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This Sustainability Report includes reporting of our economic, environmental and social responsibility. Please check our Annual Report 2013 for Financial Statements and Corporate Governance Statement.

Based on the development of Terri remedy assets and VDM business, the sustainability reporting is aligned with the financial reporting for 2013. Hence, the Sustainability Report for 2013 covers mainly Outokumpu continuing operations unless otherwise stated in the report. Please see reporting principles for detailed information.

CEO’s foreword

T
he year 2013 saw the dawn of a new era for Outokumpu. With the acquisition of In- oux, our business grew to a larger scale; our portfolio, our geographical reach and our responsibilities as a new global market leader in stainless steel. We captured this commitment in our new vision of “a world that lasts forever”

Sustainability plays a central role in our business, as it has always done. Not just out of duty as market leader, we also see it as a key driver for our long-term competitiveness and growth. Sustainability gives to the heart of our mission to create advanced materials that are efficient, long-lasting and recyclable; materials like our fully recyclable stainless steel. As a material, stainless steel is also strong, corrosion-resistant, durable and hygienic; in many ways, it is the perfect answer to global challenges such as resource scarcity, urbanization, and global climate and water challenges. As good as stainless steel is, we constantly seek to innovate – to find better forms, better applications and better ways to produce it.

Over the years, our dedication to innovation has yielded results, also in sustainability. The carbon footprint of our products today is more than 50% lower than in the 1990’s. We have improved our energy efficiency by utilizing the best available technology in production. And we have significantly reduced the amount of waste that ends up in land-fill. Our long-standing program for occupational health and a safe workplace strategies to embrace suppliers and contractors. We continue to pursue transparency; learning from dialogue with customers, investors, non-governmental organizations and local communities.

During 2013, the tough business environment and lower market demand made it difficult for us to achieve capacity utilization in our mills. Despite challenging times, we were able to further reduce our carbon profile and improve energy efficiency. In the new Outokumpu, we increased the recycled content of our material to more than 85%, well over the industry average of 60%. We also managed to successfully ramp up our recent investments; our new ferrochrome facility in Tornio, Finland and new steel mill in Calvert, Alabama, USA. Combined, these investments also included environmental investments totaling 120 million euros.

We are proud that our work in sustainability has been recognized by independent international institutions. In 2013, the Dow Jones Sustainability Index listed Outokumpu for the seventh consecutive year and currently ranks us as the sole stainless steel manufacturing company in the Index. This kind of recognition from our stakeholders spurs us on to further innovation in our commitment to responsible operations and sustainable production, from supply chain right through to delivery.

We continue to build on our strong heritage in sustainability, high product quality and solid technical expertise. We are more committed than ever to operating in an ethically sound manner through responsible business practices across the entire value chain.

Our track record and market leadership puts us in a unique position to take the industry forward. As a frontrunner in sustainability thinking, we aim to capitalize on the opportunities this offers for the good of the planet and our own business success. This, in a nutshell, is why sustainability is embedded in our DNA.

The new era for Outokumpu gives us the chance to show others the way forward in sustainability for the stainless steel industry. Together with our customers and partners, we have the opportunity to create and utilize even better materials for a sustainable future.

Mika Sallomäki, CEO
Firm steps forward

Achieving great results and new milestones during 2013 reconfirms that we are stronger together than separate. Now we are even more convinced about our bright future and the benefits of building on the strengths of the new combined Group. This we learned already during the first year, after a great deal of dedicated work.

4. New environmental product declarations

Outokumpu has implemented “Customer first” thinking in our sustainability work for a long time. It is over a decade since the first Outokumpu Environmental Product Declaration (EPD) was published. During 2013, we widened our range of EPDs. The two latest additions to our EPD family are the Long Products EPD and the Stainless Tubular EPD.

Environmental product declarations are built on life-cycle data and help in calculating sustainability performance over a product’s life cycle. Outokumpu has published EPDs to demonstrate the good performance of its products from this perspective. EPDs help our customers to quantify the environmental performance of their solutions, for example when designing for green buildings or infrastructures.

5. Renewal of our ethical statement and Code of Conduct

Outokumpu has had a public, Board of Directors-approved Ethical Statement since 2005. This statement sets the basis for our ethically sound, responsible operations. These principles are implemented through various corporate policies such as: Policy on Sustainable Development and Corporate Responsibility; Code of Conduct; Environment, Health, and Safety Policies. In a December 2013 meeting, the Ethical Statement was reviewed by the Board.

The Outokumpu Code of Conduct was published for the first time in August 2008, and this policy was updated in June 2013 with the view of reflecting some recent developments within the organization. The aim of Outokumpu’s Code of Conduct is to ensure that all Outokumpu employees live up to Outokumpu’s ethical standards and assist Outokumpu employees in different situations by setting examples and giving practical guidance.

1. New sustainability KPIs

During 2013, we launched new Sustainability Key Performance Indicators (KPIs) to secure the continual improvement and more frequent systematic monitoring of the progress. The KPIs are recycled content, energy efficiency and carbon efficiency. In addition, the KPIs also indicate financial savings against a target baseline, making the economic benefits of sustainability more concrete.

- Recycling content (Baseline 80%)
- Energy efficiency (baseline 2007-2009)
- Emissions CO₂ (baseline 2007-2009)

2. Improved environmental performance

Our stainless steel recycled content rose clearly above 85%. Energy efficiency was improved to 10% against baseline and our carbon profile was reduced in line with our long-term target.

3. Cross-auditing of Outokumpu locations

The new Outokumpu started officially in January 2013; the Group had evolved into the biggest and an even more globally present stainless steel company after completing the major acquisition at the end of 2012. In order to establish a harmonized clear picture about the state of environmental issues and to assess environmental risks across the operative sites, it was decided to perform an intensive site auditing project during 2013. The auditing was conducted in a way that experts from different business units and steel mills together with Group functions participated in audits of other units than the ones they operated themselves. This allowed the extra positive outcome of sharing best practices and building up awareness and competences across Outokumpu.

6. British Medical Journal published Outokumpu’s Chief Medical Officer Markku Huvinen’s long-term study

The British Medical Journal has published an article based on a 30-year study by Outokumpu which reports the findings on cancer incidence among ferromagnetic and stainless steel production workers in Kemi and Torro, Finland. The study shows that there is no added risk of cancer to individuals working in steel mills and living nearby. This study is unique in many ways. First of all due to its long-term (1967-2011) follow-up period and completeness (it includes all employees and cancer cases). It has been conducted in co-operation with academics and health authorities with reference to official national statistics. Now this study has been scrutinised by scientific peer review and published; therefore, it is also publicly available.

Outokumpu was included in the Dow Jones Sustainability Index for the sixth consecutive year. In the latest 2013 ranking, we were the best sole stainless steel manufacturing company and identified as one of the top three in the steel sector globally.

Outokumpu was also rated by the Carbon Disclosure Project (CDP) and included in both CDP Leadership indexes, in the Nordic 260 report in 2013. Outokumpu was, for the first time, awarded inclusion in the Carbon Performance Leadership index and, for the fourth time, inclusion in the Carbon Disclosure Leadership Index.

Outokumpu is currently included in several other sustainability and corporate responsibility indexes and ratings, including: oekom Prime, the Nasdaq OMX CRD Global Sustainability Index, Ethibel register, inclusion in the RobecoSAM Sustainability Yearbook and Silver Class Sustainability Award 2014.
Sustainable Stainless

As a material, stainless steel is strong, corrosion-resistant, durable and hygienic; in many ways, it is the perfect answer to global challenges such as resource scarcity, urbanization, and global climate and water challenges.

Stainless steel offers properties for superior life cycle

Global megatrends such as addressing humanity’s growing demand for clean energy and pure water put higher expectations on material properties. Renewable energy solutions such as solar power, biofuels and wind power require materials that can be sustainably sourced with low life-cycle costs. In applications such as these, stainless steel is often the optimal choice.

We build the future from the past

Steel is the world’s most recycled material. Estimates indicate that the current end-of-life recycling rate for stainless steel is some 82%. In global terms, approximately 60% of the raw material used in making new stainless steel is recycled steel. In Outokumpu’s manufacturing operations, the average recycled content for all stainless steel products produced by the Group in 2013 was well over 85%.

The most important raw materials used by Outokumpu in producing stainless steel are recycled stainless and carbon steels. Together with metals recovered from waste products and by-products of the production process, they enable the recycled content of stainless steel produced by the Group to be raised significantly higher than the global industry average of 60%. In addition to recycled steel, alloying elements, including iron-containing alloys and other metals such as chromium, nickel and molybdenum, are also required.

Stainless steel is fully recyclable and suffers no degradation during reprocessing. Its constituents (including iron, nickel and chromium) can therefore be reused indefinitely in producing new stainless steel. These excellent recycling characteristics mean that stainless steel is well positioned to meet the demands of a future sustainable society.

Outokumpu recognizes that recycling and the life-cycle approach are important elements in achieving sustainable operations.
Product properties

After the initial investment in resources and energy to manufacture stainless steel, the use phase, in which the material is utilized in end products such as home appliances, interior design or kitchen equipment, demonstrates many sound sustainable characteristics.

Since only extremely low levels of metal ions are released from exposed stainless products in most normal environments, no harmful impact on the environment results. In addition to its corrosion resistance, stainless steel also has good mechanical properties, and these can be exploited by manufacturing lighter components and products without compromising safety requirements. In addition to its excellent recyclability and the high levels of recycling achieved, Outokumpu stainless steel has other properties that support a sustainable society.

The forever material

The durability of stainless steel has a positive impact on life-cycle costs. The fact that only minimal maintenance is required is good for both the environment and society. The combination of corrosion resistance and durability increases product lifetime. One result of increased durability is that unnecessary replacements and repairs, and the consequent need for virgin resources, can be avoided during the product life-cycle and recycling phases.

Durability is becoming an important aspect of sustainable construction. For example, in the LEED (Leadership in Energy and Environmental Design) green building rating system, a minimum of 60 years is considered as a reference for life cycle assessments. When the correct steel grade is chosen, stainless steel easily fulfills this requirement. One of the most famous examples of long-lasting steel panels in construction is the upper part of the Chrysler building, built in 1930. Also, when a Buddhist chedi (stupa) in Chonburi, Thailand was constructed, it was designed to last 1,000 years and Outokumpu stainless steel reinforcement bars were chosen for critical parts.

When cleanliness counts

Stainless steel has a long history of use in applications where cleanliness and maintaining high levels of hygiene are important. Good examples are the medical and food-processing sectors. Stainless steel is the preferred choice for hospital equipment and surgical instruments as it can be easily cleaned and sterilized without degradation. For the same reason, much of the equipment used in pharmaceutical applications and food preparation is also manufactured out of stainless steel. The quantities of metal ions released from stainless steel surfaces are not toxic to humans or the environment, and do not have a negative effect on indoor air quality in buildings.

The unique properties of stainless steel have also helped make the process of desalination – producing potable water from seawater – economically viable. Many arid areas of the world now enjoy the benefits that follow from the availability of clean water. Stainless steel surfaces do not affect the taste of food and drink and are easy to clean and disinfect, which is why stainless steel is the preferred material in the food processing industry. In 2013, the Council of Europe published a Technical Guide on Metals and alloys used in food contact materials and articles, setting very stringent substance release limits to safeguard the health of EU citizens. The stainless steel industry has initiated tests on stainless steels with respect to these new guidelines. The project is still ongoing in 2014, but preliminary results confirm the suitability of stainless steel as a food-contact material.

Strong, light and safe

The high-strength stainless steels in Outokumpu’s portfolio offer economic benefits: less material is required for a specific level of performance, and fewer resources are therefore consumed in its production. High-strength steels can also absorb larger amounts of collision energy, improving safety levels in vehicles and other structural designs.

No. 1 in recycling

In order to improve sustainability, it is important to take steps during the design phase of products that aid efficient recycling in the end-of-life phase. The environmental and sustainability benefits associated with recycling, including the conservation of non-renewable resources, related energy savings, the avoidance of undesirable emissions and reduced levels of waste, affect the whole society. Stainless steel is 100% recyclable when the product has reached the end of service life.

The life time can be very different depending on what kind of products we look at. For buildings, we talk about several decades, while a dishwasher might last about ten years, and for mobile phones the service life might be measured in months. Whatever the product, it is seldom the stainless steel that limits the service life.

Although stainless steel is 100% recyclable, there is always some loss during the collecting and sorting process, which is why the world average end-of-life recycling rate for stainless steel has been estimated at 82%. A number few other materials can match.

A key to the outstanding performance in recycling is the high value of the material and the fact that stainless steel is not downgraded when recycled. Instead, recycled steel is also the main raw material when new advanced stainless steel is produced in Outokumpu melt shops.

Added value

Outokumpu supports customers by providing relevant information on the selection and use of different stainless steel grades. Outokumpu has, for example, registered materials in the MDIS database for the automotive sector. The Group is also ready to provide useful information on how to take advantage of stainless steel’s unique properties in forms of sustainable construction.

Achieving results through co-operation

Outokumpu also cooperates with and supports customers and stakeholders by providing information about the sustainable and environmental properties of our stainless steels. For example when the Swedish environmental assessment system for building and construction products, BASTA, needed information on the health and environmental properties of stainless steels, Outokumpu was able to provide that information. As a result of that information exchange, BASTA was able to make an assessment of stainless steels resulting in new guidelines on stainless steels and the acceptance of many stainless steel grades that were not included in the database before.
A life-cycle analysis reveals the environmental impact of a product over its entire life. The strengths of stainless steel are particularly visible from a life-cycle perspective. The life-cycle efficiency of Outokumpu’s stainless steels is based on hexfoil excellence. First are the material’s excellent properties during the use phase. Second is the fact by producing it with the lowest possible environmental impact and embedded energy, we can further improve the life-cycle impact to a level that is very hard to match.

In general terms, the material’s properties also enable lower life-cycle costs which are combined with reduced environmental impact. For the last eight years, Outokumpu has been involved in Erecyce, a widening research project being carried out in Sweden that has studied each aspect of steel’s life-cycle with a view to defining the potential for improving environmental performance. The Project final report was published in 2013. Among the results were new insights into how to increase the yield and avoid wasting valuable metals. The results also demonstrated that the use of advanced high-strength steels can lead to substantial improvements, by utilizing their properties to decrease the need for raw material for example.

Life-cycle studies and related analyses have shown that raising the level of recycled content (recycled steels and recovered metals) in stainless steel production is one of the most efficient ways of reducing the overall environmental impact of the manufacturing process. As recycled material is a scarce resource and the metallurgical properties of some alloying elements are always required, achieving 100% recycled material content in the production process is currently not possible. Outokumpu has, however, succeeded in raising the input of recycled material to levels that are well above the industry average.

The Group’s efficient energy usage, choice of sustainable electricity sources and efficient use of raw materials in production also make important contributions to reducing life-cycle impacts. Outokumpu has chosen to publish Environmental Product Declarations (EPDs) for its products, in order to communicate life-cycle information to our customers in a standardized and verified manner. In addition to our existing EPD for flat products, two new declarations have been launched in 2013 for stainless steel rebar and stainless steel long products. In addition to the EPD, our rebar products have Sustainable Constructional Steel Certification according to the CARES sustainability scheme.

Product life cycle

Life-cycle of steel products

- Alloys & Virgin materials
- New metal to stainless stock
- Integrated FeCr Production
  1. Exploration
  2. Mining & Concentration
  3. Production of ferrochrome
  4. Production of stainless stock
- Fabrication
- Product
- Recycled content >80%
- End of life, recycling rate 82%
- Recycled steel
- White goods and appliance
- Metal industry and machinery
- Food processing and kitchenware
- Building and construction
- Transport

Product and application development

- 13 years
- 18 years
- 23 years
- 23 years
- 50 years

- Outokumpu Sustainability Report 2013
- SUSTAINABLE STAINLESS
- Outokumpu Sustainability Report 2013
- SUSTAINABLE STAINLESS

Billions of people come into contact with stainless steel on a daily basis, and the lack of any resulting harmful effects is strong evidence of the material’s non-toxic properties.

To underpin this fact, Outokumpu and other companies in the industry have invested considerable effort and resources in studying safety aspects connected with the use of stainless steel. Outokumpu has also invested in the testing of specific materials for their safety in food contact and drinking water applications. Stainless steel in its manufactured forms – as delivered to Outokumpu customers – is inert and non-toxic.

On the other hand, industrial processes involving the material, such as welding or pickling, can release substances or fumes that could be hazardous if inhaled for substantial periods of time.

The Safety Information Sheets published by Outokumpu help customers handle our stainless steel products in a safe manner. Health and safety issues are important not only during the manufacturing of stainless steel, but also when the Group’s customers are further processing Outokumpu stainless steel, when products made out of stainless steel are being used, and when end-of-life steel is being recycled.

Since stainless steel is inert and non-reactive when employed correctly, the potential impact on people’s health and safety is extremely limited. This is one of the reasons why stainless steel is so widely used in medical appliances and in manufacturing the equipment and tools employed in the food processing industry.

Directions to Outokumpu’s product development are given by global trends like economic and population growth, mobility, urbanization, climate change and limited resources. We work closely together with our customers in order to align our product development with customers’ current and future needs. The development of long-lasting, sustainable material solutions providing advantages over the whole product life cycle is the key focus. The product development involves development of new steel grades, new surface finishes and improvement of existing steel grades.

Outokumpu’s R&D teams work closely together with our sales organization and customers. Our R&D experts provide our customers with technical support and advice related to material selection, fabrication and material performance in customers’ applications.

The highlights of Outokumpu’s new product launches in 2013 include new formable duplex steels FDX 25™ and FDX 27™, the high-strength, corrosion-resistant austenitic grade Outokumpu 4420, high-chromium ferritic grade Outokumpu 4622, and EDX 2304™, an enhanced duplex grade 2304 developed for offshore industry. Other examples of new product innovations include the GritLine surface finish and austenitic grades H500, H800 and H5000 for lightweight applications.

FDX is a product family exhibiting a unique combination of price-stable alloying with high strength and substantially improved formability. FDX is a totally new material solution for applications where the formability of current duplex grades has not been sufficient. The new grades complement Outokumpu’s already strong duplex offering. The ferritic 4622 grade is Outokumpu’s first high-chromium ferritic grade. It is suitable for demanding applications including façades, elevators, catering or the automotive industry. It has similar corrosion resistance but better deep-drawability than the standard 304 grade. The austenitic 4420 grade is acid-resistant and is suited, for example, for heavy industries, such as construction, pulp and paper, or structures, piping or water treatment applications. Compared to the 316L, it has improved corrosion resistance and higher strength. All the new steel grades offer tangible benefits to our customers, for example in corrosion resistance, strength and formability, and deliver lifecycle advantages compared to traditional stainless steel grades and other materials.
Our impact on the environment

Stainless steel is 100% recyclable, hygienic and corrosion-resistant and the environmental impacts resulting from its use are almost non-existent. On the other hand, its production – both the manufacturing and reprocessing stages – does have an impact on the environment.

The most substantial environmental impacts which result from the stainless steel production process include emissions of dust and particles into the air, discharges of water from production plants, and the high levels of direct and indirect energy consumption during production. Landfill waste is also created during the production process.

Because the life-cycle of stainless steel products is very long and the recycling rate the highest among metal products, the environmental impacts have to be analyzed always per life span, not only related to the production phase. The use of steel in the modern society minimizes emissions by creating efficiency in e.g. transport, construction, industries and energy production. Due to these facts, steel products are solutions in climate compact and the protection of the environment.

Environmental data and reporting for 2013 covers Outokumpu’s stainless steel, ferrochrome and mining operations in the continuing operations of the combined company of Outokumpu and Inoxum. Unless otherwise stated, the environmental data for 2012 and 2011 has been restated to reflect Outokumpu’s continuing operations.

Outokumpu’s way of managing environmental issues

Outokumpu’s firm objective is to minimize the environmental burden of the Group’s operations as much as is economically and technically feasible. The basis of this work is the Environment, Health, Safety and Quality (EHSQ) Policy. This policy was renewed in July 2012 by the CEO according to feedback from internal units and customers.

All Outokumpu’s production sites employ either Environmental Management Systems (EMS) or risk-based management systems, which...
help in avoiding spills and accidents that could be harmful to humans or to the environment. All these Group systems operate in accordance with the Group EHSQ policy and ISO 14001, the international standard for environmental management systems. Typically energy efficiency is integrated into environmental management system, although many of Group’s policies also have certified ISO 14001 standards for energy efficiency. Additionally sites comply with the ISO 9001 quality standard, Outokumpu production sites also have safety management system in accordance with Occupational Safety Management Systems for Occupational Safety Management. Some sites are also certified according to the OH-SAS (ISO) 18 001 occupational safety standard.

The EHSQ Group perspective is aligned with the Group’s management process and annual planning. Outokumpu’s aim is also to harmonize and integrate internal EHSQ management systems as much as possible and is, e.g. EMEA operations in Finland and the Netherlands operate under integrated environmental and quality certifications.

Outokumpu has a long tradition of internally steering environmental performance: the first Group-wide internal Environmental Committee was established in 1969. At the group level, together with new business units from Inoxum, this activity continued in 2013 under the name Outokumpu Environmental Network, which meets regularly each quarter to discuss the Group’s operations. These are discussed regularly in internal Environmental Network meetings. Outokumpu also participates in communicating the effects of emerging legislation and aims to supply decision makers with both industry-specific and expert information. Emerging legislation has also been identified as a sustainability issue of material importance to the Group. During 2013, we identified the main legislative initiatives and their probable financial impact. All these initiatives and impacts have been integrated into the Group’s risk management processes and Group EHSQ experts continue to communicate and gather data in legislative issues together with industrial organizations.

Emerging legislation and public initiatives

One element in operational environmental management is maintaining an awareness of emerging legislation. Outokumpu continuously monitors and evaluates legislative initiatives and evaluates their impact on the Group’s operations. These are discussed regularly in internal Environmental Network meetings. Outokumpu also participates in communicating the effects of emerging legislation and aims to supply decision makers with both industry-specific and expert information. Emerging legislation has also been identified as a sustainability issue material importance to the Group. During 2013, we identified the main legislative initiatives and their probable financial impact. All these initiatives and impacts have been integrated into the Group’s risk management processes and Group EHSQ experts continue to communicate and gather data in legislative issues together with industrial organizations.

The main new or upcoming items of legislation which have been identified include: implementation of the Industrial Emissions Directive in the European Union together with binding Best Available Techniques (BAT) requirements; the renewed EU Climate and Energy package and EU Emissions Trading rules and similar initiatives in the US and China; new European legislation related to pollution and waste and product safety especially in Europe; the EU’s initiatives on air quality policy and national emissions ceilings; the EU Air Policy Review Package; the International Maritime Organization’s decision on the sulphur content of marine fuel; and the EU Sulphur Directive, effective as of 2015 as well as national energy, waste and other environmental taxes and water and air quality targets in many member states.

The EU classification of the metal nickel as a suspected carcinogen is a concern for austenitic stainless steel business. This non-scientific classification is a criterion to exclude substances from use is included in the EU Economic Regulatory List. The derogation is possible and has already been approved for certain product groups (mobile phones, laptops, computers) but needs intensive communication. The impact of all these initiatives on Outokumpu’s operations is analyzed as part of the Group’s annual environmental risk rating process.

The follow-up of site environmental permit status and legal compliance is a routine in the quarterly internal Environmental Network meetings. In 2013, the Environmental Network decided to organize environmental audits at production sites, not only to ensure the reported compliance and data but also to map improvements and the best practice transfer possibilities. This was done Group-wide and results were good. The sites generally comply well with permit requirements. Audits targets were achieved and now the environmental status of each production site is well known and comparable. Similar audits will be within every five years at production sites.

During 2013, many of production sites got new environmental permits or updates. E.g. new air permit was issued for Wildwood, FL, US. Tomio, Finland got a permit for the construction of a fuel storage field and to RII and build a former water area. Avesta is waiting for e.g. final permit conditions for the acid regeneration plant. As an action to reduce impacts of the upcoming sulphur emission regulation Outokumpu is participating the liquid natural gas (LNG) terminal project in Tomio harbor, for which Environmental Impact Assessment was done in 2013. Armidale started the first steps in legal environmental procedures to close the melt shop.

The environmental permit of the Tomio site has been appealed by the Swedish authorities despite the fact that permit conditions related to emissions of mercury, sulphur dioxide and nitrogen oxides were strict. The decision is expected to come in 2014. However, this process did not affect on daily processes or the ramp-up of ferrochrome production. The melt shop in Sheffield, the UK, continued the new permitting process by making BAT gap analyses in 2013. At some European sites, risk assessment updates were done regarding the EU Seveso Directive.

Despite the binding EU directive and starting of new Emissions Trading period 2013-2020, the EU Commission and authorities did not allocate the final amounts of Emissions Allowances during 2013 for the most the European industry and manufacturing units. This delay is not acceptable and was caused by the authorities and delays in EU Commission’s actions. However, our operations under the EU Emissions Trading Scheme (ETS) will continue to receive free emissions allowances allocated according to efficiency-based benchmarks and historical activity. The coming allocation is forecasted to be sufficient or slightly short of the estimated need for our operations during the 2014.

Outokumpu Sustainability Report 2013

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Environmental goals and results

Target-setting is part of our continual improvement ideology and included in environmental and energy management systems. Outokumpu sets both Group-wide and site-level environmental targets. Group-wide targets are common targets that affect most Outokumpu sites. Targets at production sites are more specific.

Annual routines at all Outokumpu production locations include the setting and monitoring of independent environmental targets. These processes are built into the Group’s environmental management systems. The key targets are also set at Group level. Having concrete, measurable targets for our operations is a way of focusing attention on specific environmental and energy aspects throughout Outokumpu.

Outokumpu is committed to the long-term target of reducing the Group’s carbon emissions profile (indirect and direct emissions) by 20% per tonne produced by 2020. The setting of this challenging target is a clear demonstration of Outokumpu’s desire to improve the Group’s energy efficiency; to contribute to reducing global emissions of carbon dioxide, and to participate in the transformation to a low-carbon society.

As with almost all corporate programs, environmental target setting and associated long-term goals will naturally be affected by the combination of operations with Inoxum. The baseline for long-term targets was kept the same, the 2007–2009 period. Progress and reported 2013 results include all current production units and programs. We have retained our way of working in which setting ambitious targets is part of our culture.

Outokumpu’s ultimate target is zero-waste stainless steel production. Materials which result from the Group’s production activities are studied to find ways in which they can be fully recycled, reused or sold as by-products. In general terms, all of Outokumpu’s manufacturing processes are developed in ways that allow valuable metal content to be recovered from any resulting material streams. Outokumpu’s strategy is to improve production processes through R&D projects, continuous improvement tools like business excellence projects or by research programs which are often carried out together with external partners like universities or technology companies.

Outokumpu’s aims are two-fold when improving the Group’s material efficiency. The first is minimizing the initial use of virgin materials, either by increasing the input of recycled materials or by overall material-reduction efforts. The second aim is reduction of the quantities of waste sent to landfill after processes. By paying special attention to waste management and segregation techniques, many waste fractions resulting from production operations are now recycled and the amounts of waste sent to landfill have consequently been reduced at many Group sites.

Materials efficiency

The recycling of waste materials is a priority

Slag, dust, scales and other production-related material streams are unavoidable to a certain extent in steel processing. These material streams also contain valuable metals and recovery of these metals reduces landfilling of waste and makes sense in both ecological and economical terms. Dust and scales collected from stainless steel manufacturing operations are considered by Outokumpu to be significant waste streams. Whenever practical, these waste materials are collected and recycled to recover the valuable alloying elements they contain – these include nickel, chromium and molybdenum. Considerable research and development effort has been invested by Outokumpu in methods of recovering and re-using these materials as they can then be used as substitutes for virgin raw materials in Group processes.

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In general terms, all of Outokumpu’s manufacturing processes are developed in ways that allow valuable metal content to be recovered from any resulting material streams. Outokumpu’s strategy is to improve production processes through R&D projects, continuous improvement tools like business excellence projects or by research programs which are often carried out together with external partners like universities or technology companies.

Outokumpu’s aims are two-fold when improving the Group’s material efficiency. The first is minimizing the initial use of virgin materials, either by increasing the input of recycled materials or by overall material-reduction efforts. The second aim is reduction of the quantities of waste sent to landfill after processes. By paying special attention to waste management and segregation techniques, many waste fractions resulting from production operations are now recycled and the amounts of waste sent to landfill have consequently been reduced at many Group sites.
Recovering and re-using valuable metals from side streams in practice

One example of sustainable operating practices used to minimize emissions into the environment is our efficient filtering techniques. We collect more than 90% of the dust generated by Outokumpu’s steel production operations. Dust generated by the company’s melt shops is recycled, with collected dust fractions that have the highest metal content being used without further treatment and the remainder passing through a metal-recovery process. When necessary, specialist recovery techniques are employed.

In the UK, the in-house metal-recovery facility is located on site and uses direct-current electric-arc melting to recovery alloying metals such as chromium and nickel. Other Outokumpu residues requiring treatment are transported to external facilities located at Sweden, France and the USA, close to our melting operations. The same facility is also used to recycle metal oxide residue material recovered from the Avesta acid-regeneration plant in Sweden.

For example, in northern Finland, where frost resistance is a very important property of road foundations, the technical performance offered by slag-based materials is actually better than that of natural alternatives. Since the 1970s, all ferrochrome slag from Outokumpu operations in Finland has been sold for road construction purposes, typically some 300,000 tonnes annually.

In 2013, 271,000 tonnes of steel slag was used for construction projects: this equals some 90% of the total amount of slags. In 2013, all steel slag was CE-marked as aggregate products from the Tornio facility.

Steel slag transformed into by-products

In stainless steel making, slag is essential production material. It is also by far the biggest material side-stream from operations. Outokumpu has invested more than EUR 10 million in developing slag-based products during the last decade. On site we also have external contractors who have invested significant amounts to be able to process our slags according to Outokumpu’s quality requirements.

The resulting products are employed in construction projects and used for neutralization purposes in industrial applications. In road construction, for example, slag products can replace virgin materials such as crushed stone aggregate.

By products utilization is standard operating procedures at our melt shops

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Improving waste handling

Waste from Outokumpu production units is sent to appropriate treatment facilities or to landfill sites licensed to accept such materials. Both hazardous and non-hazardous wastes are involved, and pre-treatment of the waste material is completed whenever this is required. Hazardous and non-hazardous wastes are treated, reused or disposed of in accordance with current legislation and best practices.

Special local waste reduction program

At the Sheffield melt shop in the UK, a material efficiency program has been running now for six years. Over this period, two leading schemes have allowed the amounts of waste sent to landfill to be significantly reduced. The first of these uses processed slag as a replacement for virgin aggregate. In 2013, over 80% of the slag produced in the UK was used in road construction. When used in an asphalt mix, slag offers increased grip values, a decrease in rut formation, reduced occurrence of aquaplaning and improved resistance to abrasion. Secondly, waste volumes have been reduced by crushing refractory bricks no longer suitable for use in making steel to produce a substitute for lime. To further reduce the volume of waste sent to landfill, the Sheffield, UK operations have been working with Hanson to commission a dry material picking line to sort fine materials such as slag and refractories to increase metal recovery and divert recyclable materials away from landfill. This has allowed the UK facility to reduce the waste to landfill even more during 2012 and 2013. Compared to the situation in 2006, the total amount of waste sent to landfill in 2013 was down by two thirds. Development work is continuing, with the aim of eventually achieving the complete utilization of all by-products and waste materials produced by Outokumpu.

Improved waste utilization and less landfill waste requires knowledge

Investing in research projects

Almost all significant waste streams resulting from Outokumpu’s production processes are studied with the aim of reducing their environmental impact and eventually diverting all streams from landfill. Environment-related research projects during 2013 included:

- The treatment process of steel slag has been modified in Tomish and the metal yield was improved during 2013.
- The Wi-wood silt, FL Silt, is working on a process improvement in the picking shop to eliminate or reduce the need for sand blasting certain steel grades. This will create a cost savings and reduce the landfill burden.

Material flow in the Kemi-Tornio area

In the UK trials to dry and melt the filter press cake material from AVR acid neutralization in the SMACC EAF are ongoing.

- Steel slag as a raw material in concrete and for use in backfilling mine workings.
- Tests to evaluate fine steel slag as a material for neutralizing agent.
- Pelletizing slags and ashes into liming pellets for the forestry purpose.
- Developing a method of manufacturing briquettes in an electric-arc furnace to recover metals from internal waste streams.
- Use of shredded car tires in steel making. The project was conducted in 2013. Its aim was to investigate whether used tires can replace virgin reductants in electric arc furnaces.
- Closure of tailings sand ponds at the Kemi mine with innovative structures made from a variety of residues from a pulp and paper mill, a power plant and the ferrochrome plant. For example, a gas cleaning sludge pile. Pilot-scale structures were built in 2012 and the project is continuing.

Two major projects concerning the metal recovery of slag. For stainless steel the project is ready and the metal recovery rate of slag treatment process was increased significantly. For ferrochromium slag treatment the project is still on-going and it will continue in 2014.

Studies in German facilities to increase the recovery rate of nickel from waste water neutralization sludge. The aim of this project “RE-COA” is to improve the recovery rate of nickel out of neutralization sludge to 90%.
### Material balance

<table>
<thead>
<tr>
<th>Materials used, tonnes</th>
<th>2013</th>
<th>2012</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycled steel</td>
<td>2 111 093</td>
<td>2 328 984</td>
<td>2 099 568</td>
</tr>
<tr>
<td>Recovered metals</td>
<td>148 329</td>
<td>130 780</td>
<td>159 517</td>
</tr>
<tr>
<td>Ferrochrome</td>
<td>434 191</td>
<td>456 683</td>
<td>479 572</td>
</tr>
<tr>
<td>Nickel alloys</td>
<td>202 118</td>
<td>210 041</td>
<td>210 086</td>
</tr>
<tr>
<td>Other alloys</td>
<td>122 836</td>
<td>126 212</td>
<td>130 607</td>
</tr>
<tr>
<td><strong>Additives, tonnes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slag formers</td>
<td>384 028</td>
<td>376 967</td>
<td>400 177</td>
</tr>
<tr>
<td>Mill shop process gases</td>
<td>313 804</td>
<td>308 578</td>
<td>314 391</td>
</tr>
<tr>
<td>Pickling acids bought</td>
<td>37 703</td>
<td>31 249</td>
<td>33 884</td>
</tr>
<tr>
<td>Pollution prevention materials</td>
<td>46 107</td>
<td>45 363</td>
<td>44 930</td>
</tr>
<tr>
<td>Packaging materials used for final products</td>
<td>20 498</td>
<td>20 237</td>
<td>20 088</td>
</tr>
</tbody>
</table>

### Energy efficiency

The steel industry is energy intensive and Outokumpu's site-making and rolling processes are no exception. Achieving the highest possible level of energy efficiency is very important for the Group.

Outokumpu's aim is to minimize total energy usage and the related environmental impact. Even though significant amounts of energy are used in its production, stainless steel is an enabler for more energy-efficient solutions that save energy during the use phase. Steel grades whose production consumes more energy than others can sometimes be the most efficient solution when viewed from a life-cycle perspective. Improvements in energy efficiency are, in many cases, based on the use of stainless steel. In the energy industry, in transportation, and in building and architecture, the use of stainless steel is essential as its energy efficiency offers a way of satisfying new stricter standards and achieving society's targets. Some biofuel applications which require specific levels of corrosion resistance, for example, would not be possible in practice without the use of stainless steel.

Outokumpu manufacturing sites use a range of fuels including direct energy sources such as natural gas, propane, heavy fuel oil and electricity. Energy use by the Group totaled 29 million GJ (8.1 million megawatt hours) in 2013 of which electricity consumption totaled 16.9 million GJ (4.7 million megawatt hours). Total energy consumption increased by 8%, compared to the previous year of the combined entities of old Outokumpu and Inoxum, due to the ferromanganese expansion. Total annual energy consumption by Outokumpu is approximately equal to the amount of energy consumed by 245,000 Scandinavian households. The electricity consumption compares to about 35% of the annual output of a modern 1,600 MW nuclear power plant.

#### Energy used 2013

<table>
<thead>
<tr>
<th>GWh</th>
<th>Electricity</th>
<th>Fuel energy</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMEA</td>
<td>3,457</td>
<td>2,084</td>
<td>5,541</td>
</tr>
<tr>
<td>Specialty Stainless</td>
<td>664</td>
<td>659</td>
<td>1,323</td>
</tr>
<tr>
<td>Americas</td>
<td>502</td>
<td>444</td>
<td>946</td>
</tr>
<tr>
<td>Other</td>
<td>92</td>
<td>229</td>
<td>321</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,718</strong></td>
<td><strong>3,418</strong></td>
<td><strong>8,136</strong></td>
</tr>
</tbody>
</table>

Origin of electricity 2013

- **Renewable sources**: 38%
- Nuclear: 34%
- Fossiles and turf: 28%

#### Sustainable power solutions

Outokumpu’s Energy function is responsible for the Group’s energy strategy and procurement of the electrical energy used in Outokumpu’s operations. The primary objective is to secure predictable, competitive and stable prices for the Group’s future power supply. Other important tasks carried out by the Energy function include the management and optimization of Outokumpu’s physical energy portfolio and energy procurement assets, participating in new low-carbon energy projects, promoting low-carbon fuel energy sources, and providing support for Outokumpu companies in their energy-related activities.

*Other Green House Gas are not relevant to Outokumpu, typically below 100 t. CO2 eqv. annually. Environmental data and reporting for 2013 covers Outokumpu’s stainless steel, ferrochrome and mining operations in the continuing operations of the combined company of Outokumpu and Inoxum. Unless otherwise stated, the environmental data for 2012 and 2011 has been restated to reflect Outokumpu’s continuing operations.*
Price of electricity

In 2013 the average system price of electricity in Nord Pool, the Nordic Power Exchange, was 38.1 euros per MWh. The strong hydrological situation and lower consumption kept power prices at low levels and the monthly average system price in July was the lowest monthly price since 2000. During the third quarter, the difference between the system price and the price in Finland was very large. Primarily because of the weak hydrological situation and colder weather, market prices in the first quarter were at high levels. During the year, the improved hydrological situation, reduced fuel use and EU prices and a mild autumn brought power prices to lower levels.

Outokumpu's power procurement is executed using a long-term procurement strategy, in which the Group's aim is to achieve predictable, competitive and stable prices for electricity. Outokumpu's electrical power portfolio is managed by engaging in trading activities in the Nordic power market, through bilateral long-term supply agreements with power utilities, and by making investments in low-carbon power-generation capacity.

Nordic daily spot prices 2013

<table>
<thead>
<tr>
<th>Date</th>
<th>Price (€/MWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1</td>
<td>50</td>
</tr>
<tr>
<td>2/1</td>
<td>55</td>
</tr>
<tr>
<td>3/1</td>
<td>60</td>
</tr>
<tr>
<td>4/1</td>
<td>65</td>
</tr>
<tr>
<td>5/1</td>
<td>70</td>
</tr>
<tr>
<td>6/1</td>
<td>75</td>
</tr>
<tr>
<td>7/1</td>
<td>80</td>
</tr>
<tr>
<td>8/1</td>
<td>85</td>
</tr>
<tr>
<td>9/1</td>
<td>90</td>
</tr>
<tr>
<td>10/1</td>
<td>95</td>
</tr>
<tr>
<td>11/1</td>
<td>100</td>
</tr>
<tr>
<td>12/1</td>
<td>105</td>
</tr>
</tbody>
</table>

Energy sources in 2013

Outokumpu participates in low-carbon electricity production

Outokumpu's aim is to have access to additional low-carbon power production sources in the future. To achieve this, the Group participates in new power project opportunities and by entering into agreements with parties in the power market. By participating in new power plant projects, Outokumpu can also promote competition in Nordic power markets and contribute to adequate power production capacity being constructed in the future.

Nuclear power

Outokumpu has a minor 0.3% share in the Olikko 3 nuclear power plant project by Teollisuusvoima Oyj (TVO). Construction of the power plant in Finland is currently ongoing. In addition, Outokumpu has a minor 0.7% share in the TVO's Olikkooto 4 project. Outokumpu has a 12.5% share in the Fennovesi nuclear project. In 2013, Fennovesi selected Rosatom Overseas CJSC as a power plant supplier. According to the plans, infrastructure work at the site begins in 2015 and is expected to last approximately two to three years. The construction of the plant would begin after the infrastructure work and the power plant would start commercial operations in 2024.

Hydropower

Since 2005, Outokumpu has had a 104 MW share of Norwegian hydropower capacity in Rana, Norway through a long-term leasing agreement which is valid until 2020. In 2013, Outokumpu's consumption of electricity from renewable hydropower sources totaled approximately 440 GWh.

Wind power

Outokumpu is a minority shareholder in Rajakkilä Oy, a wind power company. Rajakkilä installed eight offshore wind turbines with a total capacity of 28.8 MW in Tomio in 2010, and commercial production of electricity started at the end of that year. The technical availability of the wind turbines has been excellent during their first years of operation. In 2013, Rajakkilä continued a feasibility study including safety inspections and applications for permits to expand the current wind power facility by 4-5 new turbines located close to the ones already operating in Tomio. The related investment decision will be made in 2014 after the feasibility and permitting processes have been carried out. Rajakkilä also has plans for an offshore wind farm and some potential new onshore sites suitable for new wind power installations.

Combined Heat and Power

Outokumpu has a minority stake in a Combined Heat and Power (CHP) plant in Tomio. This plant delivers heat to the production facilities in Tomio, and a proportion of the fuel used is carbon monoxide gas created as a by-product of the ferrochrome production process. The CHP plant has also acquired a local heating business in Tornio. This acquisition will contribute to adequate power production capacity being constructed in the Nordic power market, through bilateral long-term supply agreements with power utilities, and by making investments in low-carbon power-generation capacity.

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Tornio Manga LNG project

Outokumpu and Ruukki Metals Oy, the energy company EPV Energy Ltd and the gas company Gasum Oy agreed on a project to utilize liquefied natural gas (LNG) in industrial processes, energy production and shipping. The project development company Manga LNG Oy was established in late 2013 to prepare the contracts needed for the construction of an LNG terminal, gas procurement and logistics. LNG can replace fossil fuels in industrial use and energy production and substantially reduces particle, NOx, SOx and CO2 emissions compared to current levels.

According to the plan, reception, unloading and bunkering facilities, an LNG vaporising facility and one 50 000 m3 storage tank will be constructed at the terminal, located in the harbor area in Outokumpu’s industrial site in Röyttä, Tomio. For gas deliveries, a pipeline will be built to the Röyttä industrial site. In addition, a truck loading facility for LNG trucks will be built. From the Tomio terminal, the LNG will be delivered by trucks or railroad to customer terminals and consumption destinations in Northern Finland and Sweden. The investment decision will be made during 2014. The building phase of the terminal is 2014–2017, and LNG deliveries will commence by 2018.

The local water is used as own renewable energy source in Dahlerbrück, Germany. Outokumpu Dahlerbrück site owns a small hydroelectric power plant which was built in 1900 and is protected due to its cultural historical value. It has two turbines with a capacity of 200 kW and 110 kW. The power generation is dependent on the water level of the River Volme. The site gets 10% of its electricity from the plant. The power plant was renewed three years ago.

Voluntary energy efficiency agreements

Outokumpu has participated in voluntary national energy efficiency agreements in Finland, Sweden and the UK for many years. The Tornio site joined the Finnish program at the beginning of the 1990s. Energy savings in electricity, heat and fuel achieved during 2013 totaled 1,299 GWh. To ensure that systematic improvements in energy efficiency continue to be achieved, Outokumpu sites in Finland signed new energy-efficiency agreements in December 2007 covering the 2008–2016 period. For example, the Group’s Tornio operations decided in 2011 to align their internal targets and action programs in an agreement aimed at achieving annual savings of 150 GWh by 2016.

In Sweden, Outokumpu is also participating in the second round of the PFE (Programmet för energieffektivisering i energi intensiv industri) agreement from 2009 to 2014. The target in this second period is to achieve annual savings in electricity consumption of 11 GWh. In the first round, which ended in the summer of 2009, annual savings of 8 GWh were achieved. In connection with energy issues, Outokumpu usually works closely with national organizations – with Motiva in Finland and Jernkontoret forum in Sweden. At Outokumpu Germany sites certification for the ISO 50 001 energy efficiency management system has been carried out during 2012. In relation to this voluntary certification all these sites now have routines for annual energy efficiency work, including monitoring progress, implementing and identifying improvement possibilities.
In the past ten years, Outokumpu has reduced significantly the Group's direct carbon dioxide emissions per tonne of stainless steel pro-
duced. Outokumpu targets to further reduce the Group's specific carbon emission profile in stainless steel production by 2020, as announced in the Group's energy and low-carbon program in 2010. When assessing and measuring the Group's carbon profile, we utilize a method of calculation which focuses on factors that Outokumpu can manage and control. The targets set in Outokumpu's energy and low-carbon program high-
light not only specific reductions but also the Group's production ef-
ciciency, as emissions are calculated per tonne of stainless steel pro-
duced. These targets connect our materials and energy efficiency and supply chain management to the Group's business targets. The figure for monitoring progress is a three-year moving average that is compared to baseline figures from the 2007–2009 period. The targets of the en-
ergy and low-carbon program represent optimal Group-wide environmen-
tal objectives for both Outokumpu and combating climate change. They also support the Group's strategic goals and their achievement is sup-
ported by different energy and quality programs. As the targets are both quantitative and a clear demonstration of our long-term commitment in this area, they encourage continuous improvement.

In terms of current capacity and production after the Inoxum acquisition, the annual reduction in CO₂ emissions being targeted is approximately 0.5 to 0.6 million tonnes in 2010. This corresponds to a reduction of 3,000,000 tonnes by 2020, a total reduction of 3,000,000 tonnes over the 2010–2020 program period. During 2013, Outokumpu recalculated target baseline and emission reductions for the new combined group. Combining with Inoxum makes our long-term climate target very challeng-
ing; nevertheless we are committed to achieving the overall reductions.

Outokumpu’s main production operations in terms of energy consump-
tion and carbon emissions are located in Europe. More than 80% of the Group’s direct emissions fall under the CO₂ Cap and Trade System. The European Union Emissions Trading Scheme (EU ETS) places a direct fi-
cancial cost on production emissions and the indirect costs of emis-
sions trading are reflected through higher electricity prices. Indirect extra electricity costs for Outokumpu were during the previous EU Emis-
sion Trading period 2005–2006 some EUR 45 million per annum. These two elements raise Outokumpu’s marginal production costs in relation to competitors. To compensate for its emissions trading activities Outokumpu emphasizes the need for global regulation in efforts to transfer to low-carbon forms of society. EU Com-
mission's decision to “set-a-side” and postpone auctioning of emission allowances for the 2013–2020 period would increase these costs further. EU climate change policy and electricity intensive industry.

Major emissions of greenhouse gases by Group operations are twofold: direct releases of CO₂ from the company’s sites as a result of combusting fossil fuels and process-related emissions from Outokumpu’s steelmak-
ing operations. Outokumpu’s CO₂ emissions in 2013 totaled 3,274,510 tonnes. To compensate for its carbon emissions trading activities fully comply with the relevant EU laws and regulations, with agreed procedures and with the Group’s trading and risk policies. Carbon dioxide emissions under the EU ETS continued to be at lower than normal levels in 2013 due to reduced levels of production, which totaled approximately 1,500,000 tonnes.

The following Inoxum acquisition, Outokumpu had in total seven active sites (Inoxum and VDM business units) operating under ETS from the beginning of 2013. These Outokumpu sites remain in the sys-

The EU Emissions Trading Scheme 2013–2020 and after

The EU Emissions Trading Scheme (ETS) continued with the current trading period being 2013–2020 according to the decision made by the 2700 tonne European Commission in December 2008. From this third emissions trading period, 2013–2020, the ETS will become a target baseline and emission reductions for the new combined group. As emissions allowances allocated at no cost will gradually be reduced, auctions will become the main method for obtaining such allowances. Outokumpu’s operations under ETS will continue to receive free emissions allocations according to efficiency-based benchmarks and historical activity.

As emissions are correlated with production activity and capacity utili-

The European Commission plans to set a framework for the trading period stretching over 2020–2030 already during 2014. Direct and in-
direct costs of emissions trading have become an important factor in the competitiveness of European steel manufacturing. According to a recent study from the European Steel Association (EUROFER), “A Steel Roadmap for Europe 2050”, the estimated achievable redu-
duction potential in general is 10–20% for the European steel industry. This roadmap also concludes that steel is an answer for the climate change challenge not part of the problem. This is especially true for stainless steel. By using stainless steel, the life cycle of final product can be made very efficient and steel’s 100% recyclability reduces the climate burden further during its operational life cycle.

Outokumpu views the possible consequences of climate change as a ma-

The climate change risks

The risk of climate change induced by human activity and its possible consequences has attracted increasing attention within Outokumpu in recent years. Outokumpu has established a long-term program, implement-
ing serious actions as our response. The issue is a regular item in the Group's long-term strategic planning.

Climate change risks

The greatest uncertainty for Outokumpu in connection with emissions related regulatory measures stems from the EU Emissions Trading Scheme (EU ETS) and related consequences affecting Outokumpu’s business. In recent times, the proportion of free emissions allocations at no cost to the Group has declined as a result of decreasing free allocations available for each company. The proportion of free emissions allowances allocated at no cost will gradually be reduced, auctions will become the main method for obtaining such allowances. Extra electricity costs for Outokumpu were during the previous EU Emission Trading period, the EU ETS will become a more re-
sponsive system in the third emissions trading period (2013–2020). Both the cap on total annual emissions in Europe and the quantity of emissions allowances allocated at no cost will gradually be reduced and auctions will become the main method for obtaining such allowanc-
es. To compensate for emissions resulting from business air travel in

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leakage is high. Outokumpu sites will continue to receive free emissions allowances during the 2013–2020 period, with the amount being based on historical activity levels and efficiency-based benchmarks. An example of realized regulatory risk are the two 2013 decisions by EU, the so-called “backloading” decision and the “connection factor” decision. Backloading alters the allocation and auctioning time- frames and reduces the amount of allowances supplied to the markets. The cross-sectional connection factor cuts the amounts of emissions al- lowances allocated to operators for free and increases costs of compli- ance.

All the Group sites affected submitted applications in the course of 2013 and fully comply with authority requirements. The delays in agree- ing system definitions, international negotiations which remain un- solved and the clear risk of both extensive bureaucracy and emissions- related regulations continue to foster increased levels of uncertainty in carbon markets. Also, proposed alterations to the ETS system, such as interfering with the auctioning timetabled and agreed total emission gap, decrease the usefulness of emission markets. In the future, emissions reduction targets (e.g. the EU Climate and En- ergy package) will become more stringent and Outokumpu continues preparations for conducting the Group’s operations in a more restrictive environment in this connection. To manage related risks and prepare for expected developments connected with emissions trading, Outokumpu has an internal Emission Trading Network, which includes representa- tives from all Outokumpu operations affected by the system. The re- sponsibilities of this network include providing assistance in defining Outokumpu’s emissions management strategy and ensuring its imple- mentation.

Cost-related risks

From a Group perspective, identifying and controlling the cost of compli- ance with emissions allowance schemes is crucial. Both forecast and realized emissions allowances granted are controlled by Outokumpu on a regular basis. The Group has also taken action to re- duce the costs associated with emissions regulation by en- tering into financial arrangements such as swapping EU emissions allow- ances for Certified Emissions Reductions (CERs) and investing in carbon funds. During 2013 cost related risks were managed through utilizing CERs and emissions reduction units (ERUs) for compliance instead of Eu- ropean emissions allowances (EUAs).

As production of both stainless steel and ferrochrome is energy-inten- sive and the cross sectoral correction factor cuts the amounts of emission allowances allocated to operators for free and increases costs of compli- ance, extreme weather conditions associated with the effects of climate change could have an indirect impact on Outokumpu’s business and op- erations. Physical risks due to changes in the climate system and weather- related patterns can cause damage to property or the loss of production as a consequence of flooding, tornados or hurricanes may be exacerbated in the future. Normal measures designed to mitigate operational risk relat- ed to climate change have however already been incorporated into the Group’s risk management and related policies. Currently, Outokumpu’s production facilities, a tube mill in Florida, and melt shop and cold rolling mill in Alabama are located in areas, which are defined as “regional hotspots”. These sites are moderately exposed to severe weather and high winds either from the hurricane potential or the effects of regular severe thunderstorms and tornadoes common to this geographical area. The Group has general instructions and tools for implementing plans to ensure business continuity is also an active part of risk management. Extreme weather conditions Mexico is also highly exposed to landslides, predominantly triggered by excessive rainfall. Theoretically, San Luis Pe- tos is also exposed to landslides, although to a lesser extent.

Weather-related risks

Extreme weather conditions associated with the effects of climate change could have an indirect impact on Outokumpu’s business and op- erations. Physical risks due to changes in the climate system and weather- related patterns can cause damage to property or the loss of production as a consequence of flooding, tornados or hurricanes may be exacerbated in the future. Normal measures designed to mitigate operational risk relat- ed to climate change have however already been incorporated into the Group’s risk management and related policies. Currently, Outokumpu’s production facilities, a tube mill in Florida, and melt shop and cold rolling mill in Alabama are located in areas, which are defined as “regional hotspots”. These sites are moderately exposed to severe weather and high winds either from the hurricane potential or the effects of regular severe thunderstorms and tornadoes common to this geographical area. The Group has general instructions and tools for implementing plans to ensure business continuity is also an active part of risk management. Extreme weather conditions Mexico is also highly exposed to landslides, predominantly triggered by excessive rainfall. Theoretically, San Luis Pe- tos is also exposed to landslides, although to a lesser extent.

New opportunities

Even though the unpredictable consequences of climate change may be associated with significant future challenges, new business opportuni- ties for Outokumpu may also result. The sustainable nature of stainless steel assists both the Group’s customers and society at large in con- structing low-carbon solutions. Stainless steel’s remarkable physical properties make a significant contribution to achieving improved levels of efficiency in the transportation, energy, construction and manufactur- ing sectors, as well as in the household goods segment. Products manu- factured by Outokumpu are also important in tackling global challenges such as the need for clean water supplies.

Carbon funds

In order to decrease the cost of compliance to ETS, Outokumpu has also invested in the Testing Ground Facility (TFG), a Nordic carbon fund man- aged by the Nordic ETS Environment Finance Corporation. States and com- panies can invest in the carbon fund, which purchases emission reduc- tion units for its investors from projects that benefit the environment. The fund closed its operations during 2013 according to the original plan, Outokumpu still expects to receive some ERUs, which Outokum- pu use for compliance instead of EUAs. In 2013, Outokumpu received 12 000 tonnes of emission reduction units from TFG (2012: 13 000 tonnes excluding former Inox seamless). The TFG emission reduction units received are to be used to cover the actual carbon dioxide emissions in 2013.

One of Outokumpu’s operating principles is to use best available tech- niques (BAT) to reduce emissions and minimize harmful environmental impacts. Emissions savings result from the Group’s operations, Outokumpu means the best available pollution prevention technology from both technical and economic perspectives.

Employing BAT solutions means that the latest technology will be used to keep emissions from Outokumpu’s operations at the lowest achiev- able level. Outokumpu continuously develops Group processes and pol- lution-prevention techniques to maintain high levels of emissions control and to reduce costs in the process. This includes the use of existing expe- rience of updating the reference documents (BREF) which specify related technologies, helping to set the high standards applicable within the Eu- ropean Union.

Outokumpu in a rigorous manner administers the clean production model, which means that environmental impacts are minimized at all stages of the production process, and aims to minimize the environmental impact of Outokumpu’s sites. Outokumpu has an internal Emission Trading Network, which includes representa- tives from all Outokumpu operations affected by the system. The re- sponsibilities of this network include providing assistance in defining Outokumpu’s emissions management strategy and ensuring its imple- mentation.

Outokumpu has a comprehensive strategy for reducing emissions, which is further developed and refined on an ongoing basis. The Group has an in-depth knowledge of the production processes and has a clear understanding of how to identify and reduce emissions. The Group has a rigorous system for monitoring and verifying emissions data, as well as for regularly reviewing and updating its environmental management systems.

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At Tornio, more than EUR 60 million was invested in environmental appli-
cations during construction of the new ferrochrome sintering and melt-
ing line that was ramped up during 2013. Most of these investments were
made to prevent emissions into the air, but steps were also taken to
reduce emissions into water. The largest individual investments were
dust-filtering units, gas scrubbers and a new unit for handling process
water. The year 2013 showed that these investments were also effi-
cient; the emissions from the new sintering and ferrochrome plant
were lower than what was expected.

In Degerfors, Sweden, during 2013 investments in a new oxygen gas
plant, new water treatment plant (EUR 6.5 million) for new batch furnac-
es (EUR 11.3 million) and upgrading of a walking hearth furnace (EUR 1.5
million) will decrease local emissions and discharges. The Avesta
Steelworks plant in Sweden started a project with a consultant to optimize the pro-
duction and energy use during hot rolling which will also have an impact on
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duction and energy use during hot rolling which will also have impact on

The Kemi chrome mine is the only mine of its type located within the
European Union. The ore bodies are very stable and chem-
cals are not used in the beneficiation process, mining operations have
only a minor effect on local water quality. Metal discharges from min-
ing activities are small, and their effect is only observable as slight
ly elevated concentrations of nitrogen, solids, calcium and iron in water-
courses. The largest emissions into the air result from the transporta-
ion of ore and waste rock, from operations in the product loading area
and from piles of concentrates. All mining operations are now carried out
underground after a shift from open-pit to underground operation was
completed during 2005. Even though dust emissions into the air have
decreased there are still significant environmental impact associated with the
air emissions.

In May, there was very heavy flooding in the streams nearby the mine,
causing a rise in water-levels in measuring wells. One monitoring station
at the well was submerged and destroyed. Even though there was lot of
water coming into the mine area and tailing ponds during a short time,
no other difficulties were faced.

At Tornio in Finland, more than EUR 60 million was invested in environ-
mental applications and the beneficiation and clarification basins all have long-
term effects on the landscape. Tailing basins are landscaped when
they are full. Baren rock is used in backfilling underground workings. As
the concentration processes at the mine employed are based on gravim-
etric separation, only water and small amounts of floatable are used.
Of the total amount of water used 95% was recycled rainwater. Noise
generated by blasting operations is almost inaudible, even within the
mine area. According to environmental impact assessments carried out,
the only significant noise-related effects result from the increased levels of
road traffic involved in transporting concentrate from the mine to the
Tornio ferrochrome plant. These effects have been further mitigated by
a new road close to Tornio plant that was taken into use in 2010, mini-
mit of road traffic in the area.

In Tornio, the latest local ambient air quality study (diffuse emissions,
PMS1) results showed that European air quality guideline or limit val-
ues were not exceeded. The emissions concentrations measured were
well below guideline and limit values. In conclusion, the Finnish Meteo-
ological Institute stated that “the air quality in Tornio today is essen-
tially the same to any other small or medium-size town in Finland”. During 2013 these
measurements have been continued at two measurement points, one
located in Sweden and the other in Finland. Both measurement points
are about five kilometers away from the mill. The results (which are in
full view of everyone via the Internet) have so far been very similar to the
previous ones. Air quality in the area is generally at a good level and the
effect of Outokumpu’s dust emission is hardly visible.

Energy efficiency goes hand in hand with air emission reductions
At Avesta, actions to optimize operation of the main walking beam fac-
rine at the hot rolling mill have increased thermal efficiency by approxi-
mately 30%. The recovery of heat from furnaces exhaust gases at the
production sites in Tornio and Avesta also reduces Outokumpu’s total energy
consumption, and emissions of nitrogen oxides, CO2, and sulphur
dioxide are correspondingly lower as the amounts of fuel required to
generate heat are reduced. Successful implementation of a variety of energy
reduction measures means that the Group has largely met its energy
energy efficiency has also reduced the Group’s specific CO₂ emissions.

In Dillenburg, Germany, the two energy efficiency projects completed in
2013 (RTI, hall and air compression) will create 4 200 MWh
natural gas and 390 MWh of electricity savings per year plus, of course,
emission savings. Similarly, as part of internal saving projects at SKS in
Shanghai, China, there are several energy saving projects ongoing. The
new water crystallizer investment at Mexinox in San Luis Potosí, Mexico,
will also decrease energy consumption to a level of CO₂ emissions even
by 95%. In total, a spending of EUR 6.5 million on energy improvement
measures in 2006–2013 at the SMACC melt shop in Sheffield, UK, has
resulted in energy savings of 6% in specific energy.

Outokumpu Sustainability Report 2013
Outokumpu Sustainability Report 2013

Waste water
At our waste water is treated before discharge, either at our own facili-
ties or by the local municipality. In Calvert, AL, US, the investments
to clean and recycle water and to reduce the waste water load totaled
EUR 0.3 million. This consists of water treatment and acid regeneration
plants and storm water drainage. The acid regeneration plant (ARP) is
Based on Pymor technology and used to reclaim the waste nitric acid
and hydrochloric acid for re-use.
During 2013, NOx emissions were reduced by over 24% (100.7 tonnes to 75.6 tonnes) by de-nitrification instead of having our own treatment plant. This is why the cold rolling plant decided to finance the expansion of the municipal wastewater treatment plant (EUR 1.5 million) at the end of 2013. Investment contracts with the community will be finalized in 2014.

At Tornio, Finland, a large sedimentation pool for wastewater has also been taken into use. This arrangement allows almost all suspended solids to be filtered out and reduces metal loadings drastically. During 2013, test fishing campaigns have been done in Tornio (in the post-sedimentation pool) and in the Kemi river tailing ponds. In both, there are healthy and numerous fish populations (pikes, perches and other typical lake fishes). The chemical analysis revealed that there is no metal accumulation in the fishes, they are healthy and breed normally.

During construction of the new ferrochrome sintering and melting plant in Tornio, the wastewater handling system was renovated and the circulation of process water is now almost totally closed. Water is circulated through cooling towers and solid material is separated in settling ponds. The Mexinox cold rolling unit uses water well below the permit limits and recycles almost all the water for production processes. Process wastewater is treated and recycled, neutralization, clarification, filtration, reverse osmosis, evaporation and crystallization. Sanitary wastewater receives flotation and disinfection treatment. Oily water is treated in a ultrafiltration process and recycled. The amount of wastewater sent to the municipal sewer outlet is only 500 m³ but the total use of water is 30 000 m³ per month. So almost all water is already recycled at the site (the recycling rate is some 98%). Some of the remaining, treated and neutralized wastewater is conducted for irrigation of local vegetation, plants and trees.

Water recycling at Mexinox in San Luis Potosí is very efficient and the use of fresh water was under the company’s own internal target for the whole year 2013, and much lower than the permit limit. To improve water recycling further an expansion of the crystallization process of the wastewater treatment plant was started. The aim is to recycle more water, to replace two old units with new electrical evaporation unit, including to improve energy efficiency and decrease CO₂ emissions by 95% from that plant.

The efficient recycling of water was a principle in planning the new CVA facility in Alabama, US. The water system there uses closed-loop recirculation for cooling processes. The site reuses the industrial waters for a minimum of three cycles of concentration in systems for maximum efficiency, and of course less water usage.

In the Bochum melt shop in Germany, drinking water is used for all process purposes because natural ground or surface water is not available in the area due to large-scale underground coal mines. Due to costs in the melt shop, there is a totally closed loop in water use.

### Water withdrawal and discharges

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### Metal discharges to water

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### Annual water consumption in Tornio

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Biodiversity

Natural surroundings at stainless steel production sites remain unharmed. The production of stainless steel does not employ or reserve large areas of land, or have a significant effect on biodiversity in the surrounding natural areas. Outokumpu production facilities are not located in sensitive areas such as Unesco World Heritage sites, Ramsar sites or Unesco Biosphere reserves. During recent decades, Group sites have not been found to disturb local biodiversity in any manner which is generally considered unacceptable.

Environmental impacts are regularly evaluated

None of the species included in the International Union for the Conservation of the Nature and Natural Resources (IUCN) Red List (a list which identifies and documents species most in need of conservation attention if global extinction rates are to be reduced) are known to be affected by Outokumpu’s activities. Although the Group does not have any significant operations in ecologically sensitive areas, impacts on biodiversity at Outokumpu production sites are evaluated on a regular basis as part of the Group’s environmental management processes.

Actions to protect the local biodiversity

At these sites in which valuable biodiversity or species are recognized, Outokumpu has also actively protected the nature, wildlife and animal species. For instance, a part of the Calvert production site in Alabama, USA, is defined as wetland and is home to quite a wide variety of wildlife. At the site it is possible to see deer, wild turkey, wild boar, fox squirrels, gopher tortoises and various snakes, even Alabama black bear. Since the gopher tortoise and Alabama black bear are threatened species here, the environmental team has worked with regulators on a voluntary basis to help trap and move gopher tortoises to safe locations and intermediate rock storage locations are being used in underground construction and for gallery-filling operations. Outokumpu’s use of one 22.5-hectare concentrating sand pond in production processes at the Kemi chrome mine ended in 2008. Drying out started in 2010 and landscaping and restoration operations will be carried out in accordance with the remediation plan. The company is currently investigating more ecologically efficient ways of capping and landscaping disused ponds with industrial by-products.

At the Tresky Park landfill site in Sheffield in the UK, approximately 50% of the site has been capped after the completion of waste-tipping operations in these locations. As part of Outokumpu’s commitment to future follow-up in this area, restoration work being carried out by the Group will add to natural levels of biodiversity. The plants being introduced are native species and operations being conducted include establishing areas, bush areas and wetland areas. The vegetation is designed to provide an environment in which invertebrates such as butterflies and bees can thrive. The decommissioning of Outokumpu’s production sites at Meadowhall and Stockbridge in the UK (closed in 2006) proceeded in accordance with plans agreed with the local authorities in 2011. No environmental issues have emerged in these locations.

Marine ecosystems are in good health

The main discharges into recipient water from stainless steel production are metals and nitrates. These are monitored according to national guidance at every production site. For instance, as Outokumpu’s Tomio site is located on the Tornionjoki river estuary on the coast of the Gulf of Bothnia and close to nature reserves, the Group’s manufacturing operations have, from the beginning, been developed to be environmentally sound. Many studies monitoring the biological, physical and chemical conditions which prevail near the Tomio site have been carried out since the 1970s. The latest research report concerning the impact of nitrates on recipient water at the Tomio site and the Kemi chrome mine showed that impacts are restricted to the immediate proximity of the discharge ports at Tomio and cause slight eutrophication. At the Kemi mine, the impacts on sea areas are essentially negligible.

Pollution prevention techniques being employed by Outokumpu mean that any increases in emissions can be avoided. Further reductions from earlier emissions levels will also be achieved in many cases, even at higher-than-current production levels. Annual studies carried out by Pöyry, a consulting company, have shown that impacts on sea areas close to the Group’s production plants have diminished over the last ten years and that associated marine ecosystems are in good health. The recent environmental and biotic fish population study published in 2013 confirmed the positive development. The new monitoring of bottom fauna, the levels of metal in Fishes and water quality showed that fish populations were healthy and the levels of metals (Zn, Ni and Zr) were very low and similar to the not-loaded reference area sea 30 km from the factory. Also from bottom fauna even very sensitive species were found in the vicinity of the factory. The quality of the sea water was good and metal concentrations were below the drinking water limits at all sampling points during the whole year. Annually some twenty five professional fishermen are working close to Tomio and catch around 50 tonnes of fish. The effluents from the Tomio site has not deteriorated the reproductive capacity of the fish either.

A number of studies, including the continuous monitoring of discharge levels, have shown that discharges of chromium and nickel are now 60–80% below the levels that prevailed ten years ago. Considered to be the most significant metals released into the sea by Outokumpu’s production activities at Tomio, current discharges of chromium and nickel only represent a fraction of the total metal loading, which originates in the main from natural sources in the northern part of the Gulf of Bothnia. The sustainability of the Outokumpu supply chain is important to the Group. We want to secure sustainable sourcing and manufacturing of our products and promote sustainability towards our suppliers. The aim is to further develop our ways of working related to the supply chain. We would like to ensure that our suppliers and subcontractors fully understand and are committed to the sustainability targets and goals set by the Group. We set a clear focus on the following areas: corporate responsibility, responsible business practices and good corporate governance are integrated into the materials used in commercial training, all the way from introductory courses to training courses designed to enhance contracting and procurement skills.

Supplier requirements renewed

An essential element in ensuring Outokumpu’s sustainability is regular evaluation of our suppliers’ sustainability policies, practices, and related performance. Internal common supplier requirements were renewed and further developed during June 2013. These requirements are in line with our policies and practices regarding sustainability, Implementation of these requirements is continued. During 2013, we evaluated the existing ways of working internally related to the supply chain processes of the former Inoxum units and plan how to improve the Group-wide requirements. To develop our performance, Outokumpu provides the Group person nel with training on sustainable responsible business practices and good corporate governance are integrated into the materials used in commercial training, all the way from introductory courses to training courses designed to enhance contracting and procurement skills.

Measures to improve the condition of the Baltic Sea continue

Outokumpu is participating in the Baltic Sea Challenge. Practical measures were taken at the Tomio site in the 2000s to continue to be employed and the Group will also take action in the future to improve the condition of the Baltic Sea. In 2010, permission was given to take into use a 70-hectare sedimentation pond before filling water into the sea. This pond is significantly reducing suspended solids and metals discharged into the sea. The quantities of nitrogen in wastewater released by Outokumpu are also estimated to be lower than previously. All Tomio sanitary waters will be conducted to the local municipality water cleaning unit in 2013 and this will decrease the load on the sea even more. All the measures detailed above will help in further reducing the Group’s environmental impact on the Baltic Sea.

For more information on the Baltic Sea Action program, please visit our Sustainability website.
The latest round of the Group’s sustainability evaluation of current suppliers was finalized in 2012. The frequency is planned to be tri-annual, the scope of the evaluation forms the basis of both development work and audit planning. Outokumpu monitors the performance of Group suppliers and subcontractors through auditing. Regular external audits carried out in accordance with local EMAS (Environmental Management and Audit Scheme) management systems used at Outokumpu’s operational sites were con- ducted during 2013 as planned. The process is also an important ele- ment in managing supply chain risks. Awareness of such issues is the only way to provide Outokumpu’s customers with accurate sustainability information, and to guarantee to end-users that the Group’s stainless steel products are produced in a responsible manner.

**Sustainability is a precondition for new suppliers**

In addition to evaluating and auditing our current suppliers and contrac- tors we have integrated sustainability issues in to the approval process for new suppliers. Sustainability requirements need to be acknowledged and signed up to by new suppliers, these issues are also part of Outo- kumpu’s internal qualitative supplier evaluation system.

As a leading producer of stainless steel Outokumpu makes public prod- uct statements such as a conflict minerals statement, a statement relat- ed to product safety and health, radiactivity and chemical safety state- ments, and environmental product declarations. All of these statements require the Group to have knowledge of its suppliers and supplies. Outokumpu ensures safety of our products

Outokumpu’s new ferrochrome plant came on stream during 2013. The expanded operations produce also significantly increased amount of carbon monoxide (CO) – gas which can be used as fuel. New gas pipe- lines, blowers and changes in and consumption units were taken into use during this year. The utilization of CO gas increased by some 50%, and improved the overall energy efficiency of the Tornio site, including on-site contractors. This is an excellent example of additional benefits only possible for integrated ferrochrome and stainless steel operations.

**Main recent environmental investments**

At Degefors, Sweden: Direct environmental investment to new water treatment plant (EUR 6.5 million). Environmental investments were part of larger production investment program together with investments sig- nificantly improving environmental performance – two heat treatment furnace replacements and upgrade of existing walking heat furnace – these investments are continuing in 2014.

At Avesta, Sweden: New regenerative burners at melt shop and converter furnaces (EUR 1.5 million).

At Calvert, AL US: at melt shop, cold rolling and site also the environ- mental investments related to establishing new production site were completed over the period of 2011–2013, and they amounted over to EUR 100 million. The most significant investments in this area were:

- Water treatment plant: USD 61 million
- Acid regeneration plant USD 22 million
- EAF dust filter baghouse USD 22 million
- AOD dust filter baghouse USD 21 million
- AOD material handling dust filter baghouse USD 8 million
- Other dust filter baghouses USD 8 million

**Environmental investments and expenditures**

Costs for environment-related activities within Outokumpu totaled EUR 106 million in 2013, of which costs associated with operational environ- mental management totaled EUR 101 million. Operational costs include process-related treatment, disposal and remediation costs for waste and emissions into air and water.

Provisions and guarantees in connection with environmental consider- ations totaled EUR 0.3 million, including fines, and additional provi- sions for the aftercare of former mining sites totaled EUR 1 million. En- vironmental investments by Outokumpu in 2013 totaled approximately EUR 25 million, a clear indication of the Group’s commitment to achiev- ing continual improvements in sustainability despite the challenging business environment.

Investments to improve energy efficiency

Outokumpu’s new ferrochrome plant came on stream during 2013. The expanded operations produce also significantly increased amount of carbon monoxide (CO) – gas which can be used as fuel. New gas pipe- lines, blowers and changes in and consumption units were taken into use during this year. The utilization of CO gas increased by some 50%, and improved the overall energy efficiency of the Tornio site, including on-site contractors. This is an excellent example of additional benefits only possible for integrated ferrochrome and stainless steel operations.

**Process development**

Outokumpu has R&D teams dedicated to the development of our pro- duction processes and technologies. These process and technology development activities focus on reduction of the environmental im- pact, improvement of the cost efficiency of our production processes and on optimization of product quality. In 2013, the Group decided to launch several Core Technology. Competence working groups for intern- al improvement of production processes. Almost all of the areas these Groups work in will have positive effects on environmental matters and aspects. The work of these groups will start in 2014.

**Improved transportation efficiency reduces emissions**

Efforts continued to minimize the environmental burden resulting from activities in Outokumpu’s supply chain logistics and transportation. The emissions that result from product transportation are included in the Group’s carbon profile and integrated into Outokumpu’s long-term cli- mate-change-related targets.

Total CO₂ emissions resulting from product transportation in 2013 totaled 150 120 tonnes. The proportion of products and deliveries transported by road, rail, and sea were 51%, 21%, and 28%, respectively. The total vol- ume of finished products transported in 2013 was 2.4 million tonnes.

**Transportation of Group products by mode in 2013**

<table>
<thead>
<tr>
<th>Mode</th>
<th>2013</th>
<th>2012</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>by road</td>
<td>51.4</td>
<td>49.6</td>
<td>50.7</td>
</tr>
<tr>
<td>by sea</td>
<td>28.0</td>
<td>32.4</td>
<td>26.4</td>
</tr>
<tr>
<td>by rail</td>
<td>20.6</td>
<td>26.2</td>
<td>23.8</td>
</tr>
</tbody>
</table>

Finished products, 1 000 tonnes 2 431 2 143 1 357

Finished products, 1 000 tonnes, numbers for 2012 and 2011 are Outokumpu stand alone numbers

Outokumpu is working hard to increase levels of efficiency in the Group’s transportation networks. Improved efficiency is an important factor in improving environmental performance.

An excellent example of the benefits resulting from increased efficiency is improved utilization of the vessel that travels between the production site in Tornio, Finland and the Outokumpu service and distribution cen- ter in Tornio, the Netherlands. By optimizing material movements, dispatching direct loads destined for European customers to Tornio by sea and then managing delivery to customers on arrival, utilization of this vessel has been significantly improved. The net effect is a saving of around 1 100 truckloads (approximately 27 500 tonnes) on an annual basis. During 2013, Tornio in particular increased the share of rail transportation, while Tornio further increased sea transport.

Another example illustrating Outokumpu’s strategy of transferring trans- portation from road to rail and/or sea freight is the switching of deliv- eries from road to rail. The EuroLink railway system that connects Group sites is Outokumpu’s primary internal, rail-ship-rail transportation solu- tion for production materials. A project to switch deliveries originating in Tornio and destined for the UK to the EuroLink system commenced in in Tornio and destined for the UK to the EuroLink system commenced in 2012 and the first full-year in 2012 the savings were around 400 truckloads (approximately 10 000 tonnes).

A big challenge for the company in 2013–2014 is to reorganize a part of logistics and transports according to new business plans and material flows. The leading principles in this work are efficiency and optimising, in- cluding environmentally sound transport methods whenever applicable.

At New Castle, RI, US, the spray picking line accompanied by new wet scrubber for emissions yielded great results. This small investment is now in full use and nitric acids were reduced by 8% and hydrochloric ac- ids by 91%. This achievement was also reported to and acknowledged by the US Environmental Protection Agency’s pollution-prevention pro- grams.

**Main recent environmental investments**

At Degerfors, Sweden: Direct environmental investment to new water treatment plant (EUR 6.5 million). Environmental investments were part of larger production investment program together with investments sig- nificantly improving environmental performance – two heat treatment furnace replacements and upgrade of existing walking heat furnace – these investments are continuing in 2014.

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- AOD material handling dust filter baghouse USD 8 million
- Other dust filter baghouses USD 8 million

At Dillenburg, Germany: Investment in new neutralization plant was tak- en in use in 2013 (EUR 2.5 million).

At Wildwood, FL, US: “Pickling project” started and will reduce pickling times, minimize the use of acids, and greatly reduce or eliminate the need to send blast. The aims include:

- reducing acid gas emissions up to 90% by reducing the surface inter- face of acid to air
- retaining heat by acting as a layer of insulation for up to a 75% im- provement in heat loss
- reducing evaporation of pickling liquor by up to 90%
- providing a cleaner and healthier work environment for the pickling crew.
2013 was characterized by extensive transformation agenda and integration work to combine the power of two stainless steel companies in a challenging market environment.

The transformation agenda included organizational restructuring, capacity optimization and revision of processes, and it required also many hard and difficult decisions. However, there was a strong and joint ambition to turn around the company and to create a true market leader in stainless steel.

In the first half of the year, a new and lean organizational structure was built up enabling synergy benefits and higher effectiveness for the business with our customers. In the second half of the year consideration was given to processes and activities Outokumpu will focus on – which will be taken care of globally and which locally.

The weak market situation continued throughout the year. Since the beginning of the year, Outokumpu pursued announced synergy savings very successfully, beating all targets. In April Outokumpu announced new cost savings programs and in October new industrial plan for its operations in Europe. All these programs are ongoing and will include altogether 3 500 job reductions by the year 2017. As a result of all the cost savings actions, 766 job reductions were implemented in 2013. At the end of the year the Group had 12 561 employees in the continuing operations.

In May, Outokumpu unveiled a powerful new vision (“a world that lasts forever”), mission and brand for the new company. Employees were provided with interactive e-learning program and possibility to contribute to the process.

During the integration planning in 2012, the Outokumpu Leadership Team defined four joint transformation principles for the new company: from volumes to profits, from production to customers, speed and working together. To accelerate integration and transformation, a 2.5 day strategy workshop was arranged for the top 170 leaders in the spring in 2013. With input from this workshop, the transformation principles were further developed and turned into everyday individual behaviors, so called Winning Behaviors. A process to increase employee engagement was started in October in form of local interactive workshops to make the Winning Behaviors visible in the daily work. The workshops will continue in 2014, and the Winning Behaviors will be part of the individual target setting in 2014.

As part of the integration work, Outokumpu put a lot of effort into internal communication and making the strategic targets and their progress transparent to employees. In Outokumpu, the most important communication channels are line management communications and intranet. To intensify communication across the organization and especially to people working in production tasks, Outokumpu launched an employee magazine in four languages.

The last shift in the Krefeld melt shop on December 6, 2013. A good solution was found to all employees: 200 transferred to ThyssenKrupp, 100 moved to new job within Outokumpu and some retired. The ramp down of the melt shop was done professionally and timely as planned, which is a true testimony to the professionalism and competence of the Krefeld team.
Focus on company turnaround

Please note that all personnel figures include Outokumpu personnel in the continuing operations. The figures do not therefore include Ter-ni remedy assets or VDM business of which Outokumpu announced the divestiture in November 2013, except for personnel by countries, which is counted including discontinuing operations.

In 2013 Outokumpu was operating in a challenging market and focusing on turning around the company to reach sustainable profitability. This meant difficult decisions from the employees’ point of view. In 2013 Outokumpu pursued previously announced synergy savings of EUR 200 million and announced a new cost savings program to cut annual costs by EUR 150 million (P150 program) during the year. At year-end, discussions were still continuing with the unions and employee representatives about the new industrial plan announced in October 2013. These savings will begin to show in 2014 after the negotiations have been completed.

Overall, Outokumpu’s number of employees increased from 2012 to 2013 from 7,249 to 12,561 (continuing operations). At the beginning of 2013, due to the Inoxum transaction 12,085 people joined the Group from the Inoxum side. During 2013, following the Terni remedy and VDM divestiture, in total 6,007 employees were excluded from the continuing operations. By the end of 2013, the number of employees in continuing operations decreased by 766 as a result of various cost savings measures.

The average turnover rate for permanent employees was 5.7% (2012: 8.0%, 2011: 5.5%), the hiring rate 3.4% and the leaving rate 7.9%. The voluntary leaving rate was 3.5% (2012: 3.1%). The number of people on fixed-term contracts was 563. In all restructuring work and layoffs Outokumpu complied with local legislations, collective bargaining agreements and other applicable regulations.

The share of blue-collar workers increased and was 65% (2012: 61%). The share of women decreased and was 14% (2012: 17%), and the share of men was 86% (2012: 83%). Due to the transaction, most of the Group’s employees are now located in Germany, where the company has several sites: of the employees, 32% work in Germany, 19% in Finland, 16% in Sweden, 9% in the US and 9% in Mexico.

Outokumpu’s permanent employees mostly work on a full-time basis and some 811 people work on a part-time basis, corresponding to 709 positions in full-time equivalents.

Personnel by years of service, permanent employees

Personnel by countries (including discontinuing operations)
Goals and results

Outokumpu set goals for 2013 before the Inoxum transaction was closed at the year-end. These goals were related to defining people strategy to support Outokumpu’s business in an optimal way, conducting a yearly employee engagement (O’People) survey and ensuring good implementation of the performance and development dialogue (PDD) process and further improving the PDD completion rate.

In the course of 2013, Outokumpu had to react and prioritize its initial people management objectives in order to support and sustain the required steps in integration and change.

Instead of a comprehensive employee engagement survey as initially planned, a number of more focused surveys on internal communications and integration basics were conducted to gain fast and direct feedback from our employees. Performance management remained as a focus area in leadership, with a clear priority on establishing performance dialogues across the newly formed organization.

Outokumpu’s existing performance and development dialogue (PDD) process is a key part of Performance Management and at the same time the right of every employee that will be followed in the business areas, while taking into consideration the local processes and employee relation agreements. The practice varies from unit to unit and country to country according to local legislation and practices.

Due to the integration between Outokumpu and Inoxum, Outokumpu does not have a uniform system for performance management or discussion, and therefore an overall completion rate for PDDs cannot be given.

Goals for 2014

For 2014, the overriding objective will be consequent implementation of ongoing restructuring measures and to move the company beyond restructuring and into business excellence. The focus areas for 2014 will be increased focus on job rotation, building up capabilities and looking into fundamental business processes to ensure customer satisfaction and internal efficiency.

Opportunities and risks

Outokumpu values employee commitment and motivation. Therefore, Outokumpu continued to place particular focus in communication in 2013: in the integration and managing change, clear and open communication is the key.

After publishing an integration newsletter in 2012, a decision was made during the year to publish a quarterly personnel magazine in German, Finnish, Swedish and English and to publish two other newsletters with more specific needs, one for managers and the other for Stainless Coil EMEA, the business area facing the biggest restructuring work. To mark important milestones and to ensure everybody is updated on targets and progress, CEO letters are issued to the employees and teleconferences arranged for the top 200 managers to enable them to inform their own teams. Communication channels include team meetings, the Group intranet, personnel meetings, teleconferences and videos, printed magazines and e-mail newsletters.

To further develop internal communications, Outokumpu conducted an internal communication survey in March and in December. The results in the spring showed that internal communications were working reasonably well but that development was needed in line managing communications, on communicating the strategy or the so-called big picture and on the usability of the Group intranet. The Group started quarterly business updates, with the aim of all managers taking the message to their own teams. The most important targets such as synergy savings, inventory levels and customer feedback are now regularly tracked on the intranet. Even though major development work was on hold due to cost savings, improvements in the usability of the intranet were undertaken based on feedback. The second survey in December showed some clear improvements compared to March 2013 survey results. For instance, the share of people who felt that the information they were receiving was relevant about what is going on in the Group increased in six months from 66% to 73% favorable. Employees also saw the intranet as being a clearly less important source of information than before.

Outokumpu’s Personnel Forum

Outokumpu’s Personnel Forum is a joint consultative body which provides a channel for transferring information between Outokumpu’s management and its employees. The personnel forum was first established some ten years ago in response to a European Works Council directive. In 2013, the OPF agreement was renegotiated to reflect the changes in the Group due to Inoxum integration. The role of the forum is to discuss issues of transnational interest, such as the economic and financial performance of the Outokumpu Group, future business prospects, product and market situations, broad strategy issues, investment decisions, the annual report, manpower and employment issues, business reorganizations and matters such as health, safety and the environment, technology and research and other matters where these have transnational impact or common interest.

The first personnel forum of the new company began its work after summer with 33 representatives from European operations and held its annual meeting in November in Krefeld, Germany. The personnel forum appoints a working committee which is responsible for ongoing cooperation between the management and employees. The committee has eight members of the personnel and three representatives of the management. During 2013, the committee had 5 meetings.

Outokumpu’s ethical principles build on the equal treatment of all people and zero tolerance for any kind of discrimination based on their ethnic origin, nationality, religion, political views, gender, sexual orientation or age. A transparent and unified resourcing process ensures equal opportunities. Outokumpu complies with international labor treaties and condemns the use of forced and child labor.

During the year, the Code of Conduct was updated to reflect the recent developments in the Group. A more thorough update is planned for 2014.

Outokumpu maintains a consistent policy of freedom of association. All employees of the Group’s operations are free to join trade unions in accordance with the rules and regulations that apply in the local labor market.

In 2013, some 83% of Outokumpu’s permanent employees were covered by collective agreements. There were 24 days lost to a strike (2012: 8, 2011: 14).

The overall percentage of women working in Outokumpu among its permanent workforce is 14% (2012: 17%; 2011: 18%). At the end of 2013, two of the seven members of the Outokumpu Board of Directors were women. Within the Group, 13 women hold key leadership positions, corresponding with the overall percentage of women in Outokumpu.

Outokumpu’s Sustainability Report 2013
Training and development

During 2013, Outokumpu continued to face a challenging financial situation and implemented synergy and cost savings programs. Therefore, the training programs were kept on a minimum level in 2013 and only business critical training and safety training were organized. In accordance with the decision, the Group's training costs decreased and were 0.4% of the total personnel costs (2012: 0.6%; 2011: 0.8%). The Group provided 2.5 training days per employee (2012: 1.5; 2011: 2.0).

While formal training programs were limited, integration work and the new organization provided a lot of development opportunities, job rotation and learning on the job for Outokumpu employees. Excellent examples of job rotation practices were the continued ramp-ups: the ferrochrome expansion project in Finland and the Calvert investment in Alabama, USA. Calvert faced some normal issues in the ramp up like quality and delivery reliability. Volunteers from Finland and Sweden were chosen at the end of 2013 for a job rotation in Calvert to share their expertise in stainless steel.

Because of the amount of integration work that was going on during the year, the Group also initiated two programs – first the “Power of Two” program for the top 170 managers during the first half of the year and during the final quarter of 2013 the Outokumpu Spirit workshops for as many employees as possible. The aim of the Power of Two program was to accelerate the integration and transformation of the two companies that both have 100 years of experience in the field of stainless steel, and utilize the best parts in both organizations. The participants of the Power of Two program gave valuable input in the work of developing the transformation principles – from volumes to profits, from production to customers, speed and working together – into concrete behaviors. These Winning Behaviors were finalized during the third quarter. Employees have been invited to local Outokumpu Spirit workshops to discuss how they can take these behaviors as a part of their everyday work and take action already today. The feedback from both programs has been positive and these initiatives are a major step in building the Outokumpu Spirit in the new company.

Compensation and benefits

Outokumpu's intention is to provide competitive base salary for all Group employees based on the scope of their role, individual performance and in line with local labor market and agreements. Typically, base salary levels also vary according to the stage each individual has reached in their career. At the national level, Outokumpu's aim is for base salaries to be at the market median.

Incentive schemes are used in addition to base salaries as an element in total individual compensation. Incentive payments totaled 4.9% of the Group's total personnel costs in 2013.

Read more on management remuneration in the Corporate Governance statement in the Annual Report, p. 117.

Performance management

Performance management is one of Outokumpu's key processes. Business success demands high-quality performance management processes at both individual and Group level. Outokumpu's target is that all its employees have a performance and development dialogue with their manager.

Performance and development dialogues (PDDs) support Outokumpu's strategy execution and reinforce a performance-driven mindset especially in the current situation where Outokumpu is turning the company around. The essence of the process is engaging and involving Outokumpu personnel in the Group's strategy implementation. In period. PDD discussions are held once a year with a recommended mid-year review. The practice varies from unit to unit and country to country according to local legislation and practices.

Due to the integration between Outokumpu and Inoxum, Outokumpu does not have a uniform system for performance management or discussion, and therefore an overall completion rate for PDDs cannot be given. However, Outokumpu's overall target stays the same: all Outokumpu employees have performance and development discussions with their manager once a year.

The work done by leaders is extremely important when the operating environment is challenging and Outokumpu's PDD process provides them with a useful and important tool. Outokumpu will continue to support leaders in this area through a stronger focus on achieving high-quality discussions that have a positive impact on both manager and employee – with a corresponding positive effect on Outokumpu's performance. Successful PDDs increase individual motivation, help improve employee's performance and are an effective way of supporting the Group's business activities.
Safe working environment

At Outokumpu, safety remains the number one priority. Outokumpu is committed to providing a safe and healthy working environment at its production sites and facilities for its own personnel, contractors and visitors.

Safety remains the number one priority

At Outokumpu, safety is the number one priority. The Group management continue to reinforce a message that safety comes before performance with key safety performance indicators visible throughout the company.

Outokumpu remains committed to providing a safe and healthy working environment at its production sites and facilities for its own personnel, contractors and visitors.

In the area of safety, Outokumpu had its best performance across a number of performance indicators. The former Inoxum units have adopted the Outokumpu Safety Management systems and reporting protocols on top of their well-established systems and processes.

The ultimate goal remains zero accidents and ambition levels have been set to make a step change improvement during 2014 and 2015.

Health and safety figures from 2013 continuing operations reflect the scope of Outokumpu operations as they were in 2013, including the VDM business and excluding the ring-fenced Terni operations. For the same reason, the comparison-year (2012) figures have not been adjusted, and they include Outokumpu stand-alone before the completion of the Inoxum acquisition. The injury figures include contractors and Outokumpu personnel.

The ultimate goal remains zero accidents and ambition levels have been set to make a step change improvement during 2014 and 2015.
Health

As a responsible company, Outokumpu initiated systematic health studies with world-class independent expert institutes in the 1980s. The main targets of these studies have been individual levels of exposure to chromium and other compounds in the stainless steel production chain and their long-term effects on respiratory health. Activities focus on improving working environments and employee health is monitored using a variety of occupational health checks and fitness tests. Occupational hygiene measurements are carried out on an ongoing basis at Group production sites to monitor work-related exposures to noise and impurities in the ambient air, as well as other factors. Issues related to working environments within Outokumpu are also studied through joint research projects carried out in collaboration with universities and specialist institutions.

In 2013, an average of 6,691 days per million hours worked by Outokumpu employees were lost as a result of sickness or injury (2012: 5,980). The number of cases of occupational disease diagnosed in the Group in 2012 was 11 (2012: 16). The number includes six suspected cases of occupational disease, which are still unconfirmed.

Safety

The safety focus has remained high despite the challenging business climate. This is a great testament to the Group and operational leadership, the safety practitioners and our employees.

Outokumpu remains committed to providing a safe and healthy working environment for all of its employees, contractors and visitors. The ambition is to continuously improve our safety practices to ensure that Outokumpu is an industry leader in safety.

Safety performance

In 2013, the total injury frequency for the new company was 34.6 (2012: 37.8). The Group LTI rate (lost time injuries per million working hours) improved to 4.5 and was in line with targets (7.2 for 2012). The number of severe accidents remained at a low level with many injuries being of a minor nature resulting in a fewer number of days absence.

There were no fatal accidents in 2013; however, clear attention on the severe accidents provided a clear reminder of the importance of a continuous safety focus.

The number of non lost time injuries was 908 (2012: 512).

The follow-up of proactive safety indicators continued to be a main focus for Outokumpu’s operational management. The proactive development continued in 2013 and training for these processes was rolled out to the former Inoxum units and will be more evident in 2014. The number of hazards spotted and closed was 16,582 (2012: 17,326) and the number of safety behavioral observations also increased to 20,011 (2012: 11,533).

A number of plants maintained zero lost time injuries during 2013 and have maintained this for multiple years. These sites are across the production steps, providing evidence of best practice and sharing opportunities.

Road map for future development

Outokumpu’s safety strategy follows our existing safety principles and is built on the three themes of having visible safety leadership, employee ownership of safety and sound safety systems and processes. Work across these three areas will continue in 2014.
Outokumpu operates in a competitive industry where demand and supply meet on global markets. On the other hand, our production units are often located in relatively small cities or towns. This means that Outokumpu is significant to the small local community’s economy, and often one of very few private sector employers in the area. Finding balance between global market trends and responsibility towards communities is sometimes difficult, especially in economic downturns. Decisions have a major impact on communities, Outokumpu personnel and their families and local goods suppliers and service providers as well.

Events tailored to creating open and active participation, such as a variety of “open house” events on production sites, are clear signals for local communities that we want to be part of local communities and to encourage an open Outokumpu culture.

Outokumpu makes donations to various charitable enterprises and events in line with its ethics. The Group may sponsor research and environmental programs, sporting activities, culture and a variety of events at local level, as well as charity work. We also offer scholarships to students. Organizations that arrange activities for children are supported.

Outokumpu supports research and development related to its field of industry and maintains close cooperation with educational institutes in the training of engineers, miners and supervisors. Apprenticeships have been offered to local colleges and student placements have been made available in the form of one-year programs, and schoolchildren and local students have been introduced to the Group’s operations.

Outokumpu does not take part in or otherwise support political activities whether they are local or national. Outokumpu does not make donations to any political parties or groups.

Value added distributed to Outokumpu’s stakeholders*

<table>
<thead>
<tr>
<th>Generation of value added</th>
<th>Distribution of value added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers</td>
<td>Employees</td>
</tr>
<tr>
<td>Sales</td>
<td>Wages and salaries</td>
</tr>
<tr>
<td>6 745 € million</td>
<td>711 € million</td>
</tr>
<tr>
<td>Suppliers</td>
<td>Public sector</td>
</tr>
<tr>
<td>Cost of goods and services</td>
<td>Taxes and social dues</td>
</tr>
<tr>
<td>6 110 € million</td>
<td>98 € million</td>
</tr>
<tr>
<td></td>
<td>Creditors</td>
</tr>
<tr>
<td></td>
<td>Interest on debt and borrowings</td>
</tr>
<tr>
<td>634 € million</td>
<td>201 € million</td>
</tr>
<tr>
<td>Value added</td>
<td>Shareholders</td>
</tr>
<tr>
<td></td>
<td>Dividends - € million</td>
</tr>
</tbody>
</table>

Retained in business = -376 € million

*Including continuing operations.
Risks and stakeholders

To expand appreciation of key risks within Outokumpu and to help in mitigating the effects of possible impacts on stakeholders, the Group also monitors potential risks from a corporate responsibility perspective. Sustainability-related issues including stakeholder dialogue is an integral part of the Group’s risk management process. In addition, the Group’s risk management participates in the corporate responsibility process.

Impacts on stakeholders are reviewed as part of Outokumpu’s risk management process. The evaluation process covers enterprise-wide risks at all organizational levels and includes assessments of the impact of key risks on Group stakeholders.

The “Stakeholder perspective” diagram specifies key stakeholder groups and provides examples of the possible impact of different categories of risk on Outokumpu’s operations.

Key risks are evaluated for stakeholder impacts

Outokumpu serves its customers - distributors, producers of consumer goods and manufacturers of various industrial applications alike - globally. Continuous feedback and interaction with customers help us to improve our understanding of their needs, the challenges they face and the business environment our customers operate in.

One year ago, at the turn of the year, Outokumpu and Inoxum joined forces and emerged as the new global leader in stainless steel. With the merger, Outokumpu’s product portfolio grew, making it the widest in the market. At the same time our customer base expanded into more consumer-driven segments. With such a big change, Outokumpu aimed at business continuity and customer satisfaction for its customers. One of the transformation principles in the new common management was to provide our customers with a business model that is more consumer-driven.

In May, we arranged our first global customer event, Outokumpu Experience in London, the UK. The event brought together some 700 stainless steel professionals under one roof. Outokumpu showcased its portfolio and launched new products in the event. At the London event, Outokumpu also launched its new vision of a world that lasts forever. This vision crystallizes the sustainable properties of our products: in Outokumpu’s products, more than 80% is recycled content and they are long-lasting and 100% recyclable.

In November, Outokumpu introduced a new pricing model, the daily alloy surcharge, for the European market. This new pricing model entered into force in January 2014, following a piloting project where we tested and developed the model in collaboration with pilot customers. The model allows our customers to react faster on the changes in the raw material prices and to choose between different options in avoiding alloy risks and selecting optimum alloy surcharge.

Outokumpu’s sales and technical customer service people continued to help our customers select the right materials for each application. Several online tools such as Steel Finder also help customers to browse our offering, and to choose the correct grade. Outokumpu’s earlier published handbooks, Welding Handbook and Corrosion Handbook, were complemented with a Handbook of Stainless Steel. This Handbook is especially targeted for engineers, designers, materials specifiers and students.

During the year, Outokumpu continued to collect continuous, first-hand feedback from our customers. New customers from the Inoxum business were included in the globally uniform feedback system that Outokumpu uses to collect and utilize customer insight in all our countries of operations. The data obtained through the system is analyzed and benchmarked to support us in various goals. Customers’ feedback helps us to achieve our growth targets, and is used to enable continuous improvement of our performance, both on strategic and operational levels. The overall aim is to have a mutually beneficial process that helps us improve and increases the satisfaction of our customers. Despite the challenging year of integration and several changes ongoing, Outokumpu’s customer satisfaction continues to outperform that of our competitors.
Raw material purchases are the largest item in Outokumpu’s costs. In 2013, Outokumpu’s delivery volumes were 2,894,000 tonnes, a comparable decrease of 5.3% from the previous year, based on management estimate for 2012 figures. The cost of goods and services fell by 20.6% from the previous year, mainly due to the synergies in procurement, compared to the comparable figure from the previous year based on management estimate. As Outokumpu and Inoxum combined operations as of the beginning of the year, majority of the synergy savings came from raw material and general procurement.

Primary raw materials – nickel, ferrochrome, recycled stainless and carbon steel – are purchased on the open market. Part of the ferrochrome are sourced internally from the Group’s own chromium mine and ferrochrome operations. The doubling of ferrochrome capacity is being ramped up in 2013, after which the production capacity of ferrochrome will double by 2015.

Outokumpu regularly evaluates its suppliers from the sustainability point of view, highlighting the responsibility issues within society and local communities. The scope of the study was all raw material producers and strategic suppliers in general procurement. In the last round of evaluation, the coverage of all completed answers and evaluated companies was more than 90% of Outokumpu’s total spending on materials and supplies to these companies.

Read more about our sustainable supply chain on p. 31.

Outokumpu’s regular and active dialogue with global investors and analysts continued in 2013. The completion of the Inoxum transaction at the end of 2012, the operational plans of the Terni remediation asset as well as the new Outokumpu strategic roadmap met high interest from the capital markets. Towards the end of the year, the announcement of Outokumpu’s plan to sell the Terni remediation asset as well as the VDM business to ThyssenKrupp and to further deleverage the Group’s employer brand, especially as the merger with Inoxum has created new challenges and opportunities in this field. Being the Group’s employer brand, especially as the merger with Inoxum has created new challenges and opportunities in this field. Being the Group’s employer brand, especially as the merger with Inoxum has created new challenges and opportunities in this field. Being the Group’s employer brand, especially as the merger with Inoxum has created new challenges and opportunities in this field. Being the Group’s employer brand, especially as the merger with Inoxum has created new challenges and opportunities in this field. Being the Group’s employer brand, especially as the merger with Inoxum has created new challenges and opportunities in this field. Outokumpu’s regular and active dialogue with global investors and analysts continued in 2013. The completion of the Inoxum transaction at the end of 2012, the operational plans of the Terni remediation asset as well as the new Outokumpu strategic roadmap met high interest from the capital markets.

Investors and analysts

Outokumpu met investors and analysts at various events throughout the year. The Group organized the Annual General Meeting in March, and held quarterly results webcasts for investors and analysts for the Annual Accounts in February and for the interim reports in April, July and November. Outokumpu’s representatives also attended seminars and conferences arranged by banks and organized roadshows to meet investors. A total of 11 roadshows were arranged in Europe and in the US. In addition, Outokumpu hosted a Capital Markets Day in London in 2013. The event was well attended by 68 investors and analysts. Three site visits for analysts and institutional investors were arranged in 2013, two to the chrome mine in Kemi and the stainless steel plant in Torino, Finland and one to the new stainless steel plant in Calvert, USA. A total of over 200 one-on-one meetings, conference calls and video conferences with investors were held during the year.

Read more about Outokumpu share and shareholders, Outokumpu’s activities in the capital markets and stock exchange releases in 2013 in the Annual Report in Shares and shareholders and Information for the investors on p. 126.

Economic impact

Salary payments including pensions and other benefits paid by Outokumpu in 2013 increased compared to the previous year by some 69% to EUR 7,711 million (2012: EUR 4,110 million) mainly because of the Inoxum acquisition. Bonuses received by Group personnel in 2013 amounted to EUR 40 million (2012: EUR 15 million). The Group’s incentive plans are primarily based on operational or financial targets and vary by country.

Investors and analysts

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Read more about our sustainable supply chain on p. 31.
Outokumpu’s employees have given presentations in the training of engineers, miners, and supervisors. In Sheffield, Outokumpu’s Low-Carbon Steel Office engaged more than 450 managers and employees in the making of “green” steel, and in December 2013, a peer-reviewed scientific study on cancer frequency among Outokumpu employees in Kemi-Tornio was published in the British Medical Journal. This internationally important occupational research showed that there is no risk of increased lung cancer or other cancer types caused by atmospheric exposures to dust or metal particles among the workers. These results together with health studies conducted since the 1980s show that there are no indications of occupational or other diseases caused by metal or other chemical exposures. These workers form what is called a “worst-case scenario group” in relation to air emissions and metal concentrations, due to the fact that their level of exposure to air and emission-related chemicals is much higher than other local inhabitants.

In Germany, the permit for Marbach disposal site in Bochum Hamborn created public concerns in 2013. To address the concerns, Outokumpu established a local voluntary advisory committee in Marbach for handling information and views, including neighbors, NGOs and other interest groups. Plans regarding the closure of the Bochum melt shop caused local media attention at the end of 2013.

As a large employer, decisions regarding the Group’s operations have a major impact on communities; not only on Outokumpu personnel and their families, but also on local goods suppliers and service providers. The current strategic investments in Calvert, US are in the final phase and have an impact on the surrounding districts. During 2013 some 120 new employees were hired. Other recent investments and important investment in the expansion of the Group’s ferrochrome production in Tornio, and the EUR 100 million in increasing stainless quarto plate production capacity in Degerfors. Completion of the ferrochrome expansion and ramping up operations during 2012–2013 resulted in the addition of around 120 permanent jobs in the Kemi-Tornio region.

Outokumpu is also active in corporate responsibility networks. To support these forums, members share best practices and obtain benchmark data, and their own data for use in official industry or other studies, such as the World Steel Association Sustainability Report.

In Europe, Outokumpu is a member of several federations and associations in Finland, France, Germany, Italy, Sweden, the Netherlands, and the UK. National cooperation organizations advance industry views and participate in legislation in Europe through national representatives in EU governing bodies. Outokumpu is also a member of business associations in North America and Australia.

Eurofer and Euroioxid are collaborative organizations within the European iron and steel industry. Outokumpu contributes to Eurofer’s commercial and trade issues at the presidency level, in committees which handle statistics, research and the environment, and in working groups which focus on issues such as climate change, air quality, water, and waste. Eurofer conveys opinions to EU governing bodies (the European Commission, the European Parliament, and the European Council), and promotes measures such as the renewal of the Integrated Pollution Prevention and Control (IPPC) Directive, the implementation of REACH (the Registration, Evaluation and Authorisation of Chemicals), and continuation of the European Emissions Trading Scheme (EU-ETS). Euroioxid performs a similar role in issues related to slag and by-products.

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The project in Torino started with a survey which was conducted in March 2013 meaning different areas of wellbeing: own resources, management and leadership, training and development as well as work-life balance. Based on the survey results, the project team, consisting of management, employee representatives and members of Health, Safety and HR teams, identified development areas and prioritized the actions. The development work at Ferrometals Works is seen as a continuous process and a new survey is planned for 2014. The project team welcomes all employees to participate in improving the everyday work. Change happens when everyone takes responsibility and acts towards a common goal.

Members also contribute their own data for use in official industry or other studies, such as the World Steel Association Sustainability Report.

In 2013 Outokumpu experts and top management continued to maintain effective liaisons with the authorities and numerous organizations. Top management participated in dialogue concerning issues such as social well-being, the global financial situation, the integration of new employees, and the future of the stainless steel business. Mika Sillanfora, Outokumpu’s CEO, was an active participant in the discussions, especially those regarding society’s role in creating an operational environment that can enhance development, knowledge, and investments. Within the Group, comprehension of approaches to social responsibility is expanded through active engagement with a variety of companies and organizations.

Outokumpu is a member of international organizations and federations, including: The World Economic Forum, Eurofer, Euroinox, EuroSlag, and the International Chromium Development Association. Outokumpu is also an associate member of the World Steel Association (worldsteel) and a member of the International Stainless Steel Forum (ISSF), a stainless-steel-specific sub-organization. Outokumpu provides relevant information to decision-makers and experts relating to the development of the business environment and legislation.

The Group participates in the work of trade organizations. Outokumpu does not pressure or use hard lobbying on decision-makers. As a member of Eurofer, worldsteel and ISSF, Outokumpu participates in different policy groups whose aim is to provide expertise and help decision-makers in connection with issues such as the global mitigation of greenhouse gas emissions by the iron and steel industry. In these forums, members share best practices and obtain benchmark data relating to, among other things, the environment, R&D, product life-cycles, product and chemical safety, and occupational safety, well-being at work by promoting work ability, controlling absenteeism, prolonging working careers and sharing best practices. Currently there are more than 70 participating companies.

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Public sector, sponsoring and NGOs

Outokumpu contributes to the well-being of local, national, and international communities through tax payments, through direct and indirect employment, and by participating in other societal activities.

In 2013, taxes and social security contributions paid by the Group totaled EUR 98 million (2012: EUR 57 million). In 2013, Outokumpu posted a loss and thus also the amount of taxes paid remained low, some EUR 4 million for the financial year (2012: EUR 4 million). The impact of taxes on societal well-being is both direct and indirect.

### Taxes and social dues by country

<table>
<thead>
<tr>
<th>Country</th>
<th>2013</th>
<th>2012</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>8</td>
<td>8</td>
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</tr>
<tr>
<td>Sweden</td>
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<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Other Europe</td>
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<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Other countries</td>
<td>14</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>67</td>
<td>62</td>
</tr>
</tbody>
</table>

1) Including continuing operations.

### Public sector support received

In 2013, Outokumpu received some EUR 0.6 million (2012: EUR 0.9 million) from the public sector to support Group research and development of new technologies, products, and applications.

### External R&D collaboration

Outokumpu has an extensive network of external R&D partners and participates in both national and international research programs. Outokumpu is a member of the European Steel Technology Platform (ESTEP). Examples of research programs Outokumpu is participating in include the Finnish Mechanical and Engineering Competence Cluster (FIMECC), Research Fund for Coal and Steel (RFCS), and Jernkon-toret (the Swedish Steel Producers’ Association). In Germany we are collaborating with various universities and research institutes, among others with the Fraunhofer Institute and the Max-Planck-Institut für Eisenforschung.

Grants and community support given

Outokumpu supports higher education and research by donating funds to universities. In 2013, the co-operation between Aalto University, a new multidisciplinary science and art community, proceed-ed in the fields of science, economics, art, and design. Outokumpu has supported Aalto University from the establishment of the institution, including an initial fund donation of EUR 1 million.

Co-operation with Aalto University offers Outokumpu the chance to harness top-level know-how and a multidisciplinary approach. Aalto’s core research fields – materials research and design – will round out Outokumpu’s in-house R&D, offering new opportunities for innovation and exchanging know-how.

Outokumpu is one of the founders of the Technology Industries of Finland Centennial Foundation Fund for the Association of Finnish Steel and Metal Producers, established by five Finnish steel and metal-producing companies. The fund was founded to promote university-level research and teaching of technology and business opportunities in metals production. In 2013, the fund awarded grants of some EUR 0.3 million.

For example Outokumpu has participated in the research project Metric under the FIMECC consortium and one of the project outcomes in 2013 was a thesis studying industrial investments in a sustainabil-ity framework. This new approach aimed to quantify investment and changes to the industrial set up from social, economic and environ-mental dimensions in one model. This type of open attitude towards harnessing of new ideas describes Outokumpu’s open innovation management approach very well.

### Sponsoring

As defined in Outokumpu’s sponsorship policy, the Group’s sponsor-ship decisions are based on clearly defined pre-conditions of strate-gic, brand image, and sustainability criteria. Outokumpu also makes discretionary donations for the common good as a responsible cor-porate citizen. These donations are organized by sustainability man-agement and approved by the Leadership Team or by the Board of Directors.

Total grants and community support in 2013 amounted to some EUR 0.4 million.

Outokumpu does not take part in or otherwise support political ac-tivities, whether they are local, communal, or national. Outokumpu does not make donations to any political parties or groups.

### Dialogue with environmental NGOs continued

In 2013, Outokumpu faced the fact that a significantly expanded global presence required us to map and identify new NGO counter-parties. Therefore, Outokumpu conducted NGO mapping in order to identify new NGOs and to review the existing NGOs. The study con-centrated into the impactfullness, size and regional presences of NGOs against pre-defined material sustainability issues and regions and countries of Groups operations. This study also serves as start-ing point for stakeholder dialogue in the context of the new Outokum-pu and gives a good reference group for the next update of Outokum-pu materiality analysis.

In addition, Outokumpu continued its dialogue with environmental NGOs as a standard process. Issues that were discussed included the role of steel recycling and sustainable stainless steel in tackling the major challenges that we face as a mankind: climate change, resilience and energy scarcity together with urbanization and popu-lation growth. As a result, Outokumpu aims to increase further the transparency and information related to these issues and our prod-ucts sustainability properties.
Outokumpu produces stainless steel, a sustainable material, by using a sustainable production chain in a responsible manner.

Outokumpu’s Annual Report also meets other requirements within sustainability reporting. Outokumpu decided to adopt the ISO 26 000 “Guidance on social responsibility” standard. This is the second report in which we have the ISO 26 000 core subjects and issues comparison table together with GRI reporting index.

The Group is a signatory to the UN Global Compact. Outokumpu also follows International Chamber of Commerce policies by utilizing ISO-based management systems in connection with issues relating to Environment, Health and Safety and Quality management. Read more about the Group’s social responsibility.

The Group has also signed the Sustainable Development Charter published by the World Steel Association and the International Stainless Steel Forum. Together with the Group’s internal policies and practices these frameworks have requirements for external reporting, which have been taken into account in this Sustainability Report.
Focus on material issues

To ensure that limited resources are allocated in the most efficient manner, Outokumpu analyzed the most material sustainability issues. The results of this analysis, which identified the internal and external issues most relevant to the Group, formed a natural basis for sustainability-related actions and developments in 2013.

The results of the materiality analysis, issues with high significance for both Outokumpu and the Group’s stakeholders, were mostly those which have been on Outokumpu’s sustainability agenda in previous years. This confirms that we are working with the correct issues and that further improvements are still needed. The analysis process has helped the Group initiate new actions and programs in an optimal manner. During 2013, Outokumpu took action in connection with all issues identified as having a material significance and related developments are detailed in this report.

The Outokumpu Board of Directors reviewed the sustainability analysis and related actions in two meetings during 2013, and reviewed and approved updated Groups ethical statement at its December 2013 meeting. According to the Group policy on sustainable development and corporate responsibility, the Board of Directors monitors Outokumpu’s corporate responsibility performance at least once each year based on a report submitted by the CEO. This arrangement ensures that sustainability issues are an integral element in Outokumpu operations from the lowest to the highest levels.
### GRI profile disclosures

<table>
<thead>
<tr>
<th>Global</th>
<th>ISO</th>
<th>Comment</th>
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<tbody>
<tr>
<td>Annual Report</td>
<td>Sustainability Report section 2013</td>
<td>28000</td>
</tr>
</tbody>
</table>

| 4. Governance, Commitments and Engagement |
|---|---|---|---|---|---|---|---|
| Governance | 4.1 Governance structure of the organisation | Yes | Corporate governance statement (AR p. 115-116) | 6.2 |
| | 4.2 Position of the Chairman of the Board | Yes | Board of Directors (AR p. 14) | 6.2 |
| | 4.3 Independence of the Board members | Yes | Board of Directors (AR p. 14-15) | 6.2 |
| | 4.4 Mechanism for stakeholder and employee consultation | Yes | Corporate governance statement (AR p. 112), Open communication (SR p. 29) | 6.2 |
| | 4.5 Executive compensation and linkage to organisation’s performance | Yes | Corporate governance statement (AR p. 115) | 6.2 |
| | 4.6 Processes for avoiding conflicts of interest | Yes | Corporate governance statement (AR p. 116) | 6.2 |
| | 4.7 Processes for determining expertise | Yes | Corporate governance statement (AR p. 116) | 6.2 |
| | 4.8 Implementation of mission and values, code of conduct and other principles | Yes | CEO’s forward (SR, p. 1), Firm steps forward (SR p. 34), Our people (SR p. 34) | 6.2 |
| | 4.9 Procedures of the Board for overseeing management of sustainability, perform., incl. risk management | Yes | Corporate governance statement (AR p. 119-120) | 6.2 |
| | 4.10 Processes for evaluating the Board’s performance | Yes | Corporate governance statement (AR p. 113) | 6.2 |

| Commitments to External Initiatives | 4.11 Addressing precautionary approach | Yes | Risk-management (AR p. 120), Climate change risks (SR p. 23), Product life cycle (SR p. 6) | 7 | 0.5 |
| | 4.12 Voluntary charters and other initiatives | Yes | Outokumpu and society (SR p. 46), Associations and federations (SR p. 53) | 6.2 |
| | 4.13 Memberships in associations | Yes | Outokumpu and society (SR p. 46), Associations and federations (SR p. 53) | 6.2 |

| Stakeholder Engagement | 4.14 List of stakeholder groups | Yes | Risks and stakeholders (SR p. 48) | 6.2 |
| | 4.15 Identification and selection of stakeholders | Yes | Risks and stakeholders (SR p. 48) | 6.2 |
| | 4.16 Approaches to stakeholder engagement | Yes | Outokumpu and society (SR p. 46) | 6.2 |
| | 4.17 Key topics raised through stakeholder engagement | Yes | Customers (SR p. 59), local communities (SR p. 51-52), Our people (SR p. 34) | 6.2 |

| 5. Management Approach and Performance Indicators |
|---|---|---|---|---|---|---|---|
| Management approach to economic responsibility | Yes | Review by the Board of Directors 2013 (AR p. 16), EEOC review (AR 1.1), Risks and uncertainties mitigation (AR 1.2), Corporate Governance statement (AR p. 117-118) | 1, 4 | 6.2 |
| Management approach to environmental responsibility | Yes | Our impact on the environment (SR p. 10-13), Environmental goals and results (SR 1.5), Non-financial performance (SR 1.6), Corporate Governance statement (AR p. 120-123) | 7, 8, 9 | 6.5 |
| Management approach to labor practices and decent work | Yes | Our people (SR p. 34), Goals and results (SR 1.8), Occupational health (AR p. 124), Training and development (SR p. 40), Corporate Governance (AR p. 117-118) | 1, 3, 6 | 6.4 |
| Management approach to human rights | Yes | Our people (SR p. 34), Corporate Governance statement (AR p. 117-118), Dignity and equal rights (SR p. 38) | 6.3 |
| Management approach to society | Yes | Local communities (SR p. 51-53), Corporate Governance statement (AR p. 117-118), Customers (SR p. 46), Product properties (SR p. 6), Safe use of stainless (SR p. 9) | 6.2 |

### Economic Performance Indicators

| Economic Performance | EC1 | Direct economic value generated and distributed | Yes | Outokumpu and society (SR p. 46), Public sector, sponsoring and NGOs (SR p. 54) | 6.8 |
| | EC2 | Risks and opportunities due to climate change | Yes | Climate change risks (AR p. 25-26) | 6.8 |
| | EC3 | Coverage of defined benefit plan obligations | Partly | 20, Employee benefit obligations (AR p. 86-87) | 6.4 |
| | EC4 | Significant subsidies received from government | Yes | Public sector, sponsoring and NGOs (SR p. 54), Share development and shareholders (AR p. 20) | 6.8 |

### Environmental Performance Indicators

| Environmental Performance | Material | EN1 | Materials used by weight or volume | Yes | Material balance (SR p. 18) | 8 | 6.5 |
| | EN2 | Recycled materials used | Yes | Product properties (SR p. 6), Material balance (SR p. 14) | 8 | 6.5 |
| | EN3 | Entry level wage compared to minimum wage | No | 6 |
| | EN4 | Direct energy consumption | Yes | Material balance (SR p. 18), Energy efficiency (SR p. 11) | 8 | 6.5 |
| | EN6 | Indirect energy consumption | Partly | Material balance (SR p. 18), Energy efficiency (SR p. 11) | 8 | 6.5 |
| | EN7 | Energy used due to conservation and efficiency improvements | Yes | Energy efficiency (SR p. 11) | 8 | 6.5 |
| | EN8 | Initiatives to provide energy-efficient or renewable energy-based products and services | Yes | Energy efficiency (SR p. 11) | 8 | 6.5 |
| | EN9 | Incentives to reduce indirect energy consumption | Yes | Sustainability supply chain (SR p. 32), Climate change (SR p. 22) | 8 | 6.6 |
### Diversity and Equal Opportunity

<table>
<thead>
<tr>
<th>GRI profile disclosures</th>
<th>NCL</th>
<th>Annual Report/Sustainability Report section 2013</th>
<th>Global Com- pact 20000</th>
<th>ISO 26000</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN135*</td>
<td>No Performance management (SR p. 40)</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
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<tr>
<td>EN136*</td>
<td>Rate of injury, occupational diseases, lost time, and fatalities</td>
<td>Yes</td>
<td></td>
<td></td>
<td>1, 6, 6.4</td>
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<tr>
<td>EN137*</td>
<td>No major risks were identified during the audits of units or systems.</td>
<td>No</td>
<td>4-6</td>
<td></td>
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</tr>
<tr>
<td>EN138*</td>
<td>Yes Focus on company turnaround (SR p. 36), Diversity and equal rights (SR p. 38)</td>
<td>1, 2, 5, 6.4</td>
<td></td>
<td></td>
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<tr>
<td>EN139*</td>
<td>No Major risks were identified during the audits of units or systems.</td>
<td>No</td>
<td>1, 2, 6, 6.4</td>
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<tr>
<td>EN140*</td>
<td>No Major risks were identified during the audits of units or systems.</td>
<td>No</td>
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### Social Performance Indicators

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<tr>
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<tbody>
<tr>
<td>EN30</td>
<td>Total environmental protection expenditures and investments</td>
<td>Yes Environmental investments (SR p. 53)</td>
<td>7, 8, 6.5</td>
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</tbody>
</table>

**LA7** Initiatives to reduce greenhouse gas emissions

**LA12** Employees receiving regular performance and career development reviews

**EN25** Water bodies and habitats affected by discharge of water

**EN26** Mitigating environmental impacts of products and services

**EN27** Reusable products and reuse

**EN28** Compliance

**EN30** Total environmental protection expenditures and investments

**EN29** Environmental impacts of transportation

**EN30** Total environmental protection expenditures and investments

**EN31** Reusable products and reuse

**EN32** Compliance

**EN33** Significant fines and sanctions for non-compliance with environmental regulations

**EN34** Transport

**EN35** Environmental impacts of transportation

**EN36** Total environmental protection expenditures and investments

<table>
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<th>Comment</th>
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<tr>
<td>EN31</td>
<td>Yes Focus on company turnaround (SR p. 36), Diversity and equal rights (SR p. 38)</td>
<td>1, 6, 6.4</td>
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<td>EN32</td>
<td>No Major risks were identified during the audits of units or systems.</td>
<td>No</td>
<td>1, 2, 6, 6.4</td>
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<tr>
<td>EN33</td>
<td>No Major risks were identified during the audits of units or systems.</td>
<td>No</td>
<td>1, 2, 6, 6.4</td>
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</tbody>
</table>

**LA14** Information to women by employee category

**LA15** Composition of governance bodies and breakdown of employees

**LA16** Ratio of basic salary of men to women by employee category

**LA17** Human Rights

**LA18** Investment agreements with human rights clauses or that have undergone human rights screening

**LA19** Suppliers and contractors that have undergone human rights screening

**LA20** Human rights related training for employees

**LA21** Incidents of discrimination and actions taken

**LA22** Supporting right to freedom of association and collective bargaining in risk areas

**LA23** Measures taken to eliminate child labour in risk areas

**LA24** Measures taken to eliminate forced labour in risk areas

**LA25** Human rights related training for security personnel

**LA26** Incidents involving rights of indigenous peoples and actions taken

**LA27** Society

**LA28** Community

**LA29** Managing impacts of operations on communities – also issues of Mining and Metals

**LA30** HR3  Human rights related training for employees

**LA31** PR1  Non-compliance with regulations concerning product and service labeling

**LA32** PR2  Product information required by procedures

**LA33** PR3  Customer satisfaction

**LA34** PR4  Non-compliance with regulations concerning product information and labeling

**LA35** PR5  Customer satisfaction

**LA36** Marketing Communications

<table>
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<tbody>
<tr>
<td>EN22*</td>
<td>Yes Environmental goals &amp; results (Sustainable Development Report p. 33), Human rights related training for employees (Sustainable Development Report p. 38)</td>
<td>1, 2, 5, 6.4</td>
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<tr>
<td>EN23*</td>
<td>Yes Environmental goals &amp; results (Sustainable Development Report p. 33), Human rights related training for employees (Sustainable Development Report p. 38)</td>
<td>1, 2, 5, 6.4</td>
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<td></td>
<td></td>
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<tr>
<td>EN24*</td>
<td>Yes Environmental goals &amp; results (Sustainable Development Report p. 33), Human rights related training for employees (Sustainable Development Report p. 38)</td>
<td>1, 2, 5, 6.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EN25*</td>
<td>Yes Environmental goals &amp; results (Sustainable Development Report p. 33), Human rights related training for employees (Sustainable Development Report p. 38)</td>
<td>1, 2, 5, 6.4</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**LA6** Representation in joint health and safety committees

**LA7** Initiatives to reduce greenhouse gas emissions

**LA11** Programmes for skills management and lifelong learning

**LA12** No Performance management (SR p. 40)

**LA13** Yes Focus on company turnaround (SR p. 36), Diversity and equal rights (SR p. 38)
Reporting principles

In Outokumpu’s reporting, the goal is to support open dialogue between the Group and its stakeholders. Our aim is to address the needs of current and future personnel, shareholders, customers, and other parties who have an interest in Outokumpu and its business operations.

We use reporting as an opportunity to illustrate what Outokumpu has done to ensure that the Group’s business operations are sustainable, and to indicate actions we expect to take in the future to enhance individual well-being and the natural environment. Outokumpu has a long history of responsible business practices and we are working to make our operations more sustainable. As well as reporting on matters we consider important and relevant to our business operations, we also cover current global themes, which affect the Group's operations and our stakeholders.

If you have questions regarding the content of this report, please contact Outokumpu communications (corporate.comms@outokumpu.com).

Scope of the report

The closing of the Inoxum transaction took place on December 28, 2012. The new Outokumpu as a combined entity started its operations in December 29, 2012. On November 30, 2013, Outokumpu announced the divestment of Terni assets, VDM business and certain service centers which have been classified as discontinued operations in the financial statements for 2013. Sustainability Reporting for 2013 is based on the continuing operations of Outokumpu, unless otherwise stated.

Outokumpu’s Sustainability report is published annually, and the reporting period is the same as the Group’s financial reporting period (one calendar year). This report for 2013 was published on March 6, 2014 together with the 2013 Outokumpu Annual Report. The previous report for 2012 was published on February 25, 2012.

For 2013, the Group’s Sustainability Report has been published as a stand-alone report.

Since 2004, Outokumpu’s reporting has been based on guidelines provided in the widely-recognized and applied Global Reporting Initiative (GRI) G3 guidelines from 2007, but the reporting format now used by Outokumpu does not follow the tripartite division into economic, social, and environmental responsibility suggested by GRI.

A comparison of Outokumpu’s reporting against the GRI 3.0 guidelines and the 10 principles of the UN Global Compact together with ISO 26 000 core issues can be found on the GRI and UN Global Compact section.

Comparability of statistics

Corrections made to figures reported in previous years are indicated in conjunction with the corrected figures. Since 2007, Outokumpu’s Annual Reports have included an assurance report submitted by independent external assurance providers. This independent assurance report is available on p. 67. Figures in the financial statements under the section Financials in the Annual Report 2013 have been audited.

Measurement techniques

Economic responsibility

Most figures relating to economic responsibility presented in this report are based on consolidated financial statements issued by the Outokumpu Group and collected through Outokumpu’s internal consolidation system. Financial data has been prepared in accordance with International Financial Reporting Standards (IFRS). Outokumpu’s accounting principles for the Group’s consolidated accounts are available in Note 2 to the consolidated financial statements.

The economic responsibility measures presented in the report for 2013 are not comparable to those of 2012 and 2011 due to Outokumpu’s acquisition of Inoxum, the stainless steel business of ThyssenKrupp in December 2012. As all measures are based on Group’s consolidated financial information, only 2013 includes the effect of Inoxum, whereas 2012 and 2011 are presented as Outokumpu stand-alone. All 2013 measures include only continuing operations, excluding the Terni remedy assets, VDM business and certain European service centers, as defined in the 2013 financial statements.

All financial figures presented have been rounded, and consequently the sum of individual figures may deviate from the presented aggregate figure. Key figures have been calculated using exact figures.

Using the GRI guidelines as a basis, economic responsibility figures have been calculated as follows:

GENERATION OF VALUE ADDED

Sales invoiced to customers during the financial year are used when calculating the generation of value added. Discounts or indirect taxes are deducted from sales figures.

The cost of goods and services purchased by Outokumpu during the financial year is deducted from sales when calculating the generation of value added. Discounts or indirect taxes are deducted from sales figures.

DISTRIBUTION OF VALUE ADDED

Value added which is distributed to employees consists of wages and salaries paid to Outokumpu employees during the financial year. Pension payments and related accruals are included in this figure. Outokumpu adopted the revised IAS 19 Employee benefits in 2013. However, this resulted only to immaterial restatements in 2012 as the previously allowed corridor method had been waived already in 2012.
Independent Assurance Report

To the Management of Outokumpu Oyj

We have been engaged by the Management of Outokumpu Oyj to perform a limited assurance engagement on the quantitative information on economic, social and environmental responsibility for the reporting period of January 1, 2013 to December 31, 2013, disclosed in Outokumpu Oyj’s Sustainability Report 2013 (hereinafter “Sustainability Reporting”).

Management’s Responsibility

The Management of Outokumpu Oyj is responsible for preparing the Sustainability Reporting in accordance with the Reporting criteria as set out in Outokumpu Oyj’s reporting instructions and the G3 Sustainability Reporting Guidelines of the Global Reporting Initiative.

Practitioner’s Responsibility

Our responsibility is to express a conclusion on the Sustainability Reporting based on our work performed. Our assurance report has been prepared in accordance with the terms of our engagement. We do not accept, or assume responsibility to anyone else, except to Outokumpu Oyj for our work, for this report, or for the conclusions that we have reached.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (‘Assurance Engagements Other than Audits or Reviews of Historical Financial Information’). This Standard requires that we comply with ethical requirements and plan and perform the assurance engagement to obtain limited assurance whether any matters come to our attention that cause us to believe that the Sustainability Reporting has not been prepared, in all material respects, in accordance with the Reporting criteria.

In a limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance engagement, and therefore less assurance is obtained than in a reasonable assurance engagement. An assurance engagement involves performing procedures to obtain evidence about the amounts and other disclosures in the Sustainability Reporting. The procedures selected depend on the practitioner’s judgement, including an assessment of the risks of material misstatement of the Sustainability Reporting. Our work consisted of, amongst others, the following procedures:

- Interviewing senior management of Outokumpu Oyj.
- Visiting one production site in Germany.
- Interviewing employees responsible for collection and reporting of the information presented in the Sustainability Reporting at the Group level and at the production unit level.
- Assessing how Outokumpu Group employees apply Outokumpu Oyj’s reporting instructions and procedures.
- Testing the accuracy and completeness of the information from original documents and systems on a sample basis.
- Testing the consolidation of information and performing recalculations on a sample basis.

Conclusion

Based on our work described in this report, nothing has come to our attention that causes us to believe that the Sustainability Reporting has not been prepared, in all material respects, in accordance with the Reporting criteria. When reading our assurance report, the inherent limitations to the accuracy and completeness of sustainability information should be taken into consideration.

Helsinki, 5 March 2014

PricewaterhouseCoopers Oy

Sırpa Juutinen
Partner
Sustainability & Climate Change

Maj-Lis Steiner
Director, Authorised Public Accountant
Sustainability & Climate Change