	1,684
Total	527,708	149,812	75,054	24,477	16,348	257,128	1,166	3,723

The following table summarizes the maturity profile of the Company's financial liabilities at December 31, 2011 based on contractual undiscounted payments.

2011	Contractual cash flows	< 3 months	3–12 months	2013	2014	2015	2016	> 2017
Term loan / revolver	206,902	–	–	6,461	8,076	4,845	187,520	–
Cash interest on term loan	19,695	–	5,021	4,862	4,494	4,040	1,278	–
Fixed rate loans and borrowings	29,166	563	16,532	4,236	2,728	1,057	1,065	2,985
Cash interest on loans and borrowings	2,750	314	943	420	293	222	173	385
Financial derivatives	14,849	1,732	5,975	2,325	2,067	2,008	738	4
Financial lease liabilities	1,312	109	324	412	370	97	–	–
Trade and other payables	128,493	114,743	13,750	–	–	–	–	–
Short term bank debt	40,737	19,448	21,289	–	–	–	–	–
Accruals and other liabilities	50,325	24,818	14,740	2,581	4,325	1,564	782	1,515
Total	494,229	161,727	78,574	21,297	22,353	13,833	191,556	4,889

Interest on financial instruments classified as floating rate is generally repriced at intervals of less than one year. Interest on financial instruments classified as fixed rate is fixed until the maturity of the instrument.

The difference between the contractual cash flows and the carrying amount of the term loan noted above is attributable to issuance costs in the amount of \$7,493 and \$9,329 as of December 31, 2012 and 2011, respectively, which are offset against the carrying amount of the debt.



### Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market prices comprise three types of risk: interest rate, foreign currency, and commodity price risk. Financial instruments affected by market risk include loans and borrowings and derivative financial instruments.

The sensitivity analyses in the following sections relate to the positions as at December 31, 2012 and 2011.

The sensitivity analyses have been prepared on the basis that the amount of net debt, the ratio of fixed to floating interest rates of the debt and derivatives and the proportion of financial instruments in foreign currencies are all constant and on the basis of the hedge designations in place at December 31, 2012.

The analyses exclude the impact of movements in market variables on the carrying value of pension and other post-retirement obligations, provisions and on the non-financial assets and liabilities of foreign operations.

The following assumptions have been made in calculating the sensitivity analyses:

- The statement of financial position sensitivity relates to derivatives.
- The sensitivity of the relevant income statement item is the effect of the assumed changes in respective market risks. This is based on the financial assets and financial liabilities held at December 31, 2012 and 2011 including the effect of hedge accounting.

### Interest rate risk

Interest rate risk is the risk that changes in interest rates will affect the Company's income or the value of its holdings of financial instruments. The Company's fixed rate borrowings are exposed to a risk of change in their fair value due to changes in interest rates. The Company's floating rate borrowings are exposed to a risk of change in cash flows due to changes in interest rates. Short term receivables and payables are not exposed to interest rate risk.

The Company's policy is to maintain approximately 75% of its borrowings as fixed rate borrowings. The Company either enters into fixed rate debt or strives to limit the variability of certain floating rate instruments through the use of interest rate swaps. These are designed to hedge underlying debt obligations. At December 31, 2012, after taking into account the effect of interest rate swaps, approximately 62% of the Company's borrowings are at a fixed rate of interest (2011: 77%). This ratio declined in the second half of 2012 due to the floating rate borrowings

required for the acquisition of the outstanding shares of Graphit Kropfmühl and the related pay-down of fixed rate borrowings at the same subsidiary. With certain strategic planning initiatives underway, the Company has not fully implemented its policy for a higher percentage of fixed rate borrowings but will evaluate the timing of such policy implementation in 2013.

The following table demonstrates the sensitivity to a reasonably possible change in interest rates adjusting for multiple interest rate swaps effective as at December 31, 2012 and 2011, with all other variables held constant, of the Company's profit before tax (through the impact on floating rate borrowings). Changes in sensitivity rates reflect various changes in the economy year-over-year. There is no impact on the Company's equity.

	Increase/ decrease in basis points	Effect on profit before tax
<b>2012</b>		
USD *		(113)
Euro	+10	(9)
USD *		113
Euro	-10	9

	Increase/ decrease in basis points	Effect on profit before tax
<b>2011</b>		
USD *		(169)
Euro	+10	(9)
USD *		132
Euro	-10	9

\* Historic volatility on certain USD short term debt varies across a wide range from +25 basis points to - 25 basis points. Sensitivities are calculated on the actual volatility for each debt instrument.

See note 22 for loans and borrowings explanations.

At December 31, 2012, the Company's interest rate swaps had a fair value of (\$11,068) (2011: (\$8,375)). Per the agreements, the Company pays a fixed rate and receives a floating rate based on the six month USD EURIBOR.

The following table demonstrates the sensitivity to a reasonably possible change in interest rates using the EURIBOR swap curve with all other variables held constant, of the Company's equity and profit before tax. There were no ineffective interest rate swaps and two ineffective interest rate swap in the years ended December 31, 2012 and 2011, respectively. Changes in sensitivity rates reflect various changes in the economy year-over-year.

	Increase/ decrease in basis points	Effect on equity	Effect on profit before tax
<b>2012</b>			
USD	+5	240	–
USD	–10	(611)	–

	Increase/ decrease in basis points	Effect on equity	Effect on profit before tax
2011			
USD	+5	405	18
USD	–10	(805)	(35)

## FOREIGN CURRENCY RISK

Foreign currency risk is the risk that changes in foreign exchange rates will affect the Company's income or the value of its holdings of financial instruments. Many of the Company's subsidiaries are located outside the US. Individual subsidiaries execute their operating activities in their respective functional currencies which are primarily comprised of the US Dollar and Euro. Since the financial reporting currency of the Company is the US Dollar, the financial statements of those non US Dollar operating subsidiaries are translated so that the financial results can be presented in the Company's consolidated financial statements.

Each subsidiary conducting business with third parties that leads to future cash flows denominated in a currency other than its functional currency is exposed to the risk from changes in foreign exchange rates. It is the Company's policy to use forward currency contracts to minimize the currency exposures on net cash flows. For certain subsidiaries, this includes managing balance sheet positions in addition to forecast and committed transactions. For these contracts, maturity dates are established at the end of each month matching the net cash flows expected for that month. Another subsidiary hedges all sales transactions in excess of a certain threshold. For this subsidiary, the contracts mature at the anticipated cash requirement date. Most forward exchange contracts mature within twelve months and are

predominantly denominated in US Dollars, British Pound Sterling, Brazilian Reais and Euros. When established, the forward currency contract must be in the same currency as the hedged item. It is the Company's policy to negotiate the terms of the hedge derivatives to closely match the terms of the hedged item to maximize hedge effectiveness. The Company seeks to mitigate this risk by hedging approximately 75% of transactions that occur in a currency other than the functional currency.

In respect of monetary assets and liabilities denominated in foreign currencies, the Company ensures that its net exposure is kept to an acceptable level by buying or selling foreign currencies at spot rates when necessary to address short term imbalances.

The Company deems its primary currency exposures to be in US Dollars and Euros. The following table demonstrates the sensitivity to a reasonably possible change in the two functional currencies of the Company: US Dollar and Euro exchange rates with all other variables held constant, of the Company's profit before tax (due to changes in the fair value of monetary assets and liabilities) and the Company's equity (due to changes in the fair value of forward exchange contracts). Changes in sensitivity rates reflect various changes in the economy year-over-year.

	Strengthening/ weakening in functional rate	Effect on profit before tax	Effect on equity before tax
<b>2012</b>			
US Dollar	+5%	3,020	235
Euro	+5%	(406)	6
US Dollar	–5%	(3,020)	(235)
Euro	–5%	406	(6)

	Strengthening/ weakening in functional rate	Effect on profit before tax	Effect on equity before tax
2011			
US Dollar	+5%	514	711
Euro	+5%	(1,013)	(188)
US Dollar	–5%	(514)	(711)
Euro	–5%	1,013	188

## COMMODITY PRICE RISK

Commodity price risk is the risk that certain raw materials prices will increase and negatively impact the gross margins and operating results of the Company. The Company is exposed to volatility in the prices of raw materials used in some products and uses forward contracts to manage these exposures. For certain metals, the Company aims to maintain a greater than 50% hedged position in order to avoid undue volatility in the sales prices and purchase costs attained in the normal course of business. Commodity forward contracts are generally settled within twelve months of the reporting date. Changes in sensitivity rates reflect various changes in the economy year-over-year.

	Change in price	Effect on profit before tax	Effect on equity before tax
<b>2012</b>			
Aluminum	+10%	343	26
Aluminum	-10%	(343)	(26)
	Change in price	Effect on profit before tax	Effect on equity before tax
2011			
Aluminum	+5%	463	103
Aluminum	-10%	(926)	(207)

## CAPITAL MANAGEMENT

The primary objective of the Company is to maintain strong capital ratios in order to support its business and maximize shareholder value.

The Company manages its capital structure and makes adjustments to it, in light of economic conditions. Its policy is to ensure that the debt levels are manageable to the Company and that they are not increasing at a level that is in excess of the increases that occur within equity. During the planning process, the expected cash flows of the Company are evaluated and the debt to equity and debt to total capital ratios are evaluated in order to ensure that levels are improving year-over-year. Debt to total capital is a more appropriate measure for the Company due to its initial equity values of the subsidiaries from the combination in 2007. Management deems total capital to include all debt (including short term and long term) as well as the total of the equity of the Company, including non-controlling interests.

The Company's policy is to try to maintain this ratio below 50%. The ratio is above the policy level for the years ended December 31, 2012 and 2011. The Management Board of the Company has established new remuneration targets for operating management which focuses on cash management with the intention of bringing the ratio back into policy compliance within the next two years.

	<b>2012</b>	2011
Loans and borrowings	285,886	227,884
Short term bank debt	29,958	40,737
Trade and other payables	125,342	128,493
Less cash and cash equivalents	121,639	79,571
Net debt and payables	319,547	317,543
Net debt and payables	319,547	317,543
Total equity	217,545	220,618
Total capital	537,092	538,161
Debt to total capital ratio	0.59	0.59

## 32. Financial instruments

### FAIR VALUES

Set out below is a comparison by category of the carrying amounts and fair values of all of the Company's financial instruments that are presented in the financial statements:

		2012		2011	
	Note	Carrying amount	Fair value	Carrying amount	Fair value
Current financial assets					
Derivatives in effective hedges	32	3,156	3,156	1,680	1,680
Financial assets at fair value through profit or loss	32	73	73	2,276	2,276
Investments in equity securities	14	–	–	–	–
Trade and other receivables	16	177,232	177,232	188,103	188,103
Cash and cash equivalents	19	121,639	121,639	79,571	79,571
Total		302,100	302,100	271,630	271,630
Non-current financial assets					
Derivatives in effective hedges	32	527	527	1	1
Notes receivable		227	227	250	250
Restricted cash	18	11,888	11,888	11,074	11,074
Total		12,642	12,642	11,325	11,325
Current financial liabilities					
Derivatives in effective hedges	32	1,257	1,257	10,255	10,255
Financial current liabilities at fair value through profit or loss	32	2,643	2,643	406	406
Fixed rate loans and borrowings	22	20,333	20,333	17,436	17,436
Short term bank debt	23	29,958	29,958	40,737	40,737
Trade and other payables	30	125,342	125,342	128,493	128,493
Total		179,533	179,533	197,327	197,327
Non-current financial liabilities					
Derivatives in effective hedges	32	11,082	11,082	8,122	8,122
Financial non-current liabilities at fair value through profit or loss	32	–	–	–	–
Fixed rate loans and borrowings	22	175,117	175,089	181,497	181,577
Floating rate loans and borrowings	22	90,436	90,436	28,951	28,951
Total		276,635	276,607	218,570	218,650

The fair value of the financial assets and liabilities are included at the amount at which the instrument could be exchanged in a current transaction between willing parties. The following methods and assumptions were used to estimate the fair values.

- Short term assets and liabilities approximate their carrying amounts largely due to the short term maturities of these instruments.
- The calculation of fair value for derivative financial instruments depends on the type of instruments: Derivative interest rate contracts are estimated by discounting expected future cash flows using current

market interest rates and yield curves over the remaining term of the instrument; Derivative currency and commodity contracts are based on quoted forward exchange rates and commodity prices respectively.

- Floating rate loans and borrowings and notes receivable maintain a floating interest rate and therefore approximate fair value.
- The fair value of fixed rate loans and borrowings are estimated by discounting future cash flows using rates currently available for debt.

## FAIR VALUE HIERARCHY

The Company uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

Level 1: quoted (unadjusted) prices in active markets for identical assets or liabilities.

Level 2: other techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly.

Level 3: techniques which use inputs which have a significant effect on the recorded fair value that are not based on observable market data.

As of December 31, 2012, the Company held the following financial instruments measured at fair value:

### Assets measured at fair value

	December 31, 2012	Level 1	Level 2	Level 3
Financial assets				
Forward contracts – hedged	3,683	–	3,683	–
Forward contracts – non-hedged	73	–	73	–

### Liabilities measured at fair value

	December 31, 2012	Level 1	Level 2	Level 3
Financial liabilities				
Forward contracts – hedged	1,271	–	1,271	–
Forward contracts – non-hedged	2,643	–	2,643	–
Interest rate swaps	11,068	–	11,068	–

As of December 31, 2011, the Company held the following financial instruments measured at fair value:

### Assets measured at fair value

	December 31, 2011	Level 1	Level 2	Level 3
Financial assets				
Forward contracts – hedged	2,192	–	2,192	–
Forward contracts – non-hedged	1,764	–	1,764	–

### Liabilities measured at fair value

	December 31, 2011	Level 1	Level 2	Level 3
Financial liabilities				
Forward contracts – hedged	10,133	–	10,133	–
Forward contracts – non-hedged	275	–	275	–
Interest rate swaps	8,375	–	8,375	–

During the years ended December 31, 2012 and 2011, there were no transfers between Level 1 and Level 2 fair value measurements, and no transfers into or out of Level 3 fair value measurements.

## HEDGING ACTIVITIES

### Interest rate hedges

In April 2011, the Company entered into two interest rate hedge agreements for the entire drawdown of the term loan of €64,200 as well as \$95,000 of the revolver (see note 22). These interest rate swaps were executed so that the Company could hedge its exposure to changes in

the benchmark interest rate on the term loan of €64,200 and \$95,000 of the revolver. These swap agreements provide for a fixed annual interest rate of 2.87% for the euro denominated term loan and a fixed annual interest rate of 2.10% for the US dollar denominated revolver (exclusive of the margin) paid semi-annually by AMG and a semi-annual payment by the counterparty of EURIBOR and LIBOR, respectively, expiring in 2016. Management has designated the interest rate swap as a cash flow hedge of the forecasted interest payments on the debt. The fair value of the term loan interest rate swap as at December 31, 2012 is a non-current liability of \$6,223

(2011: \$3,707). The fair value of the revolver interest rate swap as at December 31, 2012 is a non-current liability of \$4,845 (2011: \$3,815).

Graphit Kropfmühl ("GK") entered into seven interest rate hedges for a variety of floating rate debt instruments to minimize interest rate risk. The swap agreements provided for fixed interest rates paid either monthly or quarterly by the Company and a payment made by the counterparty of EURIBOR. The contracts expired between 2013 and 2017 depending on each contract's underlying debt maturity. Management designated the interest rate swaps as cash flow hedges of the forecasted interest payments on each respective debt. At December 31, 2011, the fair value of the various interest rate swaps was (\$853). These swaps were terminated in the year ended December 31, 2012 due to the refinancing of GK's debt. This repayment led to the incurrence of certain penalties on the debt and interest rate swaps. These penalties were recorded as extinguishment of debt of \$1,292 and are included in finance expense in the year ended December 31, 2012.

The amount from effective interest rate swap cash flow hedges included in equity through other comprehensive

income is (\$9,129) and (\$6,763) in the years ended December 31, 2012 and 2011, respectively. The amount included in equity is anticipated to impact the income statement over the life of the related debt instrument. During the years ended December 31, 2012 and 2011, \$2,894 and \$1,350, respectively, were transferred from equity to the income statement as increases to interest expense. There are no ineffective interest rate swap contracts as at December 31, 2012 and there were two ineffective interest rate swaps as of December 31, 2011. Therefore, all amounts related to these contracts were directly recognized in the income statement.

#### Commodity forward contracts

The Company is exposed to volatility in the prices of raw materials used in some products and uses commodity forward contracts to manage these exposures. Such contracts generally mature within twelve months. Certain commodity forward contracts have been designated as cash flow hedges and contracts not designated as cash flow hedges are immediately recognized in cost of sales.

The open commodity forward contracts as at December 31, 2012 are as follows:

	Metric tons	Average price	Fair value assets	Fair value liabilities
US Dollar denominated contracts to purchase commodities:				
Aluminum forwards	2,900	2,180	226	(70)

The open commodity forward contracts as at December 31, 2011 are as follows:

	Metric tons	Average price	Fair value assets	Fair value liabilities
US Dollar denominated contracts to purchase commodities:				
Aluminum forwards	4,550	2,130	8	(681)

The amount from the commodity cash flow hedges included in equity was \$170 and (\$642) in the years ended December 31, 2012 and 2011, respectively. The amount included in equity is anticipated to impact the income statement over the next 12 months. During the years ended December 31, 2012 and 2011, \$932 and \$964, respectively, were transferred from equity to the income statement as increases to cost of sales. There was no ineffectiveness for contracts designated as cash flow hedges during the years ended December 31, 2012 and 2011.

#### Foreign currency forward contracts

At any point in time, the Company also uses foreign exchange forward contracts to hedge a portion of its estimated foreign currency exposure in respect of forecasted sales and purchases, and intergroup loans that will be repaid in different functional currencies. These contracts are negotiated to match the terms of the commitments and generally mature within one year. When necessary, these contracts are rolled over at maturity. Some foreign exchange forward contracts have been designated as cash flow hedges, while other contracts, although part of the risk management strategy, have not met the documentation requirements for hedge accounting and are therefore treated as economic hedges.

The open foreign exchange forward sales contracts as at December 31, 2012 are as follows:

Exposure	Notional amount	Contract rate	Fair value assets	Fair value liabilities
<b>Cash Flow Hedges</b>				
Euro (versus USD)	€ 22.5 million	1.303	73	(456)
USD (versus Euro)	\$ 69.8 million	1.288	2,040	(115)
MXN (versus USD)	MXN 14.6 million	17.405	–	(5)
<b>Economic Hedges</b>				
USD (versus Euro)	\$ 0.3 million	1.301	4	–
Euro (versus USD)	€ 44.3 million	1.269	–	(2,417)

The open foreign exchange forward sales contracts as at December 31, 2011 are as follows:

Exposure	Notional amount	Contract rate	Fair value assets	Fair value liabilities
<b>Cash Flow Hedges</b>				
Euro (versus USD)	€ 19.8 million	1.354	1,064	(12)
USD (versus Euro)	\$ 83.5 million	1.362	5	(5,023)
PLZ (versus USD)	zł 1.5 million	4.069	44	–
MXN (versus USD)	MXN 112.6 million	17.216	404	–
<b>Economic Hedges</b>				
CAD (versus USD)	CAD 3.6 million	0.966	–	(41)
Euro (versus USD)	€ 21.0 million	1.382	1,753	–

The open foreign exchange forward purchase contracts as at December 31, 2012 are as follows:

Exposure	Notional amount	Contract rate	Fair value assets	Fair value liabilities
<b>Cash Flow Hedges</b>				
USD (versus Euro)	\$ 36.9 million	1.300	453	(337)
GBP (versus USD)	£ 12.0 million	1.573	615	–
BRL (versus USD)	R\$ 96.2 million	2.105	345	(289)
<b>Economic Hedges</b>				
USD (versus Euro)	\$ 10.5 million	1.292	–	(225)

The open foreign exchange forward purchase contracts as at December 31, 2011 are as follows:

Exposure	Notional amount	Contract rate	Fair value assets	Fair value liabilities
<b>Cash Flow Hedges</b>				
USD (versus Euro)	\$ 7.8 million	1.396	596	–
GBP (versus USD)	£ 13.3 million	1.614	–	(1,474)
BRL (versus USD)	R\$ 66.3 million	1.7692	17	(3,173)
MXN (versus USD)	MXN 30 million	18.649	63	–
<b>Economic Hedges</b>				
USD (versus Euro)	\$ 0.2 million	1.293	3	(4)

The amounts from the foreign currency cash flow hedges included in equity were \$166 and (\$8,178) in the years ended December 31, 2012 and 2011, respectively. The amount included in equity is anticipated to impact the income statement over the next 12 months. During the years ended December 31, 2012 and 2011, \$3,857 and (\$937), respectively, were transferred from equity

to the income statement as increases (decreases) to cost of sales and selling, general, and administrative expenses. There was additional expense of \$60 (2011: \$207) recognized in profit or loss during the year ended December 31, 2012 due to ineffectiveness.



## Notes receivable

On December 11, 2009, the Company loaned \$5,000 to Timminco's wholly-owned subsidiary, Bécancour Silicon Inc. ("Bécancour"), in exchange for a convertible promissory note ("Initial Convertible Note"). On December 15, 2010, the Company amended the terms of the loan, through an amended convertible promissory note ("Amended Convertible Note"). As the amendments to the debt agreement were considered substantial, the transaction was accounted for as an extinguishment of the Initial Convertible Note and issuance of new debt in accordance with IAS 39. The Amended Convertible Note had an interest rate of 14%, payable quarterly in arrears starting December 31, 2010 and maturing on January 3, 2014. The full principal amount was convertible into common shares of Timminco at the conversion price, at AMG's option at any time, subject to customary anti-dilution adjustments. The conversion price was amended from C\$1.58 per share under the Initial Convertible Note to a conversion price of C\$0.26 per share under the Amended Convertible Note.

The Amended Convertible note was accounted for as a hybrid instrument with the note and the equity option being valued separately. The value of the Amended Convertible Note was \$1,714 as of December 31, 2011. The value of the equity option on the Amended Convertible Note was \$846 as of December 31, 2011. The full value of both the equity and note portion were fully reserved as at December 31, 2011 due to the CCAA filing for creditor protection of Timminco which occurred on January 3, 2012. The allowance for these receivables was recorded through selling, general and administrative expenses in the consolidated income statement. Interest income from the convertible notes was \$700 during the year ended December 31, 2011. Interest receivable related to the Convertible Note was \$58 as of December 31, 2011, but has been reserved in full due to the Timminco CCAA filing.

On July 22, 2008, the Company loaned \$5,000 to Millinet Solar Co., Ltd., a Korean manufacturer of solar silicon. The note was issued with a maturity date of July 22, 2010 and carried interest at a rate of 5% if Millinet went public and 10% if Millinet did not go public. The principal balance was not repaid on July 22, 2010 and the Company entered into default negotiations. The final amendment agreement was signed on March 10, 2011. According to the agreement, Millinet agreed to repay all amounts, including default interest and penalties, by February 21, 2012. In addition to the amendment agreement, a guarantee agreement was signed by Millinet Co, Ltd. (Millinet Solar's parent company) and its managing director. At December 31, 2010, the Company

had interest receivable of \$1,000 and the note receivable of \$5,000. After having made payments in the amount of \$2,979 during the year ended December 31, 2011, Millinet filed for bankruptcy protection in Korea on October 31, 2011. The Company recorded a provision of \$4,163 as of December 31, 2011 for the entire amount outstanding under the note, including interest.

## 33. Leases

### OPERATING LEASES AS LESSEE

The Company enters into leases for office space, facilities and equipment. The leases generally provide that the Company pays the tax, insurance and maintenance expenses related to the leased assets. These leases have an average life of 5-7 years with renewal terms at the option of the lessee and lease payments based on market prices at the time of renewal. There are no restrictions placed upon the lessee by entering into these leases.

The Company also holds a hereditary land building right at its Berlin location. This building right requires lease payments to be made annually and does not expire until 2038.

Future minimum lease payments under non-cancelable operating leases as at December 31 are as follows:

	2012	2011
Less than one year	8,762	7,922
Between one and five years	18,899	20,014
More than five years	10,532	8,342
Total	38,193	36,278

During the year ended December 31, 2012 \$8,627 (2011: \$8,453) was recognized as an expense in the income statement in respect of operating leases.

### FINANCE LEASES AS LESSEE

Certain subsidiaries of the Company have finance leases for equipment and software. These non-cancelable leases have remaining terms between one and five years. Future minimum lease payments under finance leases are as follows:

	2012	2011
Less than one year	4,413	433
Between one and five years	1,758	879
Total minimum lease payments	6,171	1,312
Less amounts representing finance charges	(331)	(108)
Present value of minimum lease payments	5,840	1,204

A German subsidiary entered into a lease agreement that ended on October 1, 2012 for two heat treatment modules. At the end of the lease term the subsidiary exercised its right to prolong the lease agreement under the same conditions for another year ending October 1, 2013. The prolongation included a purchase clause whereby the subsidiary is obliged to purchase the lease objects at the end of the extended lease for a fixed sum of \$2,950. The lease was initially classified as an operating lease but due to the transfer of ownership included in the prolongation, it was reclassified to a finance lease.

### 35. Contingencies

#### GUARANTEES

The following table outlines the Company's off-balance sheet credit-related guarantees and business- related guarantees for the benefit of third parties as of December 31, 2012 and 2011:

	Business-related guarantees	Credit-related guarantees	Letters of credit	Total
<b>2012</b>				
Total amounts committed:	57,885	162	4,840	62,887
Less than 1 year	38,982	162	–	39,144
2–5 years	2,888	–	–	2,888
After 5 years	16,015	–	4,840	20,855
<b>2011</b>				
Total amounts committed:	52,701	219	4,790	57,710
Less than 1 year	24,750	219	–	24,969
2–5 years	2,858	–	–	2,858
After 5 years	25,093	–	4,790	29,883

In the normal course of business, the Company has provided indemnifications in various commercial agreements which may require payment by the Company for breach of contractual terms of the agreement. Counterparties to these agreements provide the Company with comparable indemnifications. The indemnification period generally covers, at maximum, the period of the applicable agreement plus the applicable limitations period under law. The maximum potential amount of future payments that the Company would be required to make under these indemnification agreements is not reasonably quantifiable as certain indemnifications are not subject to limitation. However, the Company enters into indemnification agreements only when an assessment of the business circumstances would indicate that the risk of loss is remote.

The Company has agreed to indemnify its current and former directors and officers to the extent permitted by law against any and all charges, costs, expenses, amounts paid in settlement and damages incurred by the directors and officers as a result of any lawsuit or any other judicial administrative or investigative proceeding in which

### 34. Capital commitments

The Company's capital expenditures include projects to improve the Company's operations and productivity, replacement projects and ongoing environmental requirements (which are in addition to expenditures discussed in note 26). As of December 31, 2012, the Company had committed to capital requirements in the amount of \$16,061 (2011: \$5,138).

the directors and officers are sued as a result of their service. These indemnification claims will be subject to any statutory or other legal limitation period. The nature of such indemnification prevents the Company from making a reasonable estimate of the maximum potential amount it could be required to pay to counter parties. The Company has \$75,000 in directors' and officers' liability insurance coverage.

#### ENVIRONMENTAL

In 2006, a US Subsidiary of the Company entered into a fixed price remediation contract with an environmental consultant, whereby that consultant became primarily responsible for certain aspects of the environmental remediation. This subsidiary of the Company is still a secondary obligor for this remediation, in the event that the consultant does not perform. The US subsidiary is also still subject to remediate any contamination associated with perchlorate, which currently has no regulated levels, in the event that regulation is put in place that would require remediation.

The Company has other contingent liabilities related to certain environmental regulations at certain locations. Environmental regulations in France require monitoring of wastewater and potential clean-up to be performed at one of the French subsidiary's plant sites in Chauny. Although the extent of these issues is not yet known, there is a possibility that the Company could incur remediation costs approximating \$1,000. At a US Subsidiary, a provision has been recorded for the low-level radioactive slag pile (see note 26) which assumes that the Company will be able to remediate the pile using a long term control license. In 2009, the governing party responsible for this site changed and the new governing party determined that this remediation is not satisfactory and issued a requirement that the Company remediate using a second alternative. The second alternative is an offsite disposal alternative which could potentially cost from \$25,000–\$70,000. The Company was successful in its latest legal challenge to the oversight party and believes that the long term control license will be the enforced remediation and that the offsite disposal option will not be legally required.

As discussed in note 26, a German subsidiary of the Company has a sewer system liability, which is in the process of being remediated. Based on the liability associated with the sewer, it is also believed that there may be a groundwater contamination issue. This German subsidiary has not received a demand from the government with respect to any potential groundwater contamination and it has recorded no provision for this, but it is expected that some remediation will eventually be required. The Company believes that the maximum exposure related to this contamination is \$10,000.

#### **TAXATION**

A subsidiary filed for a tax domination agreement in its local jurisdiction in 2007. The Company has recognized the benefits of this agreement since its inception. This agreement has never been challenged by the tax authorities, even during recent audits, but there is a potential that it may be challenged which could lead to taxes and penalties approximating \$9,400. The Company has not provided for this contingency as it believes that the likelihood of a negative result is remote.

#### **LITIGATION**

In addition to the environmental matters, which are discussed previously and in note 26, the Company and its subsidiaries defend, from time to time, various claims and legal actions arising in the normal course of business. Management believes, based on the advice of counsel, that the outcome of such matters will not have

a material adverse effect on the Company's consolidated financial position, results of operations or cash flows. However, there can be no assurance that existing or future litigation will not result in an adverse judgment against the Company that could have a material adverse effect on the future results of operations or cash flows.

#### **OTHER**

The Company entered into a trade finance transaction with Timminco in August 2011. This trade finance transaction required that the Company would deliver material supplied by Timminco's subsidiary and subsequently collect from the ultimate external customer and is described in more detail in note 36. Timminco filed for protection under Canadian reorganization laws on January 3, 2012. The Company does not believe that it is required to supply the material to the ultimate customer due to contractual limitations. Additionally, the current market price is lower than the price of the external customer contract. Therefore, the Company believes that there is no liability associated with this transaction.

One of the Company's subsidiaries closed a pension plan in 2005, prior to becoming part of AMG. The Company has been made aware that there are potential flaws in the paperwork which substantiates the closure, which could make this closure invalid. If a claim was made on this basis, the potential liability could potentially approximate \$10,000. Due to the length of time since the closure, the Company does not believe that any claim is likely and no provision has been made for this contingency.

#### **CONTINGENCIES OF ASSOCIATES AND JOINT VENTURES**

Timminco and certain of its directors and officers, as well as certain third parties were named as defendants in a potential class action lawsuit filed in the Ontario Superior Court of Justice on May 14, 2009. The plaintiff brought the action on behalf of shareholders who acquired Timminco's common shares between March 17, 2008 and November 11, 2008 and claimed damages exceeding \$540 million. The plaintiff alleged that Timminco and others made certain misrepresentations about Bécancour Silicon's solar grade silicon production process. On February 16, 2012, the Ontario Court of Appeal dismissed the claim, citing a time limit, but this decision has been appealed. No provision has been made for this matter as AMG has an insurance policy which will provide reimbursement for costs and expenses incurred in connection with the lawsuit as well as damages awarded, if any, subject to certain policy limits and deductibles.

### 36. Related parties

#### TRANSACTIONS WITH KEY MANAGEMENT PERSONNEL

##### Key management personnel compensation

As at December 31, 2012 and 2011, Dr. Schimmelbusch is the Chief Executive Officer for the Company, and in his position receives salary, benefits and perquisites from the Company.

In addition to their salaries, the Company also provides non-cash benefits to directors and executive officers, and contributes to a post-employment defined benefit plan on their behalf.

The compensation of the Management Board of the Company comprised:

For the year ended December 31, 2012	Salaries and bonus	Share-based compensation	Post-employment benefits including contributions to defined contribution plans	Other remuneration (c)	Total
Heinz Schimmelbusch (a)	1,071	820	524	139	2,554
Eric Jackson	629	246	314	42	1,231
Reinhard Walter (b)	534	246	848	63	1,691
William J. Levy	539	154	234	29	956
Total	2,773	1,466	1,920	273	6,432

For the year ended December 31, 2011	Salaries and bonus	Share-based compensation	Post-employment benefits including contributions to defined contribution plans	Other remuneration (c)	Total
Heinz Schimmelbusch (a)	2,452	2,437	392	132	5,413
Eric Jackson	1,159	755	296	45	2,255
Reinhard Walter	1,113	755	1,159	56	3,083
William J. Levy	978	527	192	50	1,747
Total	5,702	4,474	2,039	283	12,498

[a] Dr. Schimmelbusch received compensation in 2012 and 2011 from Graphit Kropfmühl in his capacity as Supervisory Board member in the amount of \$46 and \$50, respectively, which is included in other remuneration.

[b] Dr. Walter is no longer a member of the Management Board effective October 2, 2012. A portion of the post-employment benefit amount (\$386) includes a true-up to the pension as per his severance agreements.

[c] Other remuneration also includes car expenses, country club dues and additional insurance paid for by the Company. In 2011, the Chief Executive also received payments for German living expenses, including an apartment.

Each member of the Management Board has an employment contract with the Company which provides for severance in the event of termination without cause. The maximum severance payout is limited to two years base salary and two years of target annual bonus.

The compensation of the Supervisory Board of the Company comprised:

For the year ended December 31, 2012	Cash remuneration	Share-based remuneration	Total compensation
Pedro Pablo Kuczynski	95	64	159
Jack Messman	90	44	134
General Wesley Clark	60	39	99
Norbert Quinkert	80	39	119
Guy de Selliers	80	39	119
Martin Hoyos	60	39	99
Total	465	264	729

For the year ended December 31, 2011	Cash remuneration	Share-based remuneration	Total compensation
Pedro Pablo Kuczynski	95	69	164
Jack Messman	90	48	138
General Wesley Clark	60	42	102
Norbert Quinkert	80	42	122
Guy de Selliers	80	42	122
Martin Hoyos	60	42	102
Total	465	285	750

Total Management Board and Supervisory Board Compensation for the year ended:	Cash remuneration	Share-based compensation	Post-employment benefits including contributions to defined contribution plans	Other remuneration (c)	Total
<b>December 31, 2012</b>	<b>3,238</b>	<b>1,730</b>	<b>1,920</b>	<b>273</b>	<b>7,161</b>
December 31, 2011	6,167	4,759	2,039	283	13,248

## ENTITIES WITH SIGNIFICANT INFLUENCE OVER THE COMPANY

### Foundation

In July 2010, the foundation "Stichting Continuïteit AMG" ("Foundation") was established following the resolution adopted at its Annual Meeting on May 12, 2010. The board of the Foundation consists of three members, all of whom are independent of AMG. The purpose of the Foundation is to safeguard the interests of the parent company, the enterprise connected therewith and all the parties having an interest therein and to exclude as much as possible influences which could threaten, amongst other things, the continuity, independence and identity of the parent company contrary to such interests.

By agreement on December 22, 2010 between the parent company and the Foundation, the Foundation has been granted a call option pursuant to which it may purchase a number of preference shares up to a maximum of the number of ordinary shares issued and outstanding with third parties at the time of exercise of the option. The agreement cannot be terminated by the Company as long as the Company has not canceled or repurchased preference shares acquired by the Foundation.

The Company entered into a cost compensation agreement with the Foundation dated December 22, 2010. As per the agreement, the Company is required to provide funds to the Foundation for the costs incurred in connection with the fulfilment of the objectives of the Foundation. These costs include costs for establishing the Foundation, remuneration and out of pocket expenses for the members of the board of the Foundation, commitment fees, advisory fees and certain other costs. During the year ended December 31, 2012, the amounts paid by the Company to or on behalf of the Foundation were \$64 (2011: \$100).

### ACQUISITION OF BUSINESS OF INTELLIFAST GMBH

On October 5, 2011, the Company acquired all of the assets and assumed certain liabilities of Intellifast GmbH ("Intellifast"), a subsidiary of Safeguard International, which was the former parent of the Company, prior its initial public offering. The Chief Executive of the Company was also a Managing Director of Safeguard International.

Due to a lack of profitability within this business, an impairment test using value in use was performed in the year ended December 31, 2012. The result of the

impairment test was an impairment expense of \$4,114. This impairment charge was based on the inability of the business to generate cash flows which would recover its carrying value. See note 13 for additional details of this impairment test.

The revenues and loss before tax of Intellifast for the year ended December 31, 2011, including the period prior to the acquisition, are \$3,085 and (\$1,691), respectively. The revenues and loss before tax of Intellifast for the year ended December 31, 2011, excluding the period prior to the acquisition, are \$652 and (\$695), respectively. See note 5 for additional information.

#### OTHER TRANSACTIONS

The Company leases space in Frankfurt, Germany from a partnership, in which the Company's Chief Executive Officer has an interest. Rent paid for this office space was \$87 during the year ended December 31, 2012 (2011: \$94).

Subsequent to the Company's acquisition of Intellifast, certain office space and services continued to be provided by PFW Aerospace AG ("PFW"). Rent and services of \$279 (2011: \$43) were charged by PFW but nil was due to PFW as of December 31, 2012 (2011: \$39). The Company's Chief Executive Officer is on the Supervisory Board of PFW.

The Company has a small payroll processing function that processes payroll and administers the benefits of certain employees (less than 10) who were employed by Safeguard International Management ("Safeguard") or Allied Resources. The Chief Executive Officer of the Company was a managing director of Safeguard and is the Chairman of the Board for Allied. The Company shared office space in the United States with Safeguard. During the years ended December 31, 2012 and 2011, the Company was billed nil and \$18 by Safeguard for a small portion of costs related to the building. Amounts due to Safeguard at December 31, 2012 and 2011 were nil. The Company purchased consulting services from Allied Environmental Services ("AES") during the year ended December 31, 2011. AES is owned by Allied Resources and provided environmental consulting related to the design of new equipment in the United States. The value of the services was \$100. Another subsidiary of Allied Resources provided waste energy consulting to the Company with a value of \$29. No amount was due to either Allied Resource company as of December 31, 2011.

During the year ended December 31, 2011, the Company paid consulting fees to members of the PFW GmbH Supervisory Board. PFW GmbH is partially owned by Safeguard International Fund (formerly wholly owned until September 2011). Heinz Schimmelbusch, the Chief Executive Officer of the Company is a Managing Director

and a beneficial owner of Safeguard International. Consulting fees in the amount of \$528 were paid to the Vice Chairman of the PFW GmbH board. In addition, another board member and the acting CEO of PFW GmbH for a portion of 2011 received compensation from the Company in the amount of \$117 and also received bonuses in the amount of \$117 during the year ended December 31, 2011.

All outstanding balances with these related parties are priced on an arm's length basis. None of the balances are secured.

#### TRANSACTIONS WITH ASSOCIATES

On December 11, 2009, the Company loaned \$5,000 to Timminco's wholly-owned subsidiary, Bécancour Silicon Inc. ("Bécancour"), in exchange for a convertible promissory note ("Initial Convertible Note"). On December 15, 2010, the Company amended the terms of the loan, through an amended convertible promissory note ("Amended Convertible Note"). See note 32 for additional information related to this transaction.

During the third quarter of 2011, one of the Company's subsidiaries agreed to finance Timminco by prepaying \$5,002 (€3,498) for 2,106 metric tons of silicon metal to be delivered to a third party in the third quarter of 2012. Due to the Timminco's CCAA filing for creditor protection on January 3, 2012, the full receivable amount due from Timminco (\$4,520 as valued at December 31, 2011) was provided for in an allowance account. The allowance for this receivable was recorded through selling, general and administrative expenses in the consolidated income statement. The Company did not deliver to the third party in 2012 and believes that it no longer has a legal liability to provide the material to the end customer.

One of the Company's subsidiaries, AMG Conversion Ltd. ("AMGC") was a party to a Memorandum of Understanding and Joint Development Agreement with Timminco. AMGC was established as a producer of solar grade ingots and bricks to be sold to the solar wafer market. AMGC manufactured ingots and bricks both for Timminco's and its own use. Timminco's employees were used in the production process. Each party received a tolling fee based on the cost of contributions to the process, plus an agreed upon fixed margin on such costs. During 2011, \$1,599 was invoiced to Timminco with respect to these services. AMGC had a receivable of \$367 due from Timminco as of December 31, 2011 which was fully provided for in an allowance account due to Timminco's CCAA filing.

A summary of the profit and loss impact related to all transactions with Timminco for the year ended December 31, 2011 is as follows:

Extraordinary amounts due to CCAA filing		Profit and loss classification
Provision for convertible note book value	1,714	Selling, general and administrative expenses
Provision for convertible note equity value	846	Selling, general and administrative expenses
Provision for trade financing receivable	4,520	Selling, general and administrative expenses
Provision for other receivables	461	Selling, general and administrative expenses
Impairment of associate carrying value	8,143	Share of loss of associates
Share of Timminco loss	9,563	Share of loss of associates
Net change in valuation of convertible equity option	4,267	Finance expense
Accretion in convertible note value	(1,643)	Finance income

Certain of the Company's other subsidiaries had limited sales and spare parts transactions with Timminco during the year ended December 31, 2011. These other transactions accounted for \$195 of revenues. From these transactions, amounts totaling \$32 were outstanding as of December 31, 2011.

In 2009, AMGC purchased inventory from Timminco in the amount of \$5,927 for use in its crystallization facility. A lower of cost or net realizable value reserve in the amount of \$3,420 was established against this inventory

during the year ended December 31, 2010. An additional reserve of \$1,720 was recorded in the year ended December 31, 2011.

During 2011, Dr. Schimmelbusch relinquished his position as Chief Executive Officer of Timminco but prior to his resignation, he received \$103 in compensation for this position. He also received director's compensation of \$216 in the form of deferred share units during the year ended December 31, 2011.



# Parent Company Financial Statements

## AMG Advanced Metallurgical Group, N.V. Parent Company Statement of Financial Position

(AFTER PROFIT APPROPRIATION)

As at December 31	Note	2012	2011
In thousands of US Dollars			
<b>Assets</b>			
Investments in subsidiaries	4	99,693	93,304
Loans due from subsidiaries	4	176,636	131,409
Deposits	5	84	84
<b>Financial fixed assets</b>		276,413	224,797
Property, plant and equipment, net	2	392	508
Intangible assets, net	3	77	73
<b>Total non-current assets</b>		276,882	225,378
Trade and related party receivables	6	23,338	23,785
Loans due from subsidiaries	4	126,315	126,228
Derivative financial instruments	13	–	173
Prepayments	7	603	479
Cash and cash equivalents	8	7,236	4,509
<b>Total current assets</b>		157,492	155,174
<b>Total assets</b>		434,374	380,552
<b>Equity</b>			
Issued capital	9	743	742
Share premium	9	382,176	381,921
Foreign currency translation reserve	9	(11,796)	(15,054)
Share based payment reserve	9	46,819	44,802
Net unrealized loss gain reserve	9	(8,793)	(15,591)
Capitalized development expenditures	9	2,572	2,375
Legal participations reserve	9	4,021	10,239
Retained earnings (deficit)	9	(205,015)	(203,976)
<b>Total equity attributable to shareholders of the Company</b>		210,727	205,458
<b>Provisions</b>			
Provision for negative participation	4	36,882	50,947
<b>Liabilities</b>			
Long term debt	10	172,945	110,753
Derivative financial instruments	13	4,845	3,815
<b>Total non-current liabilities</b>		177,790	114,568
Taxes and premium		92	151
Trade and other payables	11	4,830	5,890
Amounts due to subsidiaries	12	3,341	3,538
Derivative financial instruments	13	712	–
Current taxes payable		–	–
<b>Total current liabilities</b>		8,975	9,579
<b>Total liabilities</b>		186,765	124,147
<b>Total equity, provisions and liabilities</b>		434,374	380,552

## AMG Advanced Metallurgical Group, N.V. Parent Company Income Statement

For the year ended December 31	2012	2011
In thousands of US Dollars		
Income from subsidiaries, after taxes	7,528	42,795
Other income and expenses, net	(5,136)	(37,635)
<b>Net income</b>	2,392	5,160

The notes are an integral part of these financial statements.

# Notes to Parent Company Financial Statements

## 1. Summary of significant accounting policies

For details of the Company and its principal activities, reference is made to the Consolidated Financial Statements.

The parent company financial statements have been prepared in accordance with Part 9 of Book 2 of the Netherlands Civil Code, as generally accepted in the Netherlands. In accordance with the provisions of article 362-8 of Book 2 of the Netherlands Civil Code, the accounting policies used in the financial statements are the same as the accounting policies used in the Notes to

the Consolidated Financial Statements, prepared under IFRS as endorsed by the European Union. Investments in subsidiaries are valued at their net equity value including allocated goodwill.

For a listing of all subsidiaries included in the consolidated financial statements of the Company, please refer to note 1 in the consolidated financial statements.

As of December 31, 2012, the statement of financial position has been converted to USD from Euros using a conversion rate of EUR:USD of 1.3215. (2011: 1.2921)

## 2. Property, plant and equipment

Cost	Leasehold improvements	Machinery and equipment	Office furniture	Total
<b>Balance January 1, 2011</b>	599	91	406	1,096
Additions	–	–	–	–
<b>Balance at December 31, 2011</b>	599	91	406	1,096
<b>Balance January 1, 2012</b>	599	91	406	1,096
Additions	–	–	50	50
<b>Balance at December 31, 2012</b>	599	91	456	1,146
<b>Depreciation</b>				
<b>Balance at January 1, 2011</b>	(289)	(82)	(48)	(419)
Depreciation	(120)	(9)	(40)	(169)
<b>Balance at December 31, 2011</b>	(409)	(91)	(88)	(588)
<b>Balance at January 1, 2012</b>	(409)	(91)	(88)	(588)
Depreciation	(120)	–	(46)	(166)
<b>Balance at December 31, 2012</b>	(529)	(91)	(134)	(754)
<b>Carrying amounts</b>				
At January 1, 2011	310	9	358	677
At December 31, 2011	190	–	318	508
At January 1, 2012	190	–	318	508
At December 31, 2012	70	–	322	392

All property, plant and equipment is pledged as collateral under the AMG Revolving Credit Facility.

### 3. Intangible assets

Intangible assets include computer equipment and software licenses. They are carried at amortized cost and are amortized over their anticipated useful life.

<b>Cost</b>	
<b>Balance January 1, 2011</b>	419
Additions	–
<b>Balance at December 31, 2011</b>	419
<b>Balance January 1, 2012</b>	419
Additions	60
<b>Balance at December 31, 2012</b>	479
<b>Amortization</b>	
<b>Balance at January 1, 2011</b>	(212)
Amortization	(134)
<b>Balance at December 31, 2011</b>	(346)
<b>Balance at January 1, 2012</b>	(346)
Amortization	(56)
<b>Balance at December 31, 2012</b>	(402)
At January 1, 2011	207
At December 31, 2011	73
At January 1, 2012	73
At December 31, 2012	77

### 4. Financial fixed assets

#### INVESTMENTS IN SUBSIDIARIES

The movement in subsidiaries was as follows:

	Investment in subsidiaries	Provision for negative participation	Total
<b>Balance at January 1, 2011</b>	153,328	(113,851)	39,477
Return of capital	(26,551)	–	(26,551)
Investment in companies	3,067	–	3,067
Subsidiary options	1,560	–	1,560
Profit for the period	42,795	–	42,795
Deferred losses on derivatives	(14,408)	–	(14,408)
Other	(41)	–	(41)
Currency translation adjustment	(3,542)	–	(3,542)
<b>Balance at December 31, 2011</b>	156,208	(113,851)	42,357
Reclassification for provision for negative participation:			
Provision for negative participation	(62,904)	62,904	–
<b>Balance at December 31, 2011</b>	93,304	(50,947)	42,357
<b>Balance at January 1, 2012</b>	93,304	(50,947)	42,357
Dilution of equity related to squeeze-out	(9,452)	–	(9,452)
Dividend received from subsidiary	(5,000)	–	(5,000)
Investment in companies	17,337	–	17,337
Subsidiary options	1,035	–	1,035
Profit for the period	7,528	–	7,528
Deferred losses on derivatives	7,828	–	7,828
Other	(8)	–	(8)
Currency translation adjustment	1,186	–	1,186
<b>Balance at December 31, 2012</b>	113,758	(50,947)	62,811
Reclassification for provision for negative participation:			
Provision for negative participation	(14,065)	14,065	–
<b>Balance at December 31, 2012</b>	99,693	(36,882)	62,811

### Deferred gains / losses on derivatives

This represents the effect of the Company's subsidiaries recording the changes in their equity from the effective portion of the cumulative net change in the fair value of cash flow hedging instruments related to hedged transactions that have not yet occurred.

### Subsidiary options

Subsidiaries are locally recording the effect of share-based payments for their employees in their equity. The equity balance of the subsidiaries is comprised of the value of equity-settled share-based payments provided to employees (and outside consultants), including key management personnel, as part of their remuneration. The change in the Company's investment in subsidiary balance is equal to the change recognized in the share-based payment reserves at the subsidiaries.

### Dilution of equity

In the year ended December 31, 2012, AMG completed the squeeze-out of non-controlling shareholders at one of its subsidiaries. This transaction was accounted for through equity. The result of this transaction was a dilution of the Company's equity in the amount of \$9,452. See note 5 to the consolidated financial statements for additional details.

### LOANS DUE FROM SUBSIDIARIES

	Non-current loans due from subsidiaries	Current loans due from subsidiaries	Total
<b>Balance at January 1, 2011</b>	108,589	96,116	204,705
Loans	5,520	30,210	35,730
Repayments	(4,085)	–	(4,085)
Return of capital	24,651	–	24,651
Currency translation adjustment	(3,266)	(98)	(3,364)
<b>Balance at December 31, 2011</b>	131,409	126,228	257,637
<b>Balance at January 1, 2012</b>	131,409	126,228	257,637
Loans	40,749	–	40,749
Currency translation adjustment	4,478	87	4,565
<b>Balance at December 31, 2012</b>	176,636	126,315	302,951

There are two non-current loans due from a German subsidiary, which is a holding company for many German companies within the group, and one loan due from a Brazilian mining company. The first loan to the German holding company has a fixed interest rate of 7.5% and a term through December 31, 2018. The second German loan has a term through June 2017, but has an interest rate of 4.5%. The loan to the Brazilian subsidiary has a

### Capitalization of companies

AMG NV periodically reviews the capital structure of its subsidiaries. When a subsidiary receives additional capital from the Company or returns capital to the Company, it is recorded through the investment in subsidiaries balance. In the year ended December 31, 2011, a Dutch subsidiary returned capital to the Company by transferring a loan and interest due from a German subsidiary in the amount of \$26,551 back to the Company. In addition, a German subsidiary with negative equity received an increase of capital through a contribution to its capital reserve in the amount of \$28,943.

### INVESTMENT IN ASSOCIATES

In 2011, the Company held a 41.9% equity stake in Timminco. On January 3, 2012 Timminco filed for CCAA protection in the Canadian court and all trading of its shares was stopped. At December 31, 2012, Timminco was in the final stages of liquidation so the Company's equity stake is virtually eliminated. Based on the filing for creditor protection, the Company has no recoverable value in Timminco's shares and therefore, the entire remaining balance of the investment was written down to nil. During the year ended December 31, 2011, the Company's share of Timminco's loss prior to impairment was \$9,563 and an additional impairment loss on the associate was \$8,143. The total loss on the associate was \$17,706.

term through April 2017 with an interest rate of 8.8%. Current loans are due from several subsidiaries in Europe and the United States. Loans in the amount of \$126,315 (2011: \$126,228) are due in one year but can be extended by both parties upon request. All current loans have an interest rate in the range of 5.88-6.69% at December 31, 2012 (4.01% – 4.77% at December 31, 2011).

## 5. Deposits

The deposit account includes security deposits for the Amsterdam and Frankfurt office locations of the Company.

## 6. Receivables from associates and related parties

Trade and related party receivables of \$23,338 (2011: \$23,785) primarily represents interest owed to the Company on loans due from subsidiaries \$11,065 (2011: \$12,045), debt issuance costs billed to a subsidiary \$5,922 (2011: \$5,922) and management fees owed \$5,942 (2011: \$5,027). The remainder of the balance is comprised of amounts owed by subsidiaries that represent expenses paid for by AMG and billed back to the subsidiaries.

On December 11, 2009, the Company loaned \$5,000 to Timminco's wholly-owned subsidiary, Bécancour Silicon Inc. ("Bécancour"), in exchange for a convertible senior subordinated promissory note ("Convertible Note"). See note 32 to the consolidated financial statements for additional information related to this note and its impairment in the year ended December 31, 2011.

There was no profit and loss impact related to transactions between AMG NV and Timminco for the year ended December 31, 2012. A summary of the profit and loss impact related to transactions between AMG NV and Timminco for the year ended December 31, 2011 would be summarized as follows:

Extraordinary amounts due to CCAA filing	
Provision for convertible note book value	1,714
Provision for convertible note equity value	846
Provision for trade financing receivable	4,520
Provision for other receivable	81
Impairment of associate carrying value	8,143
Amounts occurring in normal course of business	
Share of Timminco net loss	9,563
Net change in valuation of convertible equity option	4,267
Accretion in note value	(1,643)

## 7. Prepayments

At December 31, 2012 and 2011, prepayments primarily represent prepaid insurance and prepaid rent for the Company.

## 8. Cash and cash equivalents

Bank balances earn interest at floating rates based on daily bank deposit rates.

## 9. Shareholders' equity and other capital reserves

For the statement of changes in consolidated equity for the year ended December 31, 2012, please refer to page 71 in the consolidated financial statements. Additional information on shareholders' equity is disclosed in note 20 to the consolidated financial statements.

## OTHER RESERVES

	Share-based payment reserve	Legal Reserves			
		Foreign currency translation reserve	Unrealized (losses) gains reserve	Legal reserve participations	Capitalized development expenditures reserve
<b>Balance at January 1, 2011</b>	41,741	(8,215)	2,632	15,268	1,498
Foreign currency translation	–	(6,839)			
Loss on cash flow hedges, net of tax	–	–	(18,223)		
Transfer to retained deficit				(5,029)	877
Equity-settled share-based payment expense	3,061	–	–		
Other					
<b>Balance at December 31, 2011</b>	44,802	(15,054)	(15,591)	10,239	2,375
<b>Balance at January 1, 2012</b>	44,802	(15,054)	(15,591)	10,239	2,375
Foreign currency translation	–	3,258	–		
Gain on cash flow hedges, net of tax			6,798		
Transfer to retained deficit				(6,218)	197
Equity-settled share-based payment expense	2,017	–	–		
Other	–	–	–		
<b>Balance at December 31, 2012</b>	46,819	(11,796)	(8,793)	4,021	2,572

## SHARE-BASED PAYMENT RESERVE

The share-based payment reserve is comprised of the value of equity-settled share-based payments provided to employees (and outside consultants), including key management personnel, as part of their remuneration.

## LEGAL RESERVES

The Company is incorporated under Dutch law. In accordance with the Dutch Civil Code, legal reserves have to be established in certain circumstances. The legal reserves consist of the cumulative translation adjustment reserve, the unrealized losses (gains) on derivatives reserve, the legal reserve participations and the capitalized development expenditure reserve. Legal reserves are non-distributable to the Company's shareholders.

## DIVIDENDS

No dividends have been paid or proposed in the years ended December 31, 2012 and 2011.

## Preference shares

In July 2010, the foundation "Stichting Continuïteit AMG" ("Foundation") was established following the resolution adopted at its Annual Meeting on May 12, 2010. The board of the Foundation consists of three members, all of whom are independent of AMG. The purpose of the Foundation is to safeguard the interests of the parent company, the enterprise connected therewith and all the parties having an interest therein and to exclude as much as possible

influences which could threaten, amongst other things, the continuity, independence and identity of the parent company contrary to such interests.

By agreement on December 22, 2010 between the parent company and the Foundation, the Foundation has been granted a call option pursuant to which it may purchase a number of preference shares up to a maximum of the number of ordinary shares issued and outstanding with third parties at the time of exercise of the option. The agreement cannot be terminated by the Company as long as the Company has not canceled or repurchased preferences shares acquired by the Foundation.

## 10. Long term debt

On April 28, 2011, the Company entered into a five-year multicurrency term loan and revolving credit facility with Commerzbank AG and Lloyds TSB Bank plc. The credit facility was initially composed of a €64,200 term loan and a \$214,200 revolving credit facility ("revolving credit facility"). AMG used the proceeds of the revolving credit facility to repay its existing \$275,000 term loan and multicurrency revolving credit facility which was due to expire in August 2012. The new credit facility's borrowing costs are generally consistent with those in the debt facility that was refinanced. The new facility is structured to be able to increase borrowing capacity using an incremental term loan and revolving facility feature under certain conditions. In 2012 and 2011, the Company utilized the accordion feature in its credit facility

to increase the term loan and revolver capacities to €100,850 and \$243,000, respectively, as of December 31, 2012. Fees related to the amendment and utilization of the accordion feature in 2012 were \$1,644 and are included in finance expense. The five-year facility extends the term of the Company's primary debt agreement to April 2016. Instalment payments for the term loan begin in 2013. With respect to the previous credit facility, the Company incurred a loss on extinguishment of \$3,902 in 2011.

Borrowings under the revolving credit facility may be used for general corporate purposes of the Company. As of December 31, 2012, \$143,610 was borrowed (excluding letters of credit) under the revolving credit facility (2011: \$123,949). At December 31, 2012, there was unused availability of \$50,794 (2011: \$59,047).

Interest on the revolving credit facility is based on current LIBOR (or in the case of any loans denominated in Euros, EURIBOR) plus a margin. The margin is dependent on the leverage ratio. At December 31, 2012, the margin was 2.625 (2011: 2.75). To mitigate risk, the Company entered into an interest rate swap for the entire €64,200 term loan to fix the interest rate on the term loan at 5.62%. The Company also used an interest rate swap for \$95,000 of the revolving credit facility borrowings to fix the interest rate at 4.85%.

The revolving credit facility is subject to several affirmative and negative covenants including, but not limited to, the following:

- EBITDA to Net Finance Charges: Not to be less than 4.00:1
- Net Debt to EBITDA: Not to exceed 3.00:1
- Tangible Net Worth to Total Assets: Not be less than 17.5% for 2012, 20.0% for Q1 and Q2 2013, 22.5% for Q3 and Q4 2013, 25% for 2014 and after

On October 9, 2012, the Company amended and restated the revolving credit facility in order to adjust certain provisions for the strategic plans of the Company. Included in the amendments was a change to the Tangible Net Worth to Total Assets covenant. Previously, the minimum ratio for this covenant was 20.0% for 2012, 22.5% for 2013 and 25% thereafter. The amendment decreased the minimum ratio to 17.5% for the remainder of 2012 and 20.0% for Q1 and Q2 2013. All other covenants remained unchanged. Fees related to this amendment were \$1,212 and are included in finance expense.

EBITDA, Net Finance Charges, Net Debt, Tangible Net Worth and Total Assets are defined in the Credit Facility agreement. The Company met all debt covenants during both years ended December 31, 2012 and 2011 at the

balance sheet date. Based on constant monitoring of its forecasts and its covenant calculations, the Company determined that it should seek a change to its debt covenants. Therefore, with the concurrence of its banking group, the Company amended its revolving credit facility in March 2013 to lower the minimum Tangible Net Worth to Total Assets ratio for an additional four quarters. The amended minimum ratios are as follows: 20.0% for 2013, 22.5% for Q1 and Q2 2014 and 25.0% thereafter.

Mandatory repayment of the credit facility is required upon the occurrence of (i) a change of control or (ii) the sale of all or substantially all of the business and/or assets of the Company whether in a single transaction or a series of related transactions.

## 11. Trade and other payables

Trade and other payables represent amounts owed to professional service firms, accrued employee costs and accrued interest.

## 12. Amounts due to subsidiaries

Certain payroll, travel and entertainment and other expenses are paid directly by two subsidiaries and billed to the Company at cost. As of December 31, 2012 and 2011, these amounted to \$3,341 and \$3,538, respectively.

## 13. Derivative financial instruments

Please refer to notes 31 and 32 in the consolidated financial statements for more information on financial instruments and risk management policies.

## FOREIGN CURRENCY FORWARD CONTRACTS

At any point in time, the Company uses foreign exchange forward contracts to hedge intergroup loans that will be repaid in different functional currencies. These contracts are negotiated to match the expected terms of the commitments and generally mature within one year. When necessary, these contracts are rolled over at maturity. The Company's foreign exchange forward contracts, although part of the risk management strategy are treated as economic hedges. The fair value of these contracts is recorded in the statement of financial position. As of December 31, 2012, the company had a derivative financial instrument liability of \$712 as compared to an asset of \$173 as of December 31, 2011.



## INTEREST RATE SWAP

The Company uses an interest rate swap to hedge its cash flow related to interest payments owed on its long term debt. At the inception of the new Revolving Credit Facility, the Company entered into an interest rate swap to swap \$95,000 of its variable rate debt into fixed rate debt with a rate of 2.10% (exclusive of margin). This hedge is treated as a cash flow hedge. The fair value of this contract is recorded in the statement of financial position. As of December 31, 2012, the fair value of this contract was a derivative liability of \$4,845 (2011: \$3,815). Since the hedge is effective, the changes in this instrument are recorded in equity as a deferred gain or loss on derivatives until the hedge is settled at which point, it will be recorded through the income statement.

## EMBEDDED DERIVATIVE

As part of its convertible note receivable from Bécancour Silicon (see note 6), AMG concluded that the conversion feature was an embedded derivative. Due to Bécancour Silicon and its parent filing for creditor protection on January 3, 2012, the value of this conversion option was written down to nil.

## 14. Commitments and contingencies

The Company has entered into leases for office space in Amsterdam and Frankfurt. The Amsterdam lease term originally had a termination date of March 31, 2013 but it has since been extended through March 2018. The Frankfurt lease term has an unlimited term but can be canceled with six months notice beginning December 31, 2012. There was also a lease for copier equipment in Frankfurt through September 30, 2013.

Future minimum lease payments under these leases as at December 31 are payable as follows:

	2012	2011
Less than one year	274	416
Between one and five years	725	121
More than five years	171	-
Total	1,170	537

## 15. Related parties

Key management compensation data is disclosed in note 36 of the consolidated financial statements. The total crisis levy for all employees for the year ended December 31, 2012 is expected to be \$51. The majority of key management compensation is not sourced out of the Netherlands and therefore the crisis levy is only applicable to key management compensation to the extent of \$14.

The Company entered into a cost compensation agreement with the Foundation dated December 22, 2010 (see note 10). As per the agreement, the Company is required to provide funds to the Foundation for the costs incurred in connection with the fulfilment of the objectives of the Foundation. These costs include costs for establishing the Foundation, remuneration and out of pocket expenses for the members of the board of the Foundation, commitment fees, advisory fees and certain other costs. During the year ended December 31, 2012, the Company funded \$64 into an account for the expenses of the Foundation. Through December 31, 2011, the amounts paid by the Company on behalf of the Foundation were \$100.

## 16. Employees

At December 31, 2012 the Company had 17 employees (2011:17), of which 3 are employed in the Netherlands.

## 17. Audit Fees

Ernst & Young Accountants LLP has served as the Company's independent auditors for each of the two years in the periods ended December 31, 2012 and December 31, 2011. The following table sets forth the total fees in accordance with Part 9 of Book 2, article 382a of the Netherlands Civil Code.

	2012	2011
Audit fees	624	468
Audit related fees	64	-
Other	-	90
Total	688	558

## Other Information

### ARTICLE 25 AND 26 OF THE ARTICLES OF ASSOCIATION

25. Adoption of Annual Accounts
- 25.1 The annual accounts shall be adopted by the general meeting.
- 25.2 Without prejudice to the provisions of article 23.2, the company shall ensure that the annual accounts, the annual report and the additional information that should be made generally available together with the annual accounts pursuant to or in accordance with the law, are made generally available from the day of the convocation of the general meeting at which they are to be dealt with.
- 25.3 The annual accounts cannot be adopted if the general meeting has not been able to take notice of the auditor's report, unless a valid ground for the absence of the auditor's report is given under the other additional information referred to in article 25.2
- 26.1 The management board shall, subject to the approval of the supervisory board, be authorized to reserve the profits wholly or partly.

### SUBSEQUENT EVENTS

As of March 22, 2013 no material subsequent events have occurred.

### APPROPRIATION OF NET PROFIT

Pursuant to section 26 of the Articles of Association, the Management Board shall, subject to the approval of the Supervisory Board, be authorized to reserve the profits in whole or in part. The General Meeting is authorized to distribute and/or reserve any remaining part of the profits.

AMG's dividend policy is to retain future earnings to finance the growth and development of its business. As a result, the Management Board, with the approval of the Supervisory Board, has resolved that no dividend will be paid in respect of 2012 and that the 2012 net profit will be added to the retained earnings.

Amsterdam, March 22, 2013

# Independent Auditor's Report

**TO: THE SHAREHOLDERS AND SUPERVISORY BOARD OF  
AMG ADVANCED METALLURGICAL GROUP N.V.**

## **Report on the financial statements**

We have audited the accompanying financial statements 2012 of AMG Advanced Metallurgical Group N.V., Amsterdam, The Netherlands. The financial statements include the consolidated financial statements and the parent company financial statements. The consolidated financial statements comprise the consolidated statement of financial position as at December 31, 2012, the consolidated income statement, consolidated statement of comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of the significant accounting policies and other explanatory information. The parent company financial statements comprise the parent company statement of financial position as at December 31, 2012, the parent company income statement for the year then ended and the notes, comprising a summary of the accounting policies and other explanatory information.

### **MANAGEMENT'S RESPONSIBILITY**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code, and for the preparation of the management board report in accordance with Part 9 of Book 2 of the Dutch Civil Code. Furthermore management is responsible for such internal control as it determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

### **AUDITOR'S RESPONSIBILITY**

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. This requires that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error.

In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial

statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### **OPINION WITH RESPECT TO THE CONSOLIDATED FINANCIAL STATEMENTS**

In our opinion, the consolidated financial statements give a true and fair view of the financial position of AMG Advanced Metallurgical Group N.V. as at December 31, 2012, its result and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code.

### **OPINION WITH RESPECT TO THE COMPANY FINANCIAL STATEMENTS**

In our opinion, the company financial statements give a true and fair view of the financial position of AMG Advanced Metallurgical Group N.V. as at December 31, 2012 and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code.

## **Report on other legal and regulatory requirements**

Pursuant to the legal requirement under Section 2:393 sub 5 at e and f of the Dutch Civil Code, we have no deficiencies to report as a result of our examination whether the management board report, to the extent we can assess, has been prepared in accordance with Part 9 of Book 2 of this Code, and whether the information as required under Section 2:392 sub 1 at b-h has been annexed. Further we report that the management board report, to the extent we can assess, is consistent with the financial statements as required by Section 2:391 sub 4 of the Dutch Civil Code.

Eindhoven, March 22, 2013

Ernst & Young Accountants LLP

/s/ Arno J.M. van der Sanden

# Shareholder Information

## Supervisory Board

Pedro Pablo Kuczynski  
Remuneration Committee (Chairman)

General Wesley Clark  
Selection and Appointment Committee

Martin Hoyos  
Audit Committee

Jack L. Messman  
Audit Committee  
Remuneration Committee (Chairman)

Norbert Quinkert  
Selection and Appointment Committee (Chairman)

Guy de Selliers  
Audit Committee (Chairman)

## Management Board

Dr. Heinz Schimmelbusch  
Chairman and Chief Executive Officer

William Levy  
Chief Financial Officer

Eric Jackson  
Chief Operating Officer and  
President, Advanced Materials Division

Copies of the Annual Report and further information  
are obtainable from the Investor Relations Department  
of the Company  
[ir@amg-nv.com](mailto:ir@amg-nv.com)  
or by accessing the Company's website  
[www.amg-nv.com](http://www.amg-nv.com)

## Listing Agent

ING Bank N.V.

## Paying Agent

ING Bank N.V.

## Euronext: AMG

Trade Register

## Trade Register

AMG Advanced Metallurgical Group N.V. is registered with  
the trade register in the Netherlands under no. 34261128

**AMG Advanced Metallurgical Group N.V.**

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