



United Nations Global Compact

Communication on Progress Covering Calendar Year 2016

7th April 2017

To our Stakeholders:

I am pleased to confirm that once again this year AMG Advanced Metallurgical Group N.V. ("AMG") reaffirms its support of the Ten Principles of the United Nations Global Compact (UNGC) in the areas of Human Rights, Labor, Environment and Anti-Corruption. Our Code of Business Conduct and Policy on Human Rights, both of which are available on our website, set out our commitments to act ethically and uphold the ten UNGC principles in all of our business activities.

In this annual Communication on Progress, we describe our actions to continually improve the integration of the Global Compact and its principles into our business strategy, culture and daily operations. We also commit to share this information with our stakeholders using our primary channels of communication, primarily the AMG website www.amg-nv.com.

Sincerely yours,

A handwritten signature in blue ink, appearing to read 'Heinz C. Schimmelbusch', written in a cursive style.

Dr. Heinz C. Schimmelbusch
Chairman of the Board and Chief Executive Officer

HUMAN RIGHTS

- Principle 1 - Businesses should support and respect the protection of internationally proclaimed human rights

AMG Advanced Metallurgical Group explicitly supports the United Nations' Universal Declaration of Human Rights and refers to this commitment in its annual report to Shareholders. Although always an integral part of AMG, our formal commitment in this area started in 2009 with the publication of our Code of Business Conduct.



AMG CODE OF BUSINESS CONDUCT



This was augmented in 2011 by the publication of our Policy on Human Rights. Both of these documents can be found in the Corporate Governance section of the AMG website, and the Human Rights Policy is shown below:



Policy on Human Rights

AMG Advanced Metallurgical Group N.V. is a global company operating in a global market. We rely on our employees to implement our ethical values to ensure our business is conducted in a way that values human rights. We formally support the United Nations Global Compact including its labor, environmental, anti-corruption and human rights aspects. With respect to human rights:

AMG supports and respects the protection of internationally proclaimed human rights and will work to make sure it is not complicit in human rights abuses.

The key principles of the AMG Policy on Human Rights are driven by internationally accepted norms and national laws and are:

- **Children and Young Workers.** AMG does not employ children or support the use of child labor. We will support the creation of educational programs for young people including apprenticeships combined with formal education.
- **Equality of Opportunity.** AMG has zero tolerance for any kind of discrimination or harassment. We embrace cultural differences in our workforce. We will attract, develop, promote and retain the best employees based solely on merit and ability.
- **Freedom of Engagement.** All AMG employees have chosen to work for the company and AMG does not engage in forced labor or compulsory hiring practices.
- **Compensation.** AMG will compensate its employees through wages and benefits to ensure it meets or exceeds legal minimums and is in full compliance with all applicable laws and will be competitive to retain employees.
- **Freedom of Association.** AMG upholds the freedom of association and the right to collective bargaining.
- **Relationships with Communities.** AMG respects the customs, values and cultures of the local communities in which we operate including communities indigenous to those areas, taking into account their concerns and needs.

Within our company our human rights principles are enacted through the provision of safe and healthy working conditions in a non-discriminatory environment. We will continuously support our human rights standards by living our values in our interactions with local and national governments, and the communities in which we operate and wherever possible endeavor to extend our values and principles to our suppliers and contractors.

These human rights principle are universal to AMG, applied in everything we do, and are implemented irrespective of the developed or developing status of the countries in which we operate. This policy provides additional details to those commitments made in our Code of Business Conduct and applies to all AMG Advanced Metallurgical Group N.V. wholly and majority owned facilities and shall be communicated annually to all employees.

A handwritten signature in blue ink, appearing to read 'Heinz C. Schimmelbusch'.

Dr. Heinz C. Schimmelbusch
Chairman of the Management Board and Chief Executive Officer

A review of this policy in 2016 determined it to still be adequate to articulate AMG's commitments and it remains relevant to the current business climate.

A network of Compliance Officers under the oversight of a Chief Compliance Officer and a core Compliance team monitors the commitments made in these publications. The core Compliance team meets typically twice per year to review Compliance and Ethical issues and is supported by an independent external consultant. This consultant has assisted in the development of policies, procedures and training programs and in responding to enquiries from stakeholder

groups with interests in human rights issues. There is an ongoing program of employee surveys to gauge the workforce's perceptions about AMG's commitments to ethical business practices and human rights and reviewing AMG's programs against the OECD guidelines for multinational enterprises. To date the results of these surveys has been positive.

In 2016 there were no reported incidents of breaches of the AMG Code of Business Conduct related to human rights abuses.

- Principle 2 - Make sure businesses are not complicit in human rights abuses

The aim of the presence of an AMG business unit in a community is to strengthen and be part of the community, fostering sound relationships and avoiding conflicts. We respect the dignity and rights of our employees, their families and the communities in which we operate and others who might be affected by our operations and actively involving ourselves and supporting those communities. AMG also contributes through philanthropic donations to support local community needs including to schools, colleges and hospitals with a focus on education in STEM subjects.

AMG sustains a network of Code of Business Conduct Compliance Officers covering all sites and based in countries and at major sites where AMG companies are operating to locally identify any potential human rights abuses. In instances where this needs to be done independently and confidentially, a Whistle Blowing policy is in force allowing any employee to come forward and report issues. The Whistleblowing policy can be accessed through the Governance section of the AMG website. The Chief Compliance Officer and their team carefully review any and all Whistleblower complaints.

AMG also has a Supplier Conduct Charter, shown below, which is part of a process to ensure the standards relating to Human Rights which AMG holds itself to, are expanded to our suppliers as well. In particular, this policy states that: "AMG's suppliers should support and respect the protection of internationally proclaimed human rights and ensure they are not complicit in human rights abuses." This Supplier Conduct Charter was reviewed during 2016 and remains adequate under AMG's current business climate.



Supplier Conduct Charter

AMG Advanced Metallurgical Group N.V. is a global company operating in a global market. Our supplier– customer relationships are essential in building economic value, but are also important in promoting social and environmental best practices

Essential elements of our supplier-customer relationship will include specifications, price, quality, service level and technology. AMG will also take into account environmental and social impact in assessing supplier quality and will preferentially deal with partners who are able to demonstrate commitment in the following areas, based upon the relevant principles of AMG's Code of Business Conduct:

- Human Rights
 - AMG's suppliers should:
 - Support and respect the protection of internationally proclaimed human rights and ensure they are not complicit in human rights abuses.
- Labor
 - AMG's suppliers should:
 - Uphold the freedom of association and the effective recognition of the right to collective bargaining; support the elimination of all forms of forced and compulsory labor; support the effective abolition of child labor; and support the elimination of discrimination in respect of employment and occupation.
 - Have programs in place to protect the health and safety of your staff, subcontractors and local residents, preferably through a documented safety management system.
- Environment
 - AMG's suppliers should:
 - Support a precautionary approach to environmental challenges and act to promote greater environmental responsibility.
 - Comply with all local environmental laws and regulations in the locations in which you operate and hold all required permits.
 - Have procedures in place to prevent environmental incidents and response plans to mitigate the effects should such an incident occur, preferably through a documented environmental management system
- Anti-Corruption
 - AMG's suppliers should:
 - Not tolerate corruption in any of its forms, including extortion and bribery.
 - Comply with laws and regulations in the locations in which they operate.
 - Uphold high standards of personal and business ethics.

AMG will engage with its suppliers in a respectful and ethical way, encompassing fairness and honesty and will select suppliers on the basis of specifications, price, quality, service level and technology, but also Human Rights, Labor, Environment and Anti-Corruption approach, as outlined in this charter.

AMG Suppliers are expected to respond promptly to inquiries from AMG procurement professionals with respect to compliance with these principles and accept that they may be required to perform self-assessment questionnaires.

LABOR

- Principle 3 - Businesses should uphold freedom of association & effective recognition of the right to collective bargaining

AMG respects the freedom of its individual employees to join, or choose not to join, legally authorized association or organizations. AMG continues to use the Global Reporting Initiative

(GRI) indicator LA4 (Percentage of Employees Covered by Collective Bargaining Agreements) to monitor this principle. In our 2016 Annual Report we state:

“The rights and freedoms for individual employees to join, or choose not to join, unions, as described in Article 23 of the Universal Declaration of Human Rights, are fully respected by AMG. Across AMG, 1,924 employees (67%) were covered by such collective bargaining agreements. 72% of AMG Critical Materials are covered by these arrangements, while AMG Engineering, which includes a higher proportion of professional salaried staff, has 52% of its employees covered. Once again in 2016, AMG facilities had no strikes or lockouts.”

Additionally, we utilize indicator HR5 (Operations identified in which the right to exercise freedom of association or collective bargaining may be at significant risk, and actions taken to support these rights). In the 2016 Annual Report we state:

“Protection of internationally proclaimed human rights is an area in which AMG is both highly aware and fully committed, and the Company strives 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 because of political or business factors. In 2016, it was found that no sites were at risk, with the exception of China, where the formation of unions remains 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. No sites have been identified that pose a risk at this time. AMG also aims to ensure rights are protected in our supply chain through its Supplier Code of Conduct. Our policy on human rights is included in the Company Code of Business Conduct and Ethics and detailed in the Company’s human rights policy; all are available on the AMG website. Refresher human rights and ethics training was performed in 2016, and employees were given refresher training in ethical businesses practices, including 1,568 in human rights and anti-bribery based materials. Compliance officers at the major sites monitor and implement the Code of Business Conduct and Ethics.”

Further, with the development and implementation of our Supplier Conduct Charter we begin to hold our suppliers to the same standard stating: *“AMG’s suppliers should uphold the freedom of association and the effective recognition of the right to collective bargaining; support the elimination of all forms of forced and compulsory labor”*

- Principle 4 - The elimination of all forms of forced and compulsory labor

All AMG employees work for the company as a result of need or want. Nobody is forced to work for AMG and we prohibit the use of any forced labor, including slavery, servitude, or prison labor. This is reflected in the widespread presence of unionized labor across AMG. Currently most of the locations and environments AMG facilities are present in are stable and advanced democracies, assisting in ensuring human rights abuses of this type are not occurring. AMG has development projects which may expand the boundaries of the company into countries with more challenging environments and AMG recognizes this may bring an increased level of diligence. Again, our Supplier Conduct Charter adopted in 2014 introduces our commitment to this principal to our suppliers stating: *“AMG’s suppliers should support the elimination of all*

forms of forced and compulsory labor.”

- Principle 5 - The effective abolition of child labor

As stated in our Human Rights Policy, AMG does not employ children and strongly rejects the use of child labor, and expects our suppliers to do the same through the requirements of our Supplier Conduct Charter. AMG does actively support the creation of educational programs for young people including apprenticeships combined with formal education, particularly in the areas of science and engineering. In our annual report we utilize the Global Reporting Initiative indicator HR6 “Operations identified as having significant risk for incidents of child labor, and measure taken to contribute to the elimination of child labor”. In its 2016 annual report AMG reported that it has reviewed 29 of its operating sites across the world to ensure that they are not at risk for employing child labor or exposing young workers to hazards. It was found that no sites posed a risk at this time. AMG is at the root of the supply chain for several of its products and is proud to be able to supply metals such as Tantalum and Tin, commodities historically fraught with human rights abuses, from mining operations with strong ethical practices and not utilizing child labor. In particular our Tantalum supply chain in Brazil is certified as Conflict Free by the Electronics Industry Citizenship Coalition (EICC).

- Principle 6 - Eliminate discrimination in respect of employment and occupation

AMG’s Code of Business Conduct states that the Company views as unacceptable any form of harassment or unfair or unlawful discrimination based on race, age, gender, color, sexual orientation, disability or national origin, whether by employees, temporary employees, managers, customers, vendors or AMG companies’ visitors.

The size of AMG’s workforce has been relatively stable over the last year and at year-end 2016, AMG Critical Materials had 2,110 employees and AMG Engineering had 778. For the facilities covered by this report, the total AMG workforce was 2,888 (other facilities not yet covered in this section employ a further 165 people). Geographically, these were located in Asia (301), Europe

(1,589), North America (545) and South America (453). In addition to direct employees, a further 238 directly supervised contract workers were employed at AMG sites in 2016.

AMG assesses the diversity of its workforce in terms of gender and age, but not ethnicity. The multinational, and therefore multicultural, nature of AMG’s business means that ethnic diversity is significant, but it is not possible to define minority employees in such an environment. Of the total employees, 16% are female; 19% are under 30 years of age, 54% are between 30 and 50, and 27% are over 50.

The Management Board is 100% male. The Supervisory Board is 89% male and 11% female. One Supervisory Board member is aged 30-50 while 8 are over 50.

However, AMG is continuing to work to improve the diversity of its Boards. On page 28 of our 2016 Annual Report we note:

“Gender Diversity:

The Supervisory Board recognizes the importance of a diverse composition of the Supervisory Board and the Management Board in terms of gender. Dutch regulations require 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, with increased focus, continue to take this allocation of seats into account in connection with the following actions: (1) the appointment or nomination for the appointment of the new members for 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 the end of 2016, AMG did not comply with the diversity criteria with regard to the composition of the Management Board and the Supervisory Board. The Supervisory Board will continue to look for suitable female candidates for both the Management Board and the Supervisory and in particular, is pleased to announce the nomination of Mrs. S. Rich Folsom as member of the Supervisory Board at the Annual General Meeting on May 4, 2017.”

ENVIRONMENT

- Principle 7 - Businesses should support a precautionary approach to environmental challenges

All AMG facilities have a strong awareness and knowledge of their environmental impact and the company utilizes the Global Reporting Initiative (GRI) guidelines to measure and report environmental impacts in a number of areas including raw material use, energy consumption, greenhouse gas generation, water use and discharge and waste generation and disposal. Collection of this data is vital to help sites focus on improving efficiencies – including reducing energy use and concurrent greenhouse gas emissions, but also reducing solid and liquid wastes and reducing water consumption. AMG is transitioning to the latest GRI guidelines G4. These environmental impacts are reported annually to our stakeholders in the Company annual report. Additionally AMG reports its greenhouse gas emissions to the Carbon disclosure Project (CDP).

Many of AMG’s activities focus on technologies to address fossil fuel efficiencies and reduce greenhouse gas generation, where we believe a precautionary approach is vital given the potential adverse effects. Many of the technologies that AMG produces, which we refer to as “enabling technologies” contribute to significant reductions in greenhouse gas emissions in the transportation and buildings sectors. The contribution of those technologies is outlined in the CEO letter on page 10 and 11 of the 2016 Annual Report to Shareholders:

“The other stakeholder who needs our special attention is the environment. I will hasten to say that other big stakeholders, such as suppliers and customers, need not be specially referred to here, as they are our daily work, and the basis of our corporate existence. The environment is different. When we initially conceived of AMG, we envisaged a new concept of material science-based, incremental and transformational innovations to create value. We focused on light-weighting of materials, from aluminum and titanium alloys to carbon-reinforced composites; on surface treatment and coating technologies to enable materials to endure higher operating temperatures; on recycling technologies turning metal-containing hazardous waste into a new raw material source (a new ‘mine’, so to speak); and on energy saving materials for buildings,

just to name a few. It is safe to say that our biggest 'client' has been the environment.

We began our focus on CO2 reduction in our IPO documents. We believe that it is necessary to buy an insurance policy against atmospheric CO2 concentration, and our industrial CO2 reducing solutions can be seen as such an insurance. When you buy life insurance, you don't prolong your life; you do something for the next generation. Our contributions to our biggest client, the environment, can be quantified using a fairly straightforward methodology.

The selected AMG products and solutions which we regularly measure have enabled our customers to reduce CO2 emissions in 2016 by a total of 28.4 million tons compared to a CO2 saving of 23.7 million in 2015. Those are very significant numbers for our planet and for a company our size. This can be put into the context of our direct CO2 emissions of around 600,000 tons per annum as a result of our production activities in 29 sites around the world. The total CO2 savings of 28.4 million tons as a percentage of total assets of roughly \$900 million gives a ratio of 3.2. This measure of our 'greenness' can be used to draw comparisons. To state the result simply, AMG is a leader in 'greenness', considerably ahead of our competitors. It is clearly visible that our work for the environment, as our most prominent client, has had a significant impact on the motivation of our employees and on the pride that we are contributing to future generations in a material way. This has been particularly important to me in my capacity as the founder of this company."

Additionally, the relevant section from the Annual Report to Shareholders showing how AMG measures its environmental impact is reproduced at the end of this Communication on Progress (COP).

- Principle 8 - Undertake initiatives to promote greater environmental responsibility

The principles outlined by AMG's CEO and founder referred to above eloquently describe AMG's broader approach to the environment. In terms of detailed environmental management at local sites, twelve of the larger AMG manufacturing facilities now have ISO 14001 environmental management system certification in place. Formalized management systems are seen as a key tool to maintaining focus on environmental responsibility. Additionally AMG has invested in projects including hydroelectric generation, solar generation and heat recovery systems. It is also promoting energy management initiatives to improve efficiencies, with several larger energy users, including the largest, holding ISO 50001 energy management certification. The relevant section from the Annual Report to Shareholders showing how AMG measures its environmental impact is reproduced at the end of this Communication on Progress (COP).

- Principle 9 - Encourage the development and diffusion of environmentally friendly technologies

As described above, AMG's businesses continue to focus on environmentally friendly technologies. In 2016 AMG continued its investment in the production of titanium aluminides used in the aerospace industry. Investments in the plant in Cambridge, Ohio that produces the steel strengthening alloy ferrovanadium from byproducts of the oil refining and power generation industries, eliminating landfill, has resulted in significant capacity increase, with minimal

increase in carbon footprint. Further, this technology reduces energy in the manufacturing process and by strengthening steel, significantly reduces the tonnages required in end user applications. AMG is also actively supporting the automotive industry as it moves to more fuel efficient turbo charged, low displacement engines, through heat treatment of fast moving, high temperature parts such as turbo chargers and piston heads. Similar applications have been seen in next generation aviation jet engines which contribute to the fuel efficiency of next generation aircraft and where AMG's ceramic coating technologies further enable fuel efficiency savings. AMG continues to believe that nuclear power is required as part of the short and medium term solution to anthropogenic CO2 emissions and continue to supply products and engineering expertise to support this sector.

ANTI CORRUPTION

- Principle 10 - Businesses should work against corruption in all its forms, including extortion and bribery.

In 2009 AMG introduced (and published) its Code of Business Conduct to all of its staff which sets out guiding principles in its ethics and business conduct as adopted and approved by the Company's Management Board and Supervisory Board. The Code of Business Conduct was reviewed and updated in 2016, adding safety as a core value, and it discusses in detail the ethical conduct and business practices which AMG expects from all employees, covering areas like conflicts of interest, anti-bribery, insider dealing, policies on corporate entertainment and acceptance of gifts, and the integrity of our record keeping and reporting. AMG also has a stand-alone policy on Anti-bribery and Anti-corruption. This is available under the Corporate Governance section of the AMG-NV website. Training in these aspects is carried out on an ongoing basis.

AMG further promotes these values throughout the Company with multi lingual posters (updated in 2016) prominently displayed at operational sites to raise awareness of the Code of Business Conduct and various ethically based programs.

we act **safely**
 we aim to create **value**
 we **respect** people
 we act with **integrity**

AMG's Code of Business Conduct and its supporting policies set out AMG's guiding principles in its ethics and business conduct and applies to all directors, officers and employees of AMG and its group companies worldwide regardless of their position, nationality, gender, race or religion.

At work you may face situations where interpretation or further guidance is needed. When this happens consult the Code of Business Conduct and its supporting policies or discuss the situation with your manager. You can also discuss with your local Compliance Officer or contact AMG's Legal Department.

www.amg-nv.com



We welcome comments on our Code of Business Conduct and supporting policies.

Michael Witte, Chief Compliance Officer
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Nous agissons en **sécurité**
 Notre but est de créer de la **valeur**
 Nous **respectons** chaque personne
 Nous agissons avec **intégrité**

A AMG nous sommes ambitieux, innovants et engagés à être leader dans le domaine des matériaux critiques et services d'ingénierie et à atteindre l'excellence dans tout ce que nous faisons. Nos valeurs fondamentales – sécurité, création de valeur, respect et intégrité – forment la base de cette déclaration et s'appliquent à la façon dont nous menons nos activités et à la façon dont nous traitons nos employés, partenaires en affaires et intervenants.

www.amg-nv.com



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ATTACHMENT 1

SUSTAINABLE DEVELOPMENT SECTION FROM THE 2016 ANNUAL REPORT TO SHAREHOLDERS

Sustainable Development



This section provides our ninth annual sustainability report, which evaluates and compares AMG's social and environmental performance to previous years.

The reporting boundaries have not changed significantly since 2015; one operational site has been divested. The 29 locations reporting in 2016 (in which AMG has a 51% or greater stakeholding) are detailed in the table below.

They include mining and manufacturing operations and sales and administrative offices in 13 countries across 4 continents. This report covers the same two segments as described in 2015: AMG Critical Materials and AMG Engineering. 2015 data are included so that comparisons can be made and trends can be identified. AMG will continue to assess the boundaries of this report based on the corporate ownership structure on an ongoing basis.

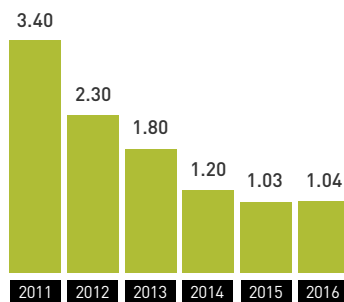
SITE NAME ¹	LOCATION	COUNTRY	DIVISION
AMG Headquarters	Amsterdam	Netherlands	AMG Corporate
AMG USA Headquarters	Pennsylvania	USA	AMG Corporate
ALD USA ³	Connecticut	USA	AMG Engineering
ALD France	Grenoble	France	AMG Engineering
ALD Vacuum Technologies ²	Hanau	Germany	AMG Engineering
ALD Vacuheat ²	Limbach	Germany	AMG Engineering
ALD TT USA ²	Michigan	USA	AMG Engineering
ALD Dynatech ³	Mumbai	India	AMG Engineering
ALD TT Mexico ²	Ramos Arizpe	Mexico	AMG Engineering
ALD Japan ³	Shinjuku-ku	Japan	AMG Engineering
ALD C&K ³	Suzho	China	AMG Engineering
AMG Antimony	Chauny	France	AMG Critical Materials
Bogala Graphite Lanka ²	Colombo	Sri Lanka	AMG Critical Materials
AMG Graphite ²	Kropfmühl	Germany	AMG Critical Materials
AMG Antimony	Lucette	France	AMG Critical Materials
AMG Mineração ²	Nazareno	Brazil	AMG Critical Materials
AMG Silicon ²	Pocking	Germany	AMG Critical Materials
AMG Graphite	Qingdao	China	AMG Critical Materials
AMG Graphite Tyn	Tyn	Czech Republic	AMG Critical Materials
AMG Alpoco	Anglesey	UK	AMG Critical Materials
AMG Titanium Alloys and Coatings ²	Brand Erbsdorf	Germany	AMG Critical Materials
AMG Aluminum ³	Jiaxing	China	AMG Critical Materials
AMG Aluminum	Kentucky	USA	AMG Critical Materials
AMG Alpoco	Minworth	UK	AMG Critical Materials
AMG Titanium Alloys and Coatings ²	Nürnberg	Germany	AMG Critical Materials
AMG Vanadium ²	Ohio	USA	AMG Critical Materials
AMG Superalloys and AMG Aluminum ²	Rotherham	UK	AMG Critical Materials
AMG Superalloys ²	São João del Rei	Brazil	AMG Critical Materials
AMG Aluminum	Washington	USA	AMG Critical Materials

¹ The chart indicates which facilities were included in the scope of the sustainable development data. Only data from these facilities are included in this section, which may therefore show inconsistency with other sections of this annual report covering all facilities.

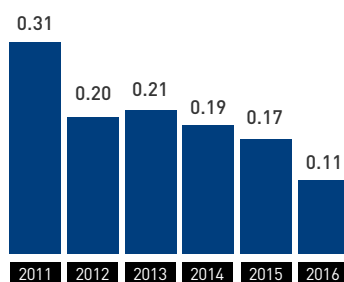
² 2016 remote externally audited data.

³ Minor or office facilities with estimated data.

LOST TIME INCIDENT RATE



INCIDENT SEVERITY



All locations report their performance at the end of the fourth quarter and no forecast data are used. However, sales and administrative offices and some smaller engineering sites (typically with less than 10 employees or with environmental impacts <1% in all aspects) have been determined to be non-material to the report, and therefore estimated data have been used for these in 2016. Those sites utilizing estimated data are indicated in the table on page 39.

SCOPE OF THIS REPORT

AMG utilizes some of the Global Reporting Initiative (GRI), Mining and Metals Sector Supplement aspects as a basis for this report but includes only those which are material to its business units. The report covers aspects that:

- Reflect the organization's significant economic, environmental and social impacts; or
- Substantively influence the assessments and decisions of stakeholders.[†]

AMG utilizes a standard 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 GHD. The environmental key performance data for both segments are summarized in the table on page 47.

AMG Advanced Metallurgical Group N.V. amg-nv.com

Contact: global.sustainability@amg-nv.com

AMG PEOPLE

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

The size of AMG's workforce has been relatively stable over the last year and at year-end 2016, AMG Critical Materials had 2,110 employees and AMG Engineering had 778. For the facilities covered by this report, the total AMG workforce was 2,888 (other facilities not yet covered in this section employ a further 165 people). Geographically, these were located in Asia (301), Europe (1,589), North America (545) and South America (453).

In addition to direct employees, a further 238 directly supervised contract workers were employed at AMG sites in 2016. AMG assesses the diversity of its workforce in terms of gender and age, but not ethnicity. The multinational, and therefore multicultural, nature of AMG's business means that ethnic diversity is significant, but it is not possible to define minority employees in such an environment. Of the total employees, 16% are female; 19% are under 30 years of age, 54% are between 30 and 50, and 27% are over 50.

The Management Board is 100% male. The Supervisory Board is 89% male and 11% female. One Supervisory Board member is aged 30-50 while 8 are over 50.

The rights and freedoms for individual employees to join, or choose not to join, unions, as described in Article 23 of the Universal Declaration of Human Rights, are fully respected by AMG. Across AMG, 1,924 employees (67%) were covered by

[†] GRI, G4 Sustainability Reporting Guidelines, Reporting Principles and Standard Disclosures, 2013, p.17.

such collective bargaining agreements. 72% of AMG Critical Materials are covered by these arrangements, while AMG Engineering, which includes a higher proportion of professional salaried staff, has 52% of its employees covered. Once again in 2016, AMG facilities had no strikes or lockouts.

AMG is pleased to report that no fatal incidents occurred to its workforce in 2016. AMG's medium-term goal is to become a zero lost time incidents workplace—we cannot accept that any incident is inevitable. Since 2008, there has been year-over-year safety improvement across AMG, although this trend slowed in 2016. For AMG as a whole, the Lost Time Incident Rate¹ was relatively unchanged at 1.04 (1.03 in 2015). The incident severity² was, however, significantly lower at 0.11 compared to 0.17 in 2015 (a 35% improvement). Of the 29 locations included in this report, 17 achieved zero lost-time incidents in 2016. While lost time incident rate improvement slowed, total incident rates (including all medically treated injuries) improved 16% from 2.00 in 2015 to 1.68 in 2016. No specific occupational diseases were reported in 2016.

Formal safety management systems continue to be important to achieving zero harm to employees and fifteen of AMG's larger sites are OHSAS 18001 certified. In 2016, 86% of the AMG workforce was represented in formal health and safety committees and they are in place at every major production facility and many of the smaller facilities. In these committees, representatives from all levels of the organization become pivotal decision makers regarding safety at their facilities. The average absenteeism rate across AMG was 2.75%.

AMG also collects data on the hours we invest in our people to develop their skills, categorized into management; professional, technical, sales and administration; and production and maintenance employees. The categories of training tracked included technical and professional development, quality, anti-corruption policies, human rights policies and health and safety.

This is important to our safety, environmental and ethics programs, and in maintaining our technical competitive advantage. In 2016, the training provided was: management (158 employees trained, averaging 28.3 hours per person), professional, technical, sales and administration (958 employees trained, averaging 32.3 hours) and production and maintenance (1,722 employees trained, averaging 35.5 hours).

Across all the reporting sites, AMG employees received an average of 32.3 hours of training time in 2016 (approximately 1.75% of total hours worked).

¹ Lost time incident frequency rate equals the number of lost time incidents multiplied by 200,000 divided by the total hours worked. Lost time injury was defined using local regulations.

² Incident severity is defined as the number of scheduled work days lost as a result of disabling injuries per thousand hours worked. In some locations, calendar days are counted by local regulators and these data are used here if scheduled work days are unavailable.

HUMAN RIGHTS AND ETHICS

GRI INDICATORS HR 3, HR 5, HR 6 AND SO 3

Protection of internationally proclaimed human rights is an area in which AMG is both highly aware and fully committed, and the Company strives 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 because of political or business factors. In 2016, it was found that no sites were at risk, with the exception of China, where the formation of unions remains 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. No sites have been identified that pose a risk at this time. AMG also aims to ensure rights are protected in our supply chain through its Supplier Code of Conduct. Our policy on human rights is included in the Company Code of Business Conduct and Ethics and detailed in the Company's human rights policy; all are available on the AMG website.

Refresher human rights and ethics training was performed in 2016, and employees were given refresher training in ethical businesses practices, including 1,568 in human rights and anti-bribery based materials. Compliance officers at the major sites monitor and implement the Code of Business Conduct and Ethics.

RESOURCE EFFICIENCY AND RECYCLING

GRI INDICATORS EN 1 AND EN 2

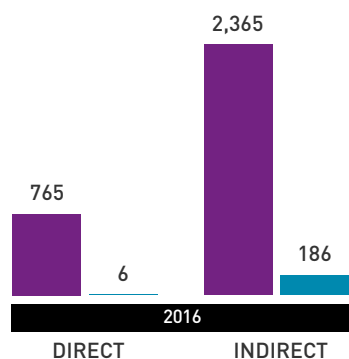
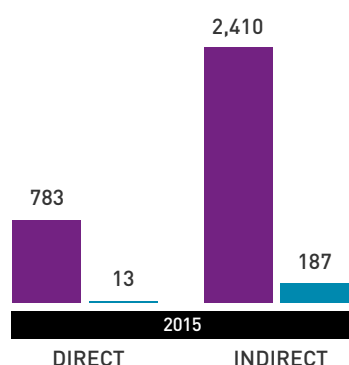
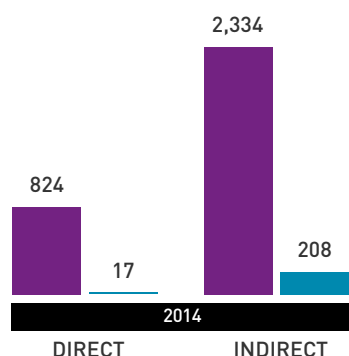
The use of resources varies between AMG business units, ranging from those that locally mine or purchase primary raw materials to produce metals, alloys, and inorganic chemicals, through those that produce metals and alloys from secondary, recycled resources, to those that provide technology and engineering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

The predominantly furnace technology and engineering services provided by AMG Engineering, including furnace assembly operations and heat treatment services means this segment utilizes limited amounts of resources. Resources used are mainly complex component parts for furnaces, which are routinely measured in units rather than by mass. Unlike the chemicals and alloys business units, this means only limited data are available on resource mass. In 2016, AMG Engineering reported using 3,370 mt of resources, all of which were classified as primary.

AMG Critical Materials uses a much more diverse range of resources, including mined ores for tantalum, lithium and graphite production, power plant wastes and spent refinery catalysts for the production of vanadium alloys, and metal salts for aluminum alloy production. The segment uses recycled iron, steel, aluminum and titanium in processes when possible. The segment utilized 1,099,980 mt of resources in 2016, of which 40,650 mt were secondary or recycled materials. In 2016,



ENERGY USAGE (TJ)



AMG Engineering
AMG Critical Materials

the primary utilization of resources was by AMG Mineração (711,400 mt of mined ore) and AMG Silicon (190,900 mt of quartz, coal and other raw materials) with the remaining AMG Critical Materials sites using 157,100 mt.

ENERGY CONSUMPTION

GRI INDICATORS EN 3 AND EN 4

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 AMG Critical Materials 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.³

The reported energy usage for AMG Critical Materials was marginally lower in 2016 compared to 2015, decreasing from 3,193 terajoules (TJ) in 2015 to 3,130 TJ in 2016. Direct energy usage was 765 TJ and indirect was 2,365 TJ.

The energy used by low-energy heat treatment processes utilized by AMG Engineering remains low in comparison.

The segment used 192 TJ in 2016, 4.5% lower than in 2015 (199 TJ). Indirect energy, in the form of electricity, accounted for 186 TJ, while direct energy use, primarily through natural gas, totaled 6 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 2016, AMG's hydroelectric generating facility near São João del Rei, Brazil generated 55,530 gigajoules (15,425 MWh). This supplied AMG's local requirements at its São João del Rei, Brazil plant. Additionally, AMG Vanadium's solar power system generated 911 gigajoules (253 MWh) in 2016.

WATER CONSUMPTION

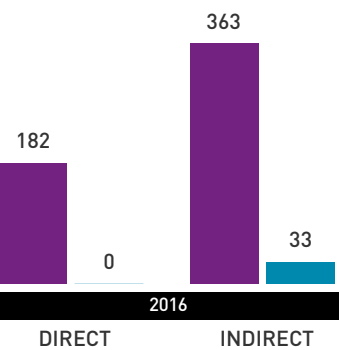
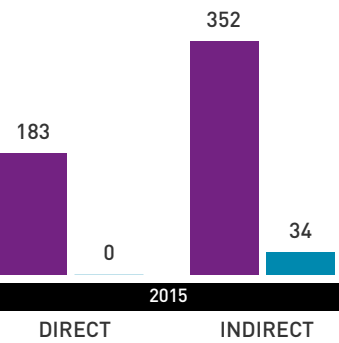
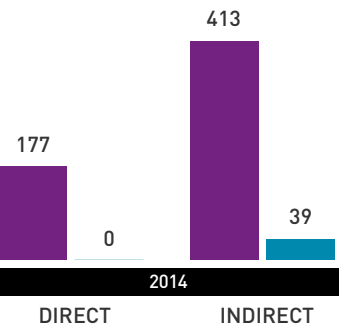
GRI INDICATOR EN 8

Water is essential to many manufacturing processes and is used by AMG 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 for ore processing. Water utilized for cooling, processing and sanitation is reported by AMG facilities. Reported water use for AMG Critical Materials was lower in 2016 at 4,220,000 cubic meters (a 10% decrease). AMG Engineering's water consumption was 100,800 cubic meters during 2016, also similar to that of 2015 (99,600 cubic meters).

AMG Critical Materials has its largest water use at the mine sites in Brazil, Germany and Sri Lanka, and the silicon metal production plant in Germany. Of these, the mine in Nazareno,

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

GHG EMISSIONS ('000 MT)



AMG Engineering
AMG Critical Materials

Brazil remains the largest user with 2,495,000 cubic meters in 2016, a 15% decrease 2015, and a result of process water recycling and improved measurement. Full data are provided in the table on page 47.

BIODIVERSITY

GRI INDICATOR EN 11

Of the 29 locations reporting for 2016, there were three reported land areas on or adjacent to AMG's properties which had high biodiversity value, sensitive habitats or were protected. These areas are: native forest in São João del Rei, Brazil; river frontage and setback areas in Nazareno, Brazil; and wetlands in Ohio, United States. AMG remains very aware of the need to be responsible stewards of these important areas.

CLIMATE CHANGE

GRI INDICATOR EN 16

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 carbon dioxide equivalent (CO₂e), 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.

AMG Critical Materials' GHG emissions were marginally higher in 2016 at 546,000 mt of CO₂e (2015, 535,000 mt). 67% of these emissions are attributed to indirect sources (electricity) while 33% are attributed to direct sources. Emissions remain dominated by the silicon metal production activities which account for 390,000 mt of CO₂e (approximately 6.62 kg CO₂e per kg silicon metal produced). This activity also dominates AMG's overall GHG emissions, accounting for 67% of total group emissions. Further, changes in supply mix, including reduction of nuclear and variations in renewable energy in Germany, resulted in lower emission factors for this electricity and accounted for some of this increase. These factors, outside of AMG's control, outweighed additional reductions achieved elsewhere.

AMG Engineering GHG emissions in 2016 were 33,000 mt, a decrease from 33,000 mt in 2015. 99% of these emissions are indirect and associated with electricity usage.

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. GHG intensity is therefore defined on the basis of revenue rather than, for example, mt of product. Normalized to a revenue basis, AMG Critical Materials emitted 546,000 mt CO₂e, with revenue of \$702 million, equivalent to 778 mt CO₂e per million \$ revenue. AMG Engineering generated 32,900 mt CO₂e and \$270 million in revenue, or 122 mt CO₂e per million \$ revenue. This wide range reflects the diversity of AMG but also guides focus on reduction opportunities.

For AMG as a whole in 2016, GHG emissions were 579,000 mt, up 2% from 569,000 mt in 2015. Revenue was \$971 million, giving a GHG intensity of 596 mt per million \$ revenue, again an increase of 2% from 2015.

EMISSIONS TO AIR

GRI INDICATORS EN 19 AND EN 20

The emissions of ozone-depleting substances remain de minimis for AMG. AMG Engineering also has de minimis air emissions for other pollutants, resulting from only small sources such as heating and hot water boilers. AMG Critical Materials' production facilities do have some other air emissions, including SO_x (777 mt), NO_x (627 mt) and particulate materials (74 mt). Data are only available for regulated sources where measurements have been made. The largest particulate emissions come from silicon metal production activities.

EMISSIONS TO WATER AND SPILLS

GRI INDICATORS EN 21 AND EN 23

AMG facilities continue to maintain records of the volume of aqueous effluents, including process water and non-sanitary sewer discharges 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 2016, the total water disposed to water courses by AMG Critical Materials equaled 3,257,000 cubic meters compared to 3,629,000 cubic meters in 2015. This decrease is attributed to improvements in efficiencies at the AMG Mineração mine, production levels and product mix. Of the total amount, 1,970,000 million cubic meters of water were discharged to the same water body from which it is withdrawn at the mine site in Brazil, a 15% reduction from 2015.

After mining activities, most of AMG Critical Material's water is used for cooling purposes and therefore produces clean water discharges, and some of the wet chemical processes generate aqueous waste streams. This included cooling water used by the silicon metal furnaces as well as mine water from dewatering pumps. In several locations, mine water is utilized for process water before final discharge. For the 8 production sites reporting industrial process water disposal, the major constituents were metals (712 kg), fluoride (6,180 kg), sulfate (1,039 mt) and total suspended solids (36 mt).

AMG Engineering 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 non-contact cooling water takes place at the site in Michigan, USA (37,000 cubic meters in 2016).

In 2016, there were no significant spills (defined as one which would affect the Company's financial statements 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 2016 for waste streams generated by AMG, along with documentation of their recycling 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 AMG Critical Materials was 19,356 mt, a decrease of 19% over 2015 (24,000 mt). 46% of these materials (8,970 mt) were non-hazardous, with the remaining 10,380 mt disposed to licensed hazardous waste landfills.

The waste produced by AMG Engineering is much different in composition, and much smaller in volume. Just 193 mt were disposed to landfills in 2016 (109 mt in 2015), composed mainly of general waste, contaminated oil and metals that could not readily be recycled, and almost no hazardous waste.

Overall, the Company disposed of 19,550 mt of waste to landfills or incineration in 2016 compared to 24,500 mt in 2015. Hazardous waste accounted for 46% of the total.

SIGNIFICANT FINES FOR NON-COMPLIANCE WITH ENVIRONMENTAL AND OTHER LAWS

GRI INDICATOR EN 28

AMG Mineração received a fine of thirty-two thousand dollars as a result of a routine environmental inspection. No other facility received any significant fine or equivalent penalty for non-compliance with environmental laws in 2016.

GRI INDICATOR S08

In 2016, AMG Engineering and AMG Critical Materials did not receive any fines.

PRODUCT RESPONSIBILITY

GRI INDICATOR MM 11

AMG continues its progress regarding its responsibilities under the REACH regulations in Europe, and is continuing to prepare for its 2018 registrations for products with volumes greater than 1 mt. European operations are working with Consortia in 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 units are involved in, among others, 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 guidelines for the voluntary reporting of sustainable development indices. The table on the next page serves as a reference guide to the sections of the report where information about each item can be found. The GRI 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 data are included in this report.

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 fifth Communication on Progress in April 2017.



EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE

AMG continues its support of the Extractive Industries Transparency Initiative (EITI, 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. As of today, AMG does not have any extractive operations in an EITI-implementing country, although it does have exploration and development activities in Mozambique.

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 (amg-nv.com).



ENVIRONMENTAL, HEALTH, SAFETY AND SOCIAL REPORTING STATEMENT OF ASSURANCE

SCOPE, OBJECTIVES & RESPONSIBILITIES

AMG's environmental, health, safety and social performance reporting has been prepared by the management of AMG who are responsible for the collection and presentation of the information. GHD was retained by AMG to conduct an independent review and assurance of the key information* and data reported in the Sustainable Development section of this report. The objective of the assurance process is 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. GHD'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. GHD 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

GHD'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 Guidelines and international standards for assurance appointments. Remote audits utilizing telephone and web-based methods were carried out for 12 facilities (see table on page 39) identified by AMG, representing approximately 41% of the total number of AMG facilities. Stakeholder engagement was not within the scope of the assurance activities.

CONCLUSIONS/RECOMMENDATIONS

Based on the method and scope of work undertaken, and the information provided to GHD 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 2016. 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 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.

GHD

ASHLEY VALENTINE, P.E.

GHD

* LA1, LA4, LA7, LA13, EN1, EN2, EN3, EN4, EN8, EN16, EN20, EN21, and EN22

SOCIAL AND ENVIRONMENTAL KEY PERFORMANCE INDICATORS AND GRI CONTENT INDEX

SELECTED SOCIAL AND ENVIRONMENTAL KEY PERFORMANCE INDICATORS*

GRI INDICATOR	DESCRIPTION	UNITS	AMG CRITICAL MATERIALS		AMG ENGINEERING		AMG GROUP	
			2015	2016	2015	2016	2015	2016
LA1	Total workforce		2,055	2,110	789	778	2,844	2,888
LA4	% of employees covered by collective bargaining agreements		71	72	49	52	65	67
LA7	Accident Rates	Total	1.22	1.19	0.46	0.58	1.03	1.04
LA7	Accident Severity Rate	Total	0.22	0.13	0.02	0.03	0.17	0.11
LA10	Average Hours of Training Per Year	Per person	25.1	26.3	69	49.2	37.1	32.3
EN2	% Recycled Raw Materials	%	10	10	0	0	3.2	3.7
EN3	Direct Energy Consumption	TJ	783	765	12	6	796	771
EN4	Indirect Energy Consumption	TJ	2,410	2,365	187	186	2,596	2,550
EN8	Water consumption (manufacturing)	'000 cubic meters	1,247	1,133	100	101	1,343	1,234
EN8	Water consumption (mining)	'000 cubic meters	3,497	3,092	NA	NA	3,497	3,092
EN16	CO ₂ equivalent emissions	mt	535,000	546,000	34,000	33,000	569,000	579,000
EN20	SO _x emissions	mt	628	627	0	0	628	627
EN20	NO _x emissions	mt	780	777	0	0	780	777
EN20	Particulates discharged to air	mt	81	73	0	0	81	74
EN21	Metals discharged	kg	807	712	0	0	807	712
EN22	Hazardous waste (including recycled)	mt	5,480	5,730	63	153	5,543	5,884
EN22	Non-hazardous waste (including recycled)	mt	26,130	27,600	114	217	26,245	27,800
EN22	Percent of waste recycled	%	23	38	39	23	23	37
EN22	Waste disposed to landfill	mt	24,406	19,356	109	193	24,514	19,500
EN23	Spills	L	0	0	0	0	0	0
EN28	Environmental Fines	\$	32,000	0	0	0	0	32,000
S08	Fines for non-compliance with laws	\$	0	0	0	0	0	0

* For a full list see pages 40-46.

GRI CONTENT INDEX

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