

TOWARDS A MORE SUSTAINABLE WORLD

SSAB





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Most of the energy consumption and emissions of steel end-products occur when those products are being used. SSAB offers its customers high-strength and energy-efficient steel products and solutions that prolong the life, lower the costs and reduce the environmental impacts of an end-product during its entire lifecycle. SSAB also works to reduce the environmental impacts of end-products by continuously improving material and energy efficiency in its own production processes. These improvements can lead to lower emissions and less use of resources. With a unique offering of high-strength and wear-resistant, efficiently-produced steels, SSAB contributes to building a stronger, lighter and more sustainable world.

Safety is also a top priority for SSAB. We are determined to be one of the safest steel companies in the world, continuously striving to achieve zero accidents and work-related injuries in all our operations.

ABOUT THIS REPORT

SSAB's Sustainability Report 2014 is comprised of information on SSAB's sustainability related activities and performance. The report also constitutes Communication on Progress (CoP) reporting to UN's Global Compact, where activities and results related to Global Compact's principles are reported. The scope of reporting is the SSAB Group, former SSAB AB and former Rautaruukki Oyj combined. The reported data reflects pro-forma figures, i.e. as if Rautaruukki Corporation had been part of SSAB the whole reporting period from Jan 1 to Dec 31, 2014, unless otherwise stated. Also the comparison years' data has been re-stated to cover the new SSAB. The environmental data refers mainly to the main production sites in Sweden and Finland and for some data also to the North American operations. Figures in brackets refer to the comparison period 2013. The report is intended to be read together with SSAB's Annual Report 2014, where more extensive information can be found regarding SSAB's business, strategy, financial performance and corporate governance.

SSAB's Sustainability Report 2014 is published in English in PDF format and is available on SSAB's sustainability website at: <http://www.ssab.com/en/Sustainability/>.

SSAB in brief

60

Net sales SEK 60 billion pro forma

17,000

Number of employees:
approximately 17,000

50

Employees in 50 countries

SSAB is a highly specialized, global steel company. The company is a leading producer on the global market for Advanced High Strength Steels (AHSS) and Quenched & Tempered steels (Q&T), strip, plate and tubular products, as well as construction solutions.

SSAB's steels help to make end products lighter and increase their strength and lifespan.

SSAB has a cost-efficient and flexible production system. SSAB's production plants in Sweden, Finland and the US have an annual steel production capacity of 8.8 million tonnes. The company also has capacity to process and finish various steel products in China and a number of other countries. In Sweden and Finland, production is integrated into a blast furnace process. In the US, it is scrap-based production in electric arc furnaces.

Main production sites

Borlänge Sweden

Established: 1878
Strip products
SSAB Europe
Employees: 2,100

Hämeenlinna, Finland

Established: 1972
Strip products and tubes
SSAB Europe
Employees: 900

Luleå, Sweden

Established: 1941
Steel-making
SSAB Europe
Employees: 1,200

Mobile, Alabama, USA

Established: 2001
Heavy plate mill
Scrap-based EAF production
SSAB Americas
Employees: 600

Montpelier, Iowa, USA

Established: 1997
Heavy plate mill
Scrap-based EAF production
R&D Center
SSAB Americas
Employees: 500

Raahe, Finland

Established: 1960
Steel-making, heavy plates and strip products
SSAB Europe
Employees: 2,800

Oxelösund, Sweden

Established: 1913
Steel-making, heavy plates
SSAB Special Steels
Employees: 2,400

We are unique

- A global leader in value-added high-strength steels
- The origin of the best applications development and service innovations
- Leading home market positions in the Nordics and US
- Long-term customer relationships
- Strong end-user focus
- Unique, globally recognized brand

SSAB is listed on Nasdaq OMX Stockholm (Large cap list) and has a secondary listing on Nasdaq OMX Helsinki.

- Headquarters in Stockholm, Sweden
- President & CEO Martin Lindqvist
- SSAB employs approximately 17,000 people in 50 countries
- Net sales: SEK 60 billion pro forma (SEK 57 billion in 2013)

SSAB's
divisions

5



SSAB Special Steels

Global steel and service partner in value-added Advanced High Strength Steels (AHSS) and Quenched & Tempered Steels (Q&T)



SSAB Europe

The leading Nordic-based steel producer of high-quality strip, plate and tubular products



SSAB Americas

Market-leading North American steel producer of high-quality heavy plate



Tibnor

The leading Nordic distributor of steel and non-ferrous metals



Ruukki Construction

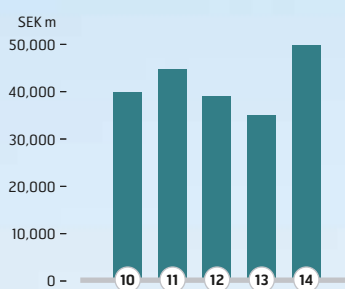
European provider of energy-efficient building and construction solutions

Group

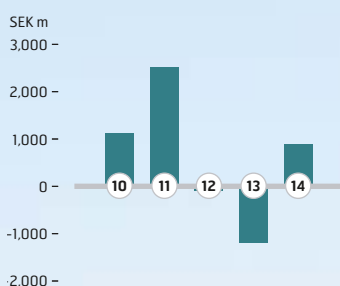
Key figures, SSAB Group

	2014	2013
Sales, SEK million	47,752	36,455
Operating profit/loss ¹⁾ , SEK million	894	-1,204
Profit/loss after financial items ¹⁾ , SEK million	242	-1,801
Earnings per share, SEK	-3.33	-3.29
Operating cash flow, SEK million	1,737	1,956
Proposed dividend	0	0
Energy consumption, GWh		
Fuels ³⁾	4,179	4,255
Electricity	4,632	4,615
Carbon dioxide emissions ⁴⁾ , thousand tonnes	9,628	9,358
Accident frequency (LTFI= Lost Time Injury Frequency)	6,6	7,4

Total sales

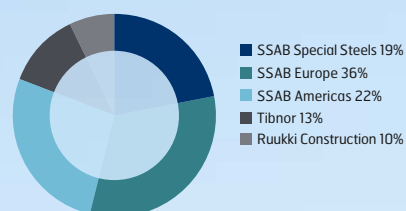


Operating profit/loss¹⁾

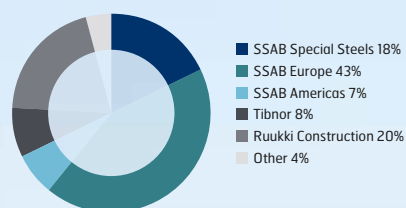


Divisions

Sales²⁾, SEK 60,112 m



Number of employees, 16,887



The financial data reflects actual figures. Other data reflects pro-forma figures, i.e. as if Rautaruukki had been part of SSAB since Jan 1, 2013.

¹⁾ Excluding items effecting comparability

²⁾ Pro forma

³⁾ Includes oil, natural gas, LPG. Coal and coke excluded

⁴⁾ Preliminary, not verified

Comments by the CEO

The event having the greatest impact on SSAB in 2014 was the acquisition of the Finnish company Rautaruukki. Together, we are now creating a more efficient and flexible steel company, whilst strengthening our leading position on the home markets in the Nordic region and globally within high-strength steels. Our strategy of global leadership in high-strength steels is the main driver towards our vision of a stronger, lighter and more sustainable world.

Rautaruukki fits in excellently with our strategy

SSAB's strategy is based on an overriding vision to contribute to a stronger, lighter and more sustainable world. The vision relates to SSAB's ability to develop steel applications for customers to enable them to e.g. reduce end-product weight, increase payloads, simplify production and to cut fuel and energy consumption. Three overriding objectives have been formulated in our strategy "Taking the lead" – to be leader on domestic markets in the Nordic region and North America, to be global leader within high-strength steels and to be leader within value-added services.

The combination with Rautaruukki gives SSAB a considerably larger base in the Nordic region within sheet and plate, and strengthens the global position within high-strength steels through new products, trademarks and markets. The product offering is being expanded within sectors such as high-strength tubes for the automotive industry and within coated products, for example. On top of this, a greater total number of service centers and production units enhance the service level.

How the strategic objectives will be achieved has been formulated into three concepts: flexible operations, a high-performing organization and superior customer experience. The acquisition of Rautaruukki gives us an enhanced cost position in the Nordic region, together with the widest offering and highest level of service. SSAB has already previously enjoyed a leading cost position among comparable steel works in North America. A recurring theme in the combination has been to capitalize on the best competences in SSAB and Rautaruukki. Together, the new SSAB gains considerably greater competence and a broader platform on which to develop new products and offerings, and thus to further strengthen customer collaboration.

Our goal is to recapture our leading position as one of the most profitable steel companies globally. Historically, in terms of profitability, SSAB has outperformed peer competitors as a whole, but our performance in recent years has been unsatisfactory.

After the combination with Rautaruukki, we are well placed to achieve industry leading profitability through the improved efficiency of strip products in the Nordic region, by capturing synergies, continuing to develop profitable operations in the US, and by continuing to grow through high-strength steels and value-added services globally.

Focus on sustainability

In the new SSAB, we are placing even stronger focus on managing and coordinating sustainability and corporate responsibility-related issues on Group level. During the year, we decided to coordinate sustainability work more clearly,

"In the new SSAB, we are placing even stronger focus on managing and coordinating sustainability and corporate responsibility-related issues on Group level."

and to this end we set up a group sustainability function that reports directly to me.

Our sustainability approach is based on our economic, environmental and social performance. We take responsibility, not only for our own operations, but also continuously develop our practices to better control the environmental and social impacts of our whole value chain. During 2015, we will announce a revised sustainability strategy and new goals for this prioritized area. The renewal of the sustainability targets that we launched in 2013 is necessary after our combination with Rautaruukki. Risks and opportunities in the new

set-up must be analyzed and goals set to take the Group's sustainability work further and to include sustainability issues more clearly in our business.

Continuous work to improve our environmental performance

Steelmaking is an energy- and resource-intensive industry and, as a steelmaker, we have a responsibility to minimize adverse environmental impacts. SSAB has for many years worked hard to bring down carbon dioxide emissions and other emissions from our manufacturing. Even if our blast furnaces are already among the world's most carbon efficient, we are constantly looking for opportunities to improve. In 2014, we continued to invest in technology to further reduce emissions and increase energy efficiency. In Sweden, a new hot stove became operational in Oxelösund and a major renovation was carried out of one hot stove in Luleå. Both investments decrease the amount of energy used in the blast furnace processes. The switch from oil to natural gas to fuel a reheating furnace in Borlänge was completed in December. The change of fuel will result in a reduction of emissions. In 2014, we also started construction work on a new quenching tower at the coke oven plant in Luleå, which will halve the particulate matter emitted from coke quenching. In Raahе, a new power plant unit (75% owned by SSAB), will replace the technically obsolete equipment in the old power station in 2016, and at the same time improve the efficiency and environmental soundness of the plant.

New EU energy and climate policies

In October 2014, the European Council summit set new more ambitious targets for carbon emissions, renewable energy and energy efficiency for 2030. The new target to reduce carbon dioxide emissions is to cut them by 40% compared to 1990. These targets risk further weakening our competitiveness in the

global market, unless there is a binding and equally as ambitious international agreement related to carbon emission reductions. In accordance with our own position, and that of the steel industry in Europe, the European Council summit agrees that the most efficient industrial operators exposed to international competition should not be subject to a direct or indirect cost disadvantage resulting from the EU's climate policy and Emission Trading System for 2030. For SSAB – and for all other steel producers in Europe – it is extremely important that the requirements of the EU Emission Trading System do not lead to a significant economic disadvantage compared to our competitors outside the EU, regardless of our highly-efficient steelmaking and substantial investments made to lower carbon emissions. Similar rules for all players are also necessary to combat climate change so as to prevent steel production relocating to countries where there is no emissions regulation.

Aiming to be one of the safest steel companies in the world

We have long been striving to constantly increase awareness of, and to reduce, the risks related to safety in all our operations. Good results have been achieved especially within SSAB Americas, whose accident statistics are among the lowest in the industry, as well as in Ruukki Construction. Good progress has been made also in some units in Europe, showing that determined safety management and leadership bears fruit. As a whole, SSAB's lost time accident frequency decreased to 6.6 (7.4). Despite all our efforts, regrettably, a fatal accident occurred at SSAB's site in Luleå. We continue to further improve the safety work we have long been doing. Our aim is to be one of the safest steel companies in the world. To achieve this, we have established a group-wide safety expert group and safety management team to plan and execute safety initiatives throughout SSAB. We will increase focus on preventative actions, managerial support and the sharing of best practices throughout the entire company.

Supporting the UN's Global Compact initiative

SSAB has been a signatory to the UN's Global Compact initiative for several years, thereby making clear the responsibility we assume for the environment, people and communities affected by our operations. This report constitutes a part of our communication on how we operate based on the Global Compact principles. We continue to support the Global Compact's principles related to the environ-

ment, human rights, labor standards and anti-corruption and work is continuing to integrate them into our operations, culture and value chain.

SSAB is also better placed than earlier when it comes to sustainability. The combination with Rautaruukki has given us greater resources, flexibility, efficiency and improved cost position, as well as enhanced potential for profitable growth in high-strength steels that are at the core of our vision.

Martin Lindqvist
President and CEO





***A stronger,
lighter and more
sustainable world***

OUR VISION

SSAB's vision points out the direction for the company's long-term development and the objective toward which the company strives: a stronger, lighter, and more sustainable world.

Together with our customers, we will go further than anyone else in realizing the full value of lighter, stronger and more durable steel products.

OUR VALUES

Our values are the guiding principles of our company. They shape our culture and characteristics. They serve as a compass for our actions and behavior, and describe what we stand for. Values guide us daily in making the right choices and doing the right things.

CUSTOMER'S BUSINESS IN FOCUS

- We constantly listen to and understand our customers' needs.
- We aim to always take an active, long-term interest in our customers' business.
- We want to earn our customers' trust.
- We want to be our customers' innovation partner.

TAKING RESPONSIBILITY

- We build strong, long-lasting relationships by being professional, cooperative and honest.
- We keep our promises.
- We work safely and responsibly.
- We respect people and strive for diversity.

EXCEEDING EXPECTATIONS

- We are dedicated, ambitious and proud of what we do.
- We are straightforward, result-oriented and quickly take action.
- We don't do things that don't create value for our stakeholders.
- To achieve top performance, we always challenge ourselves and further enhance our expertise.

Strategy and targets

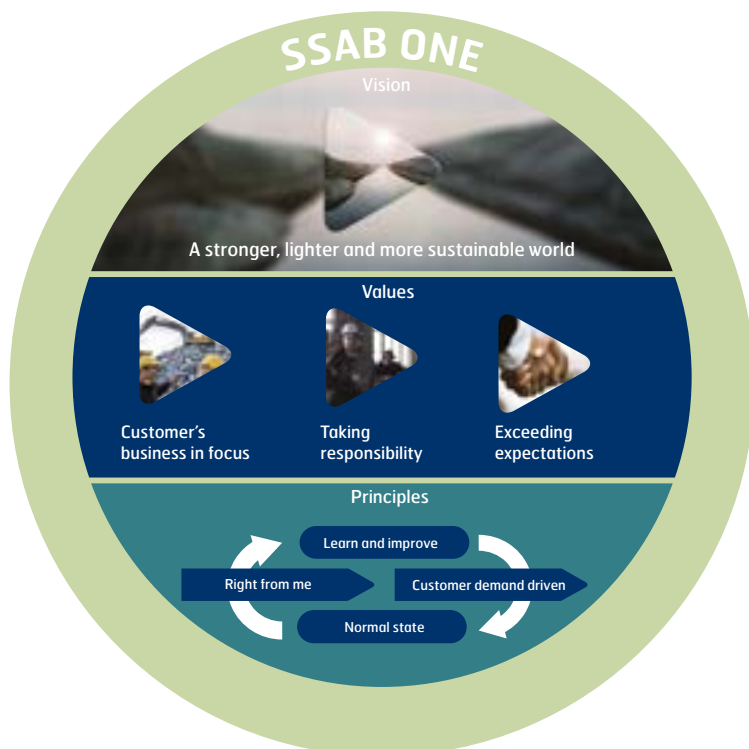
SSAB's strategic direction

SSAB's strategy "Taking the lead" is aimed at securing the company's long-term development and value for shareholders and other stakeholders, while at the same time promoting long-term sustainable development. SSAB's overarching objective is to be one of the most profitable steel companies in the world.



SSAB ONE – THE NAME OF OUR MANAGEMENT PHILOSOPHY

SSAB One is about having the customer's business as a starting point when involving all employees in improvement work, to improve the flow or the series of activities that create customer value.



FINANCIAL TARGETS

SSAB has three financial targets within three areas.

Area	Objective
Profitability	SSAB targets an industry-leading profitability measured as EBITDA margin among comparable peers ¹⁾ .
Capital structure	The Group's operations are cyclical. The objective is a long-term net debt/equity ratio of 30%.
Dividends	Dividends are adapted to the average earnings level over a business cycle and, in the long term, constitute approximately 50% of profit after tax, taking into consideration the net debt/equity ratio. It shall also be possible to use dividends to adjust the capital structure.

SUSTAINABILITY TARGETS

Following the combination between SSAB and Rautaruukki, a new sustainability strategy and targets for SSAB are being developed. The new sustainability strategy, to be launched during 2015, will support the overall SSAB strategy – Taking the lead.

¹⁾ AK Steel, Dillinger, Nucor, Salzgitter, Steel Dynamics, Tata Steel Europe, Thyssenkrupp, US Steel

Our sustainability approach

Our vision is the core of our sustainability approach. In everything we do, we strive to create a stronger, lighter and more sustainable world. Our role as a unique, highly-specialized steel company and our strategy of global leadership in high-strength steels are the main drivers towards our vision. Global drivers such as a growing population, increased energy demand and a scarcity of natural resources as well as climate change, make it increasingly important for us to focus on material and energy efficiency both for our products and own operations.

Our sustainability approach is based on our economic, environmental and social performance. We take responsibility, not only for our own operations, but also taking into account the whole value chain. Our employees are a key driving force, given that our value-added services are built on experience and know-how, and we continue to develop our high-performing organization. Safety is always a top priority for SSAB. We are determined to be one the safest steel companies in the world with an objective of zero accidents and work-related injuries.

New organization for sustainability management

In the new SSAB, stronger focus is being placed on managing and coordinating sustainability and corporate responsibility issues on Group level. In September 2014, Maria Långberg was appointed President Merox AB

and Vice President & Head of Group Sustainability. She reports directly to the President and CEO of SSAB. To ensure Group-wide collaboration, a Sustainability Management Team has been formed. The members of the team create a network of expertise having the responsibility of coordinating SSAB's sustainability initiatives on Group level. Decisions related to the strategic direction of SSAB's sustainability work are taken by the Sustainability Board. In practice, sustainability is integrated into the day-to-day work at production sites, as well as, global business and support functions.

Sustainability work throughout the organization

Each member of the Sustainability Management Team is responsible to include relevant employees throughout the organization to ensure the involvement of key experts and divisional representation. To support work

related to issues concerning the external environment, SSAB has an Environmental Council, which includes representatives from each division and main production sites as well as SSAB's subsidiaries, Merox and Tibnor. The Council is chaired by SSAB's Environmental Director, also member of the Sustainability Management Team. For issues related to responsible sourcing the Director of Business Ethics is working together with the procurement department.

Renewed sustainability strategy

Because of the combination with Rautaruukki, there will be a review of the sustainability strategy and objectives introduced in 2013. At the end of 2014, a materiality analysis process was conducted in order to define SSAB's most important sustainability aspects in accordance with the new GRI G4* process. As a part of this process, a stakeholder survey

The organization



was carried out in the form of an online survey and interviews of a selected group of our key stakeholders – owners, investors, customers and our own employees. The outcomes of the stakeholder survey will be taken into account when updating SSAB's sustainability focus areas and targets, and when defining the material aspects and indicators for GRI G4 report content in 2015.

The renewed sustainability objectives for SSAB will be defined during 2015. These objectives will include measurable targets related to our most important sustainability aspects. Information about the sustainability targets defined in 2013 can be found in this report on pages 21 and 32.

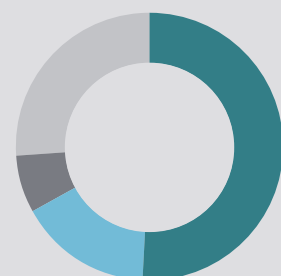
Stakeholder engagement and continuous dialogue

SSAB aims for regular, honest and transparent interaction with its stakeholders. We actively maintain and develop our stakeholder relations and draw on information obtained from stakeholders when developing our operations, products and services. Through a continuous dialog SSAB also communicates what efforts and measures are taken within sustainability. At the same time, good communication is equally important from a stakeholder perspective – that SSAB can contribute to sus-

tainability related assessments from suppliers and customers, investors as well as from various sustainability ratings. SSAB has defined its key stakeholders as being its customers, suppliers and subcontractors, owners, investors and its own employees. Collaboration and interaction with these stakeholders are high on the corporate responsibility agenda. Other stakeholders we interact actively with include the media, local communities near our production sites, regulators and various non-governmental organizations, research bodies and partner organizations.

* Global Reporting initiative (GRI) is a leading sustainability reporting framework. The fourth generation of the guidelines, GRI G4, was launched in 2013. Reports published after December 31, 2015 should be prepared in accordance with the new version, if a company reports officially according to the GRI framework.

Distribution of economic value



- Wages and salaries 51%
- Social security expenses 16%
- Dividends to shareholders 0%
- Interest payments to lenders 7%
- Reinvested in the company 26%

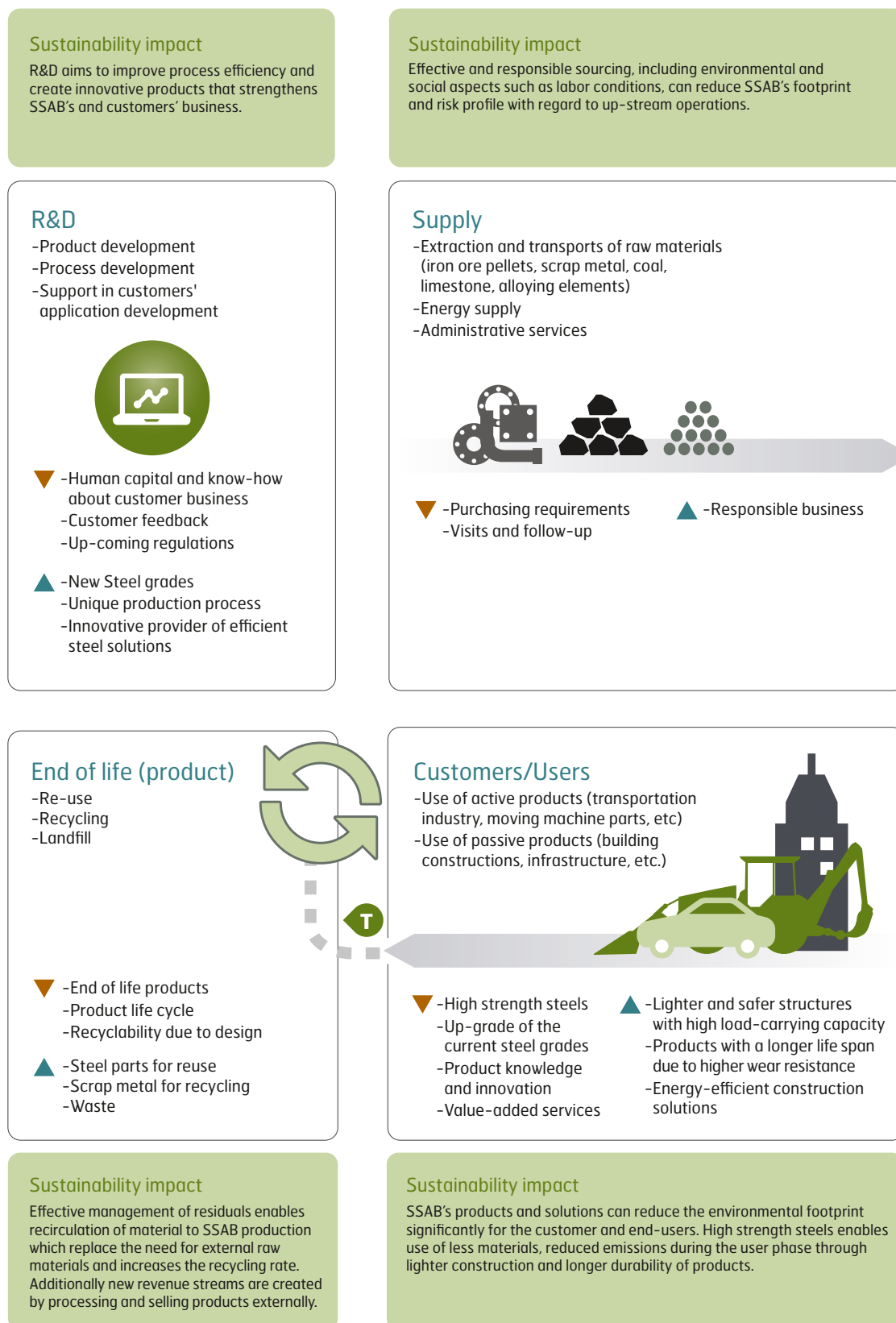
SSAB creates and distributes economic value to various stakeholders in society, such as owners, financiers, suppliers, employees, the public sector and communities, whilst minimizing the adverse impacts of its operations. SSAB is a major local and regional influence in many places where it has production sites. This is reflected in SSAB's role as an employer, buyer of regional goods and services and as a benefactor to local communities. The chart above illustrates how the economic added value created by SSAB was distributed among various stakeholders in 2014.

SSAB welcomes dialogue and actively seeks comments from different stakeholders by inviting them to open forums or presentations. Examples of these are summarized in the table below.

Stakeholder	Forum	Issues
Customers	Meetings with customers, Knowledge Service Center, customer seminars, trade fairs and the Swedish Steel Prize	<ul style="list-style-type: none"> • Profitability and environmental benefits with high-strength steels • Exchange of know-how • Quality in deliveries • Joint development together with our customers
Employees	Performance dialogs, employee surveys and information meetings	<ul style="list-style-type: none"> • Health & Safety • Feedback from performance dialogs • Strategic and integration issues
Shareholders	Annual General Meeting, Capital Markets Day, investor meetings with shareholders, investors and analysts, interviews and web survey	<ul style="list-style-type: none"> • Strategy and financial performance • Sustainability strategy and management • Safety issues • Risks relating to suppliers • Climate change issues • Resource and energy efficiency
Authorities and organizations	Industry organizations, research co-operation projects, consultation and negotiations on permit matters	<ul style="list-style-type: none"> • Emissions rights trading and competitive conditions • Technological development • Environmental and social responsibility reporting
Suppliers	Purchasing meetings, conferences and visits to suppliers	<ul style="list-style-type: none"> • Contract issues regarding human rights, the environment and other matters regarding responsible sourcing • Delivery certainty and quality
The community	Local consultation with residents, the media, environmental groups and politicians	<ul style="list-style-type: none"> • Permit matters • Impact on the local community • Impact on the environment • Exchanges of information • Community relations

SSAB's sustainable value chain

SSAB's value chain illustrates relevant sub-activities throughout the various phases of the value chain, highlighting the inputs needed and outputs generated in each stage, and the main sustainability impact on SSAB's business, stakeholders and the environment. SSAB strives to integrate sustainability in its culture, and the company's endeavors depend on every employees' contribution. Every activity undertaken is guided by our vision and values, the principles of our management philosophy SSAB ONE, management systems, Code of Business Ethics, and complies with applicable laws and regulations.

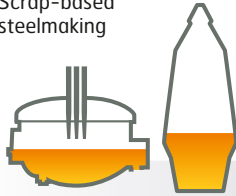


Sustainability impact

Energy intensive production requires high focus on material and energy efficiency to mitigate environmental impacts, including climate change. Health and safety in the workplace is a top priority. Stakeholders trust SSAB to manage labor rights and other social impacts of our operations responsibly.

Production

- Own personnel and contractors
- Ore-based hot metal and steelmaking
- Scrap-based steelmaking
- Casting and slabs handling
- Rolling, quenching, coating
- Energy recovery
- By-products and waste management



- ▼ -Iron ore pellets, scrap metal, coke, limestone, alloying elements, residuals
- ▼ -Energy (electricity and fuels)
- ▲ -High strength steels (strip products and heavy plates)
- ▲ -Ordinary steels
- ▲ -Materials for recirculation
- ▲ -By-products for external sales
- ▲ -Energy for recovery
- ▲ -Emissions to air and water
- ▲ -Waste to landfill

Sales

- Marketing and sales
- Knowledge service centers
- Go-to market
- Wear services
- Distributors
- Agents



- ▼ -Customer needs and demands
- ▼ -Know-how and sales skills
- ▲ -Satisfied customers
- ▲ -Strengthened customer relationships

Sustainability impact

The sales stage, including all market activities, is key to identify customer needs and gain market insights leading to potential improvements of products and offerings. Through collaborations SSAB can help customers improve their processes and products, through new design and constructions.

SSAB's guiding principles

- Vision and values
- SSAB ONE, our common management philosophy
- The management systems
- Code of Business Ethics
- Regulatory Compliance

Sustainability impact

SSAB's business is dependent on efficient transports throughout the stages of the value chain. Logistic efficiency in terms of timely and optimized transports as well as reduced fuel rates have direct economic and environmental impact for SSAB.

Transport

- External transports (land-based and sea-based)
- Internal transports



- ▼ -Logistics planning
- ▼ -Electricity, diesel and heavy fuel oil
- ▲ -Emissions to air (exhaust gases)
- ▲ -On-time deliveries

T Transport

▼ Input ▲ Output

Policies and guidelines

Since the combination with Rautaruukki, SSAB has undergone major reorganization. To ensure all Group policies and guidelines continue to meet external and internal requirements, Group policies will be updated during the beginning of 2015 according to the new company. The Code of Business Ethics, the Environmental Policy and the Health and Safety Policy are the most important Group policies from a sustainability perspective.

Code of Business Ethics

SSAB's Code of Business Ethics (the "Code") is the company's ethical compass and lays down guidelines for SSAB's behavior vis-à-vis stakeholders and the market. The Code helps us translate values into action and forms the basis for our environmental and social responsibility commitments. The provisions of the Code take precedence over all other policies in a division area or at a subsidiary level and, in certain cases, may be more far-reaching than national laws and regulations. The Code is corporate-wide and applies to all employees. The Code is based on international standards including the UN Declaration of Human Rights and UN Global Compact Principles.

SSAB's up-dated Code of Business Ethics will include guidance within:

- Employee health and safety
- Diversity and internationally recognized labor law guidelines
- Business practice
- Human rights
- Stakeholder and community relations
- The environment
- Communication

Health & Safety Policy and Environmental Policy

In order to reflect the new SSAB, a new Health & Safety Policy and a new Environmental Policy is being defined. SSAB is committed to creating value for its stakeholders and to building relationships based upon respect, responsibility and excellence with its employees, customers, shareholders and other business partners – and to do so in a socially and environmentally responsible manner.

The new Health & Safety Policy will focus on a safe working environment for all SSAB's employees and contractors. Compromising on safety is never acceptable. SSAB actively strives for the continuous improvement of workplace health and safety for its employees and contractors.

The new Environmental Policy will establish the most important ambitions for SSAB's environmental work and cover the environmental aspects, which play a key role in the sustainable development of SSAB's business. The Environmental Policy will support day-to-day work across the organization and will essentially entail the following:

- SSAB will continue to develop products and services in cooperation with customers, so as to actively contribute to environmentally sound and profitable business;
- SSAB attaches importance to the efficient use of raw materials and energy, while minimizing waste

Risk awareness and systematic risk management

Management systems and action plans ensure the Group systematically carries out its work on critical sustainability issues. Several different management systems and tools are used to effectively control operations in accordance with SSAB's Code of Business Ethics, Health & Safety Policy and Environmental Policy. Systems developed in-house, as well as third party certified systems, are in place. Safety management systems for systematic health and safety work have been implemented at all production sites, of which OHSAS 18001 is one of the systems used. Environmental and climate work takes place primarily within the scope of the ISO 14001 environmental management standard and via local energy management systems. Work environment risks and environmental risks are also covered by SSAB's internal risk controls and internal audits.

Whistleblower

A whistleblower function allows employees to report serious irregularities and violations of SSAB's various policies. In 2014, 5 (9) complaints were reported to the Whistleblower function. Two of these cases have resulted in SSAB taking action and 3 are still under investigation.

Corporate Governance

For information regarding corporate governance, see pages 98–109 in the Annual Report 2014.

Sustainability Indices

An increasing number of investors and analysts assess SSAB's share taking into account also the company's environmental and social responsibility, as well as corporate governance work. SSAB is selected for inclusion in the Ethibel EXCELLENCE Investment Register. This selection by Forum ETHIBEL indicates that the company performs better than average in its sector in terms of Corporate Social Responsibility. In addition, SSAB maintains its inclusion in the OMX GES Sustainability Sweden Ethical Index.

SSAB is a signatory to the UN's Global Compact and supports its 10 principles within the areas of human rights, labor standards, the environment and anticorruption.



Environmental responsibility

To minimize our environmental footprint, we remain committed to further improving the resource efficiency in our operations. We continue to innovate and provide our customers with unique steel products and applications that increase material and energy efficiency throughout the end-product's lifecycle. The potential to reduce the weight, whilst increasing the productivity and durability of end-products is a crucial environmental aspect from the lifecycle perspective. Use of SSAB's high-strength steels can reduce the carbon dioxide (CO₂) emissions of end-products. In many cases, this reduction exceeds the emissions that originate from the steel production processes due to e.g. lighter vehicles that consume less fuel.



Steel lifecycle

Steel is the most recycled industrial material in the world and can be recycled indefinitely without losing its properties. Due to its durability, steel products have a long useful life and can often be recycled and used in other applications, thus saving resources. SSAB aims to reduce the environmental impact of its steel products in every phase of the life-cycle, from raw material extraction to recycling at the end of a product's life.

1. Responsibility in raw material sourcing

Raw materials used in iron and steel production are our most significant purchases. SSAB purchases iron ore pellets from the Swedish supplier, LKAB, and a smaller share from the Russian supplier, Severstal. Metallurgical coal is purchased from major suppliers in Australia, Canada, the US and a smaller share from a Russian supplier. The injection coal is sourced from a specific mine in Russia. Steel scrap from the scrap market is used as raw material in all SSAB's steel mills and scrap is purchased locally in the US, Sweden and Finland. Supportive blast furnace coke is purchased in Poland to the Raahé site, when needed. Limestone is purchased for all steel making from Sweden. Alloys are purchased from some 40 different suppliers.

Read more about responsible sourcing of raw materials on page 37.

2. Efficient steel production

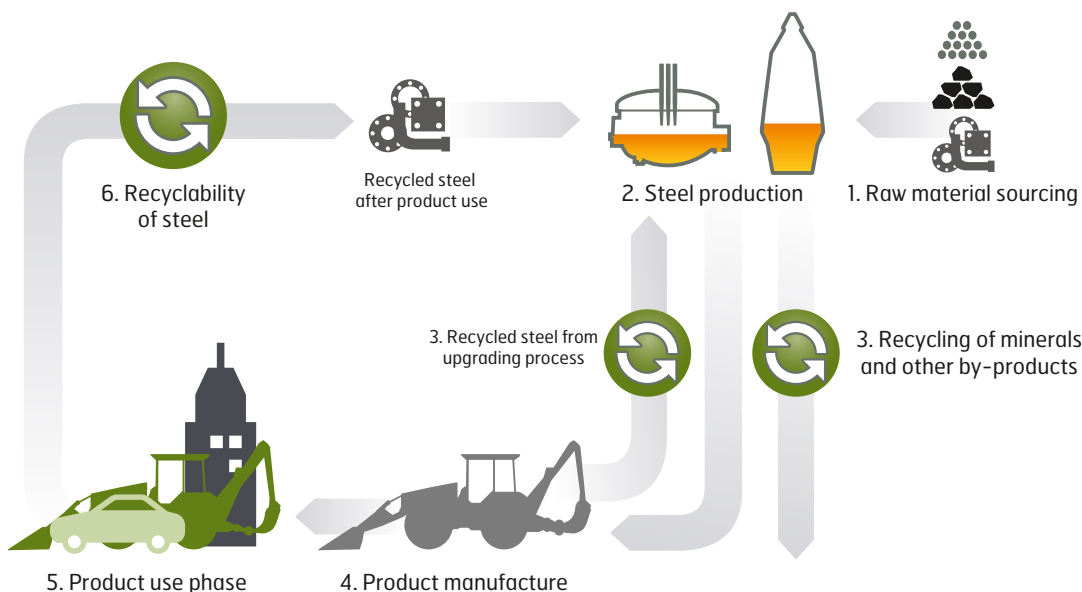
Two different processes are used in the production of SSAB's steels: iron-ore based production in blast furnaces in Sweden and Finland and scrap-based production in electric arc furnaces in the U.S. Even though the efficiency of our five blast furnaces is already among the top performers in the world, we are constantly looking for opportunities to improve. Industry-wide cooperation is important for continuously improving the technology available to reduce emissions. CO₂ emissions originating in production in electric arc furnaces are less than 10% of the emissions generated from iron ore-based steel production.

Read about our continuous work to improve our environmental performance on pages 20–27.

3. Recycling of minerals and other by-products

Wherever possible, minerals and by-products created in the iron- and steel-making process are recycled to substitute virgin raw materials. Most of the dust created in the blast furnace based steel-making process is returned back to the process, which results in decreased waste amount and increased material efficiency. Recycled steel reduces the environmental footprint during the end-product's lifecycle. It replaces the iron ore as input material in the steel production process. Also energy flows created are recovered back to the production process. Not all by-products can be recirculated in the steel production. In some cases new revenue streams are created by processing and selling products externally. The material flows from production that cannot be recycled or sold externally are sent to

The SSAB steel lifecycle



landfill. In the Nordics, SSAB's subsidiary Merox develops products based on by-products originating in steel operations. The by-products are recycled internally or sold externally, and new areas of use as alternatives to depositing in landfills are continuously under development.

Read more about the material and energy efficiency of our production and how by-products are managed on pages 22–24.

4. Resource-efficient product manufacture

High-strength steels are stronger than ordinary standard steels. Withstanding any given physical load requires less high-strength steels than would be the case using standard steels. Consequently, designs that use high-strength steels are lighter and weight savings can be up to 20–40%, meaning around 20–40% less steel is used. In addition, the quantities of steel material involved in the end-product's manufacturing process, as well as the resources used in steel production (iron ore, alloying elements, carbon and energy) are also similarly reduced. In close collaboration with customers, product design can increase the environmental and cost benefits enabled by the use of high-strength steels.

5. Use phase: Stronger, lighter and more sustainable world

Through the use of high-strength steels, customers are able to manufacture products, which use less material, are stronger, lighter and provide improved total economy. For energy using applications the use phase carries a significant share of the lifecycle environmental footprint. The most beneficial weight reductions can be found in applications such as mobile and loader cranes and load handling equipment. In many cases, the reduction in emissions due to decreased weight can exceed the emissions originating in the steel production processes when calculated over the entire lifecycle of an end-product.

Read more about our energy-efficient steel products and construction solutions on pages 16–19.

6. Recyclability of steel

As the world's most recycled industrial material, steel is unique in that it retains its properties no matter how many times it is recycled. Using recycled steel, scrap metal, in steel production saves natural resources and increases material efficiency, whilst also reducing CO₂ emissions. However, recycled steel is not enough to meet the growing demand for steel

and thus primary steel needs to be produced from iron ore. SSAB's mills in the US produce steel based exclusively on recycled scrap metal. Small amounts of coal and natural gas are used in the production process, but mainly electricity is used for smelting the scrap metal. All in all, CO₂ emissions are less than one tenth of the emissions generated in conjunction with iron ore-based steel production. SSAB uses approximately 20% of scrap metal in conjunction with steel production in Sweden and Finland, and 100% in the US.

Read more about the benefits of steel recycling on page 22.



Life cycle assessment shows the efficiency of SSAB's steel production

SSAB conducted a Life Cycle Assessment (LCA) study for several steel products in 2014. The LCA study, based on data from 2012 and conducted for SSAB's steel plant in Raahé, showed that the steel mill can produce a tonne of steel with approximately 10% smaller global warming potential and energy use, compared to the European average. The lifecycle assessment is based on SSAB's own production and worldsteel datasets*, which provide accurate and comprehensive data on the environmental profiles of steel products. Given the performance of the blast furnaces in Luleå and Oxelösund, they will most likely show similar results if included in a LCA study. Specific LCA data for SSAB's products are available in the form of environmental product declarations (EPDs) for steel products and steel construction products. EPDs contain information about the lifecycle environmental impacts of products: the use of raw materials, energy consumption and emissions arising from production, as well as product recyclability. These EPDs are available on request. Construction product EPDs are posted also on Ruukki Construction's website (www.ruukki.com).

* SSAB has contributed to worldsteel's product lifecycle inventory data (LCI). The information is available on request to all SSAB stakeholders via worldsteel's website

Increased efficiency and environmental benefits with high-strength and wear steels

Requirements and demand for improved material and energy efficiency are important drivers leading to the growing use of high-strength steels, which provide advantages in the form of stronger, lighter and more durable steel solutions. High-strength steel applications reduce the environmental footprint at the user stage, and have an important role in the transition towards a more sustainable world.

Unique offering in special steels

SSAB offers its customers a broad range of high-strength and wear steels that enable better energy and material efficiency, as well as strength and durability in the applications they are used in. In addition, reduced dead-weight in moving transport means higher payloads and improved fuel economy.

Driving improvement with knowledge sharing

SSAB works in close cooperation with its customers during the phases of application and process development in order to design more value-added and sustainable products by upgrading into high-strength or wear steels. By taking full advantage of SSAB's value-added services and technical expertise, customers can build lighter products with longer life-cycle. Hardox Wearparts is a one-stop-shop service concept, providing spare parts and advice to users of Hardox wear steel e.g. in mining, infrastructure, construction and recycling machinery. The concept allows for further product development and innovation, creating opportunities for e.g. abrasion calculations on existing equipment and improvement measures with new replacement parts. It also benefits the environment by extending the lifespan of end-products. SSAB Shape offers customized solutions based on a wide range of design, processing and logistics services through its own VAS Centers and a worldwide network of pre-processing suppliers. In addition, SSAB's Knowledge Service Center provides specific advice and innovation support regarding the ways in which the properties of high-strength steels can be utilized to achieve maximum benefits, creating more value-added and sustainable products.

Optimized weight and fuel consumption in moving transport segment

The environmental and financial advantages of using high-strength steels are significant in active constructions such as trailers, trucks, materials handling and lifting equipment as well as construction machinery. In these appli-

cations, the use of SSAB's high-strength steels (Domex, Weldox and Optim) reduces the weight of vehicle structures by enabling minimum steel thickness through new structural design, and also enables redesigns that can reduce production cost, e.g. through less welding, and improved usability. A reduction in the weight of the vehicle leads to increased payloads and lower fuel consumption and emissions. For example, the weight of trailer bodies made of SSAB's high-strength steels can be reduced by up to 30% compared to using traditional steel grades. In applications such as lifting equipment, where high load-bearing capacity is required, the use of high-strength steel enables stronger designs. At the same time, structural wall thickness is reduced, which through weight savings lowers fuel consumption and emissions of mobile machines.

Furthermore, automotive manufacturers are calling for light-weight, durable materials with beneficial environmental properties that, additionally, are manufactured resource efficiently. SSAB's cold-rolled advanced high-strength steels make it possible to develop safer, lighter and less emitting cars. The new steel grade Docol 1700 M has been engineered for safety applications in cars with stringent requirements for reduced weight and high energy absorption.

Extended service life of machinery and equipment

SSAB's wear steels (Hardox, Raex) are Quenched and Tempered (Q&T) steels that are used in different types of machinery and equipment in mining, quarries, recycling and road building segments. Common to all these applications is that they have a unique combination of hardness and toughness that is characteristic of Q&T steels. Using Q&T steels in buckets, crushers, blades, shredders and tip-pers provides higher resistance against structural wear and damage, which in turn improves machinery performance and extends its service life. Additionally, weight reductions in machinery result in cost benefits to end-users

40%

High-strength steels can reduce up to 40% of the weight in steel constructions.

10-40%

High-strength steels can reduce CO₂ emissions by 10–40% during the life cycle of passive constructions.

5-10%

High-strength steels can reduce CO₂ emissions by 5–10% during the life cycle of active constructions.

and reduce the environmental impact over the machinery's lifecycle.

Improved energy-efficiency and eco-friendliness with coatings

SSAB develops new functional surface coatings that lower energy consumption and maintenance costs, improve durability of surface and extend the life-span of buildings. There are several coatings that contribute to a more environmental friendly and sustainable construction. Thermal coatings (Prelaq Energy and Hiarc reflect) reflect solar radiation when used outside the building and thermal radiation when used inside the building leading to decreased energy consumption in heating and cooling. GreenCoat is a new type of color coating for steel, including high-strength steel, that is partly based on rapeseed oil instead of traditional fossil oil. The result is an improved coated steel product, with a prolonged service lifetime, as well as a reduced environmental footprint.

Swedish steel prize case: Building the world's largest dump truck

The winning design of the international Swedish Steel Prize* 2014 was created by the global mining dump truck manufacturer Belaz from Belarus. By using SSAB's high-strength steels in the new innovative construction for axle suspension and slewing bearings, Belaz successfully created the world's largest dump truck, the 75710. The dump truck is capable of a payload of 450 tonnes, an increase of 20% compared to conventional trucks leading to decreased emissions per ton transported load. The new construction takes full advantage of the properties of high-strength steels using Weldox 700F in the swivel carriage (part of the truck suspension system) and Hardox 450 in the dump truck body.

Other features of the dump truck include an additional pair of tires (in total 4 pairs) and to save fuel when the dump truck is not loaded, it runs on only one of its two 16-cylinder diesel engines. The full load fuel consumption is 13 L/km.

The dump truck is currently undergoing final testing in an open coal pit in Siberia, known for its harsh mining conditions, proving that the dump truck can handle temperatures down to -60 Celsius degrees. The first dump truck is already being produced and there are more orders planned for 2015.

* The Swedish Steel Prize was established by SSAB in 1999 to inspire and disseminate knowledge about high-strength steel and how it can be used to develop stronger, lighter and more sustainable products.



Energy-efficient construction solutions

The building sector accounts for around 40% of total European energy use. Reducing the energy consumption through thermal control in buildings, especially heating, cooling and air conditioning, plays an important role in reaching the energy efficiency targets set by the European Union. Through the use of energy-efficient exterior structures and by utilizing renewable energy sources, it is possible to enhance the energy performance of a building during its use phase. SSAB's energy efficient solutions for the construction industry take into account increasingly stringent requirements for the energy performance of buildings, and can directly impact on buildings' energy performance ratings in environmental certifications.

Reduced energy consumption with energy-efficient building solutions

By using energy-efficient exterior structures, such as energy panels, the user of a building gains improvements in the building's energy efficiency performance. The thermal insulation of Ruukki Construction's* energy panel, combined with the airtightness of the panel, generates savings of up to 20% in annual energy costs compared to the use of more traditional sandwich panels in Nordic conditions. During 2014, a new renovation concept for old commercial and industrial buildings was developed that utilizes a building's existing frame and installs panels on the walls to improve the energy performance. By preserving the old frame, the solution also saves materials and costs.

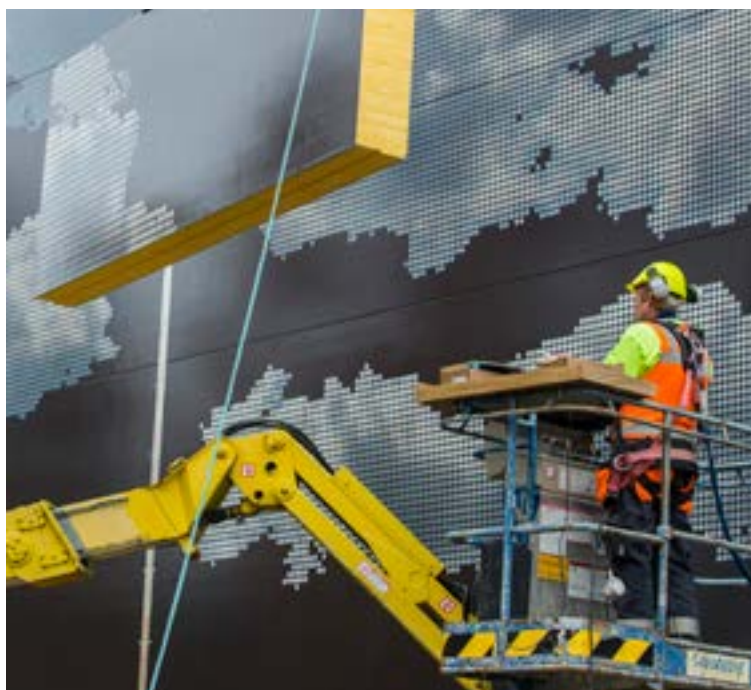
Decreasing CO₂ emissions with renewable energy sources

By using solutions that utilize renewable energy sources, it is also possible for the building sector to reduce its overall environmental impacts and gain benefits in building energy performance. Ruukki Construction's solar energy solutions for roofing and facades enable solar energy to be used to heat up domestic hot water and living spaces. There is also a made-to-measure system, launched in 2014, available within the solar thermal products.

20%

Ruukki Construction's energy panel can generate 20% of savings in the annual energy costs of a building.

* A division of SSAB Group



Near zero-energy hall in Hämeenlinna

Ruukki Construction has participated in a project to build a near zero-energy hall on the campus of HAMK University of Applied Sciences in Hämeenlinna. When completed during the spring 2015, the 1 500-square-meter hall will be the first near zero-energy hall in Finland. A near zero-energy hall is more competitive than a similar hall built using traditional building solutions since the initial investment is less than the energy savings over the entire building's life cycle. Energy piles in the building's foundations transfer geothermal energy to heat up the building during winter. During summer, solar thermal energy is transferred into the ground, where it is stored and utilized again during winter. Solar heat collectors are installed on the roof and the building envelope is created with an airtight energy panel system and walls that feature components collecting solar energy to be used in heating. The windows and the envelope have been designed for maximum energy efficiency and weather protection. Instruments and sensors are installed in the hall structures to verify lifecycle energy efficiency. Partners in the project are Ruukki Construction, HAMK and Häme Municipal Federation for Professional Higher Education (HAKKY). Arkkitehtitoimisto Kaipainen Oy is the lead designer in the project.

Ruukki Construction solutions for low- and zero-energy buildings:

- **Ruukki Classic Solar thermal roof** heats up water with solar energy
- **Ruukki Solar energy solutions** are a product family for water heating and electricity production based on solar energy
- **Ruukki facade solar systems** are building-integrated systems, which convert sunlight into electricity
- **Hiarc reflect coating** for façade solutions keeps the façade surface cooler, which reduces the need for indoor cooling and improves the energy efficiency of the building
- **Ruukki energy panels** ensure thermal insulation and air tightness that conforms to the strictest requirements for thermal insulation. Energy panels can generate savings up to 20% in annual building energy costs compared to the use of more traditional sandwich panels
- **Ruukki life energy panels** lower Global Warming Potential and enable higher rate of secondary material usage in buildings
- **eRR and eRD energy piles** can be integrated into a ground heat collection system in building foundations



Continuous work to improve our environmental performance

Steel production is resource intensive and generates carbon dioxide emissions. SSAB is committed to continuous environmental work aiming at minimizing the adverse environmental impacts from our operations. Even if our blast furnaces are among the most efficient in the world in terms of minimizing emissions, we are constantly looking for opportunities to improve. Also in 2014, we invested in technology that reduces emissions and increases energy efficiency.

Significant environmental aspects

The most significant environmental aspects for SSAB are:

- Efficient use of raw materials and energy
- Air emission reductions of carbon dioxides, nitrogen oxides, sulfur oxides and particulate matter
- Water effluent reductions of nitrogen and suspended substances
- Landfill waste minimization

The most significant environmental impacts arise at SSAB's production sites in Luleå, Borlänge, Oxelösund, Raahé, Hämeenlinna, Mobile and Montpelier. However, the impact on the local environment in the vicinity of SSAB's plants has decreased significantly over time. Technological advances and increasingly stringent external requirements promote continuous operational improvements.

Emissions and resource utilization can be controlled and reduced by improving energy efficiency in the production processes and by recirculating by-products (slag, sludge, mill scale and dust) and scrap as input material in steel production. Where it is not possible to return the residual materials back to the processes, SSAB's Nordic subsidiary, Merox, is working to develop new areas of use for them as alternatives to depositing in landfills. Systematic energy efficiency management at all sites and energy recovery, as well as production of electricity from process gases at steel mills, ensure efficient use of energy and lower emissions.

Our blast furnaces are among the most efficient in the world

SSAB has significantly reduced emissions over the past decades by focusing on improving resource efficiency, e.g. by utilizing waste energy for district heating, and by investing in environmentally sound technology. Steel production processes are based on the best available technology. In recent years, one of the main focus areas has been to find a solution for resource-efficient production while running blast furnaces at below maximum capacity in a response to lower steel demand.

Energy efficiency in production is improved through utilization of process gases, recovered heat and residual materials from production processes instead of purchased fuel and raw materials.

As a result of continuous development of our processes, our blast furnaces are among the most efficient in the world in terms of minimizing emissions from steel production. SSAB's use of coke and coal as reducing elements is close to the theoretical minimum for a blast furnace. If SSAB had used reducing agents as the average blast furnace in Europe (EU15), the emissions of carbon dioxide would have been 7% higher, i.e. 600,000 tonnes more on annual basis (see graph below). Industry-wide cooperation is important for identifying new technical solutions that can further decrease the impacts of steel making processes. In the Nordics, SSAB is collaborating with KTH Royal Institute of Technology in Stockholm, Luleå University of Technology,

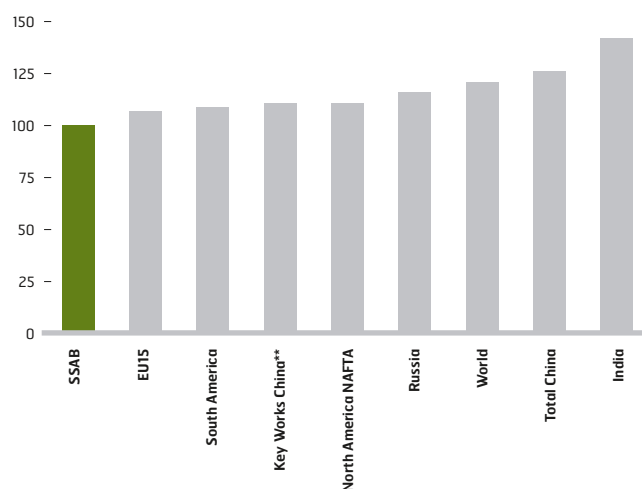
Dalarna University, Swerea, Oulu University, Aalto University, Åbo Akademi University and VTT Technical Research Centre of Finland. In SSAB Americas The American Iron and Steel Association is an important partner. SSAB is participating in various national and international joint projects with different research institutions and industrial associations.

Environmental management

The continuous development of environmental performance is ensured through monitoring performance against environmental targets and the environmental management system. SSAB's environmental management is based on the Group's Environmental Policy and the international environmental and energy management system ISO 14 001 and ISO 50 001 standards.

In 2014, all SSAB's manufacturing sites had third party certification for the ISO14001 standard. Energy efficiency management is

Blast furnace efficiency*



* Consumption of reducing agents (coal, coke, gas, oil) in iron making in blast furnaces (kg/t hot metal). Indexed, SSAB=100. Source: Stahl-Zentrum (2012) and SSAB

** Key Works in China = Steel works with 70% of total hot metal production in China

systematically promoted at production sites, either as part of an ISO14001 system or through a certified ISO50001 energy management system (in Borlänge and Finspång).

Internal and external audits at sites ensure that everyday practices comply with set targets. Also regular management reviews drive the environmental work. In 2014, work started on preparing an action plan to ensure compliance with the coming revision of the ISO14001 environmental management system standard.

Divisions, subsidiaries and sites are responsible for putting environmental protection into practice. Each production site has an environmental team or manager responsible for monitoring compliance with legislation and handling permit matters. Each SSAB employee is responsible for complying with the environmental policy and for integrating environmental aspects into their everyday work.

Management of environmental risks

Environmental risks are included in the corporate risk management process. Risk management supports the company's strategy and ensures business continuity. Emissions from normal operating conditions are controlled and subject to environmental permit limits. Regular risk analyses cover possible emissions in the event of disruption or accident. The results of these analysis serve as the basis for

preventive measures and corrective actions at various levels, both in corporate governance and ways of working locally on site.

Environmental permits and legislation

SSAB's operations are subject to environmental permits containing numerous environmental conditions governing various parameters as it relates to production levels, air emissions, discharge water effluent, and waste management. All production sites comply with relevant local, state, and federal environmental requirements and the Group holds mandatory environmental damage as well as liability insurance covering damage to third parties. SSAB records all environmental damage and other environmental non-compliances and makes a public proclamation of them to the authorities. On some occasions permit limits at the Raahe Works were exceeded during 2014. The most common cause for exceeding was oil discharges into the waterways caused by oil escaping into cooling systems. As corrective actions a new oil separation basin with oil removing devices is invested in one wastewater line and operational and maintenance work practices are improved. SSAB received no environmental fines during 2014.

Environmental targets for 2014–2018 and progress in 2014

The Corporate Sustainability Strategy includes three measurable environmental targets, developed by the former SSAB, for the period of 2014–2018. The baseline year was 2013. To date, all targets are on track. Measures completed during 2014 will allow approximately 40% of the carbon emission reduction target to be met and the targets related to the reduction of purchased energy and material deposited in landfills to be surpassed in 2015. The most significant improvement measures taken were the switch from oil to natural gas in Borlänge and, since 2014, the briquetting of Basic Oxygen Furnace (BOF) sludge in Luleå being used as a raw material in the blast furnace instead of being sent to landfill. By the end of 2018, individual activities shall, in a sustainable manner and when taken together on an annual basis, have:

- Reduced by 100,000 tonnes CO₂ emissions derived from fossil fuels
- Reduced by 20 GWh the use of purchased energy
- Reduced by 10,000 tonnes the quantity of material deposited in landfills or sent for destruction externally

New environmental targets for SSAB in 2015

Renewed sustainability targets for SSAB will be set during 2015 as a part of SSAB's new sustainability agenda. The targets will include measurable targets related to minimizing our environmental impacts. The revision of targets is necessary because of the combination with Rautaruukki. In addition to Group level targets, all SSAB's production sites have their own more specific environmental targets that are relevant for their type of production and impacts they have.

The new targets will be published on our sustainability website (<http://www.ssab.com/en/Sustainability/>)

Permitted production at the Swedish plants ¹⁾

Thousand tonnes	Locality	Permitted production	Production 2014
Coke	Luleå	1,100	652
	Oxelösund	530	385
Hot metal	Luleå	– ²⁾	2,093
	Oxelösund	2,000	914
Steel slabs	Luleå	3,000	2,030
	Oxelösund	1,900	930
Hot-rolled steel	Borlänge	3,200	2,008
	Oxelösund	1,000	519
Pickled steel	Borlänge	2,500	1,267
Cold-rolled steel	Borlänge	1,400	764
Annealed steel	Borlänge	650	468
Metal-coated steel	Borlänge	400	303
Organic-coated products	Borlänge	140	86
	Köping	30	14
	Finspång ³⁾	40	21

¹⁾ Not applicable to Finnish sites due to different legislation. In North America, production levels are determined in the form of maximum permitted hourly production volumes.

²⁾ Not regulated.

³⁾ Unit million m².

Recycling, material efficiency and waste management

Material and energy efficiency is a key aspect in minimizing emissions originating in SSAB's own production processes. Effective management of residuals enables recirculation of material back to production, which replaces the need for external raw materials and increases the recycling rate. This includes by-products from blast furnace production that are recirculated, and scrap metal that is recycled and used in blast furnace, steel plant and electric arc furnace steel production.

Recirculation of by-products and slag

SSAB promotes the use of materials originating from its production in its own processes and thus reduces the use of natural minerals and decreases raw material costs in production. In 2014, the amount of raw materials used in steel production in the Nordics amounted to 12.7 million tonnes and in the U.S. 3.4 million tonnes. Thanks to the exact processes, as well as the long experience and expertise in SSAB's steelmaking, steel production gives rise to a number of valuable by-products that can be recirculated back into the processes. In 2014, 78% of by-products and waste from the ore-based steel production were utilized, internally and externally.

Steel slag (BOF slag) is recirculated in the blast furnaces in Luleå, Raahе and Oxelösund. During the year, a new sludge drying method was taken into use in Luleå and, as a result, over 12,000 tonnes of basic oxygen steelmaking sludge was turned into briquettes to be used as raw material instead of being landfilled. In addition, almost 8,000 tonnes of ladle slag originating in the continuous casting process was used as raw material in the blast furnace instead of being landfilled in Luleå. In Raahе, desulfurization slag and part of ladle slag are utilized in internal infrastructure construction. Development work is being done to maximize the internal use of metal component separated from slag. Today, already most of this scrap is used internally.

Not all by-products can be recirculated in steel production. In some cases new revenue streams are created by processing and selling products externally. For example, the BOF slag is sold to the road construction segment. In Raahе, blast furnace slag is sold to road construction, agriculture and cement industry and major part of ladle slag is sold to agriculture. In 2014, 1.1 million tonnes of by-products were sold externally.

Scrap metal used in steel production

Recycled steel has a big impact on reducing the environmental footprint of the product's lifecycle. It replaces the iron ore as input material in steel-making. However, the availability of recycled steel does not cover the growing global demand for steel. In SSAB as a whole, an average of 45% recycled steel is used in steel production. SSAB Americas produces steel based exclusively on recycled scrap metal. SSAB uses approximately 20% of scrap metal in conjunction with steel production in the Nordics, and 100% in the U.S.

Waste management and landfill

SSAB is continuously focusing on reducing the amount of material sent to landfill. The key to waste reduction is to refine by-products and waste from steelmaking into raw materials that can be reused as well as developing new by-products that can be sold outside of SSAB.

There are waste products from the production processes for which there is not currently any environmentally or economically justifiable application and which need to be removed from the processing cycle on environmental grounds. At SSAB, this type of waste is e.g. flue gas sludge that cannot be utilized due to its physical and chemical characteristics. The management and monitoring of the company's landfill sites are strictly regulated by laws and governmental authorities. Deposited waste must be handled in such a way that these resources, too, might be utilized in the future. SSAB Americas does not own or operate waste transportation equipment or landfills and deals only with government-approved landfills. Before waste is being classified as landfill material thorough testing and classification is carried out. The testing is carried by a specialized third party contractor.

45%

In SSAB as a whole, an average of 45% recycled steel is used in steel production.

78%

In 2014, 78% of by-products and waste from the ore-based steel production were utilized, internally and externally.

1.1

In 2014, 1.1 million tonnes of by-products were sold externally, excluding scrap metal.

Basic oxygen steelmaking sludge turned into briquettes for use as a raw material instead of being landfilled in Luleå

Over the years, many attempts have been made to develop a way to re-use the sludge originating in basic oxygen steelmaking in Luleå, Sweden. The sludge contains fine-grained steel particles and burnt lime. The problem has been how to efficiently dry the wet sludge so that it could be returned to the steel production process. A new method for drying the sludge was developed during 2013 and 2014. This method involves taking the sludge from landfill and spreading it onto a large field to dry in the sun. Trials to produce briquettes from the dried material proved very successful and, during 2014, over 12,000 tonnes of sludge from the landfill were reused in the briquette mix for the blast furnace. The aim is to increase this amount in 2015.

Ladle slag used as raw material in the blast furnace instead of being landfilled in Luleå

Ladle slag is a waste product originating in the continuous casting process and for many years it has been deposited in a landfill in Luleå. Spring 2014 saw the first trials to reuse ladle slag in the blast furnace. The results were good and almost 8,000 tonnes of ladle slag were used during the year. Since ladle slag contains less phosphorus and vanadium than steel making slag (BOF slag), more limestone and manganese ore can be saved at the blast furnace.

Recycling scrap tires in Alabama

In Alabama, SSAB Americas has had a scrap tire recycling program that utilizes scrap tires as a substitute material for the carbon used for charging in the EAF. Since 2003, SSAB has recycled more than 5 million scrap tires. The program also supports SSAB's Foundation for Education. For ten years, SSAB has made donations of \$100,000 per year to local schools for the purchase of key supplies and equipment, all as a direct result of the cost savings from the scrap tire recycling program.



Merox – with a focus on sustainability

In the Nordic region, SSAB's subsidiary, Merox, works to optimize the value of SSAB's by-products, scrap and waste with a focus on sustainability and value creation. Merox's operations cover the whole value chain from R&D and production to marketing and sales. The operations primarily consist of three parts; recirculation of materials to SSAB production, processing and selling products externally and managing waste that cannot be recirculated or processed into new products. This includes handling of material being sent to landfill in the Nordics. Merox delivers products globally and has six production facilities in Sweden and Finland. In Americas, the management of by-products, scrap and waste falls under the responsibility of SSAB's production facilities in North America.



Energy usage and recycling

SSAB's production processes are energy-intensive. Systematic work to increase energy efficiency in various stages of steel production is central in mitigating the environmental impacts, such as CO₂ emissions. Also cost savings can be achieved by more efficient use of energy.

In total, SSAB's steel operations consumed 4,632 (4,615) GWh of electric power and 4,179 (4,255) GWh of oil, liquefied petroleum gas (LPG) and natural gas during 2014. The main fuels that are used at the production sites are process gases, natural gas, propane and for the time being, also heavy fuel oil.

Energy recovery at steel mills

To improve energy efficiency, energy flows are recycled in the production (see the illustration below). Gases, steam and hot water produced in the processes are recovered and utilized in other parts of the processes to generate electricity and heat. The energy-rich coke oven,

blast furnace, and basic oxygen steelmaking gases, which cannot be used in the steel production, are used in combined heat and power plants, among other things, to supply SSAB with approximately 37% of the electricity needs of the steel production in Sweden and Finland. During the year, 1,039 (975) GWh of electricity was produced from recovered energy.

In 2014, SSAB delivered 1,064 GWh of district heat. SSAB's supply of district heat in Luleå, Raahel and Oxelösund cover about 90% of local district heating needs.

4,632

SSAB's steel operations consumed 4,632 GWh of electric power in 2014.

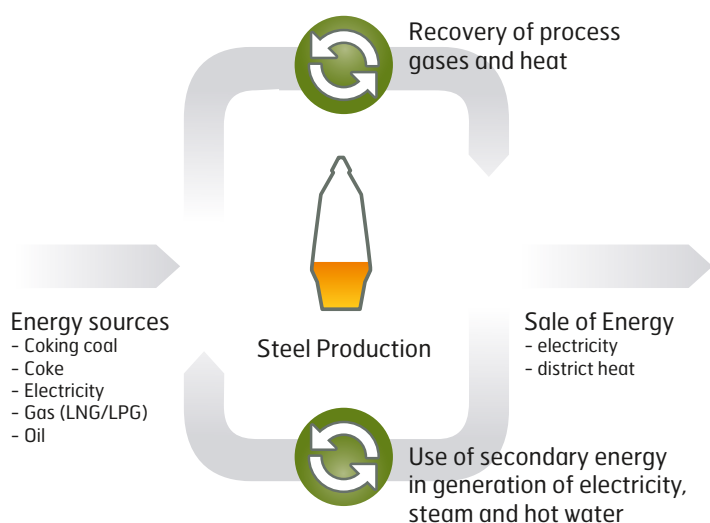
1,064

SSAB delivered 1,064 GWh of district heat in 2014.

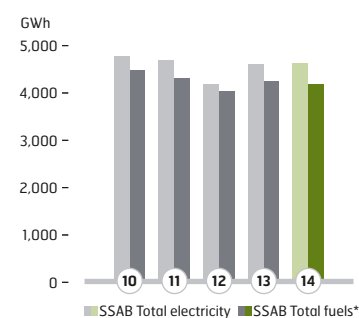
37%

of the electricity used in the Nordic steel production is produced from recovered process gases and heat.

Energy recycling in blast furnace steel production



Total energy consumption





New liquefied natural gas terminal project in Northern Finland

SSAB is participating in Manga LNG Oy's liquefied natural gas (LNG) terminal project to be built in Tornio in the north of Finland. The terminal will serve industry, mines and other energy users in the area. At SSAB's Raahе steel mill, liquefied natural gas (LNG) will replace the use of LPG in the reheating furnace in the strip mill and be used as a support fuel in the boiler of the new power plant unit. Use of LNG will ena-

ble SSAB to replace the use of oil-based fuels and thus reduce particulate, nitrogen oxide (NO_x), sulfur oxide (SO_x) and CO₂ emissions from their present levels. SSAB has a 25% share in the terminal project. The terminal in Tornio will be completed in early 2018.

SSAB's involvement in Fennovoima nuclear power project

SSAB took over Rautaruukki in its entirety, including all assets and obligations under applicable agreements. Subsequently, Rautaruukki's commitment to participate in Fennovoima's Hanhikivi 1 nuclear power plant project in Finland was part of the transaction. Involvement in the project is one way SSAB can spread purchases of the electricity needed in steel production in Finland. SSAB seeks to ensure a long-term supply of competitive and steadily-priced electricity. As an investor, SSAB is one of many companies in the Finnish Voimaosakeyhtiö SF (VSF), which currently owns 66% of the shares in Fennovoima. SSAB's share of the output of the plant's nominal capacity is estimated to be around 40 MW (3%) over the following 10 years and SSAB will invest around EUR 60 million in the project. Most of the investment will be back loaded. The power plant is scheduled to enter commercial service in 2024.

Conversion to natural gas in Borlänge

Natural gas, supplied as liquefied natural gas (LNG), replaced oil in Borlänge to fuel one of the reheating furnaces in the hot strip mill. The switch from oil to natural gas was completed already in December 2014, a few months ahead of schedule. The change of fuel will result in a reduction of 40,000 tonnes in annual CO₂ emissions and completely eliminate the sulfur dioxide emissions of 400 tonnes. Requirements to reduce nitrogen oxide emissions will also be met.

Efforts to reduce nitrogen oxide emissions from the production in Borlänge have taken place in several phases over the past ten years. Conversion to natural gas is the final phase in this work.

The conversion is also an important part of SSAB's strategy to adapt the energy system towards an increasingly more sustainable energy supply, and to spread the risks by using several fuel types and to prioritize the growing energy markets.

Investments in hot stoves in Oxelösund and Luleå

In Sweden, a new hot stove became operational in Oxelösund and a major renovation was carried out of one hot stove in Luleå.

One of the main benefits of these investments is that the higher temperature of the hot blast air reduces the amount of energy

(coke and coal) used in the blast furnace processes. The investments also increase operational safety.

Carbon dioxide emissions and other emissions into the air

The process of producing steel from iron ore is carbon-intensive and the raw materials used in the production are the main source of carbon dioxide (CO₂) emissions, along with CO₂ emissions generated from energy usage.

In 2014, SSAB's carbon dioxide (CO₂) emissions were 9.6 million tonnes (9.4). Around 90% of SSAB's total CO₂ emissions are generated in the iron ore-based steel production in Luleå, Oxelösund and Raahe, and 98% of these CO₂ emissions are related to coke and coal. Compared to the European average, SSAB's steel production generates around 600,000 tonnes less CO₂ emissions each year due to efficient use of raw materials in the blast furnaces. The greenhouse gases produced in Nordic steel production is within the scope of the European Emissions Trading System.

At SSAB Americas' production sites, steel is produced in two electric arc furnaces, using electricity and scrap as raw material. The scrap metal is melted using a combination of electric and chemical energy in the electric arc furnaces. The melted scrap then becomes new crude steel. CO₂ emissions are less than 10% of the emissions generated in conjunction with iron ore-based steel production since less coal and natural gas are used in the production. Additionally, much of the coal used in the production is derived from recycled coal residual.

Other emissions into the air*

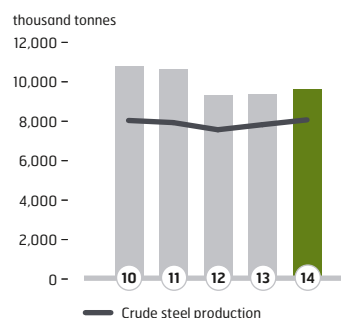
In addition to CO₂, there are also other emissions into the air being formed during the steel making process. The most important air emissions are particulate emissions, sulfur oxides (SO_x) and nitrogen oxides (NO_x). SSAB monitors the emissions arising from its operations both at production sites and in their vicinity to ensure compliance with emissions limits and to improve local air quality.

The combustion processes and the fine material used in iron and steel production give rise to particulate emissions into the air. In 2014, particulate emissions, excluding fugitive particulate emissions, totaled 758 tonnes (737). Particulate emissions contain metals, which originate mainly from the iron ore pellets, coking coal as well as from by-product and waste handling. SSAB is continuously working to reduce the particulate emissions. In 2014, the construction work of a new quenching tower at the coke oven plant in Luleå started, which will reduce particulate matter emissions during 2015. The particulate emissions from the quenching tower will be halved, corresponding to a reduction of the annual emissions of about 20 tonnes.

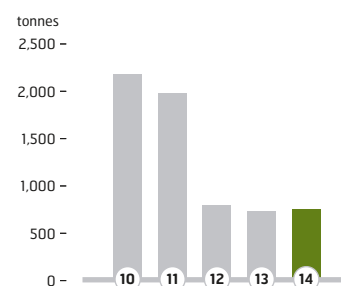
In 2014 around 2,096 tonnes (3,001) of sulfur dioxide emissions originated from the sulfur containing raw materials and fuels. At the Raahe site, the closure of the sinter plant and the switch to using iron ore pellets has resulted in a significant reduction in sulfur dioxide and particulate emissions compared to 2011. Nitrogen oxides emissions are mainly formed in the combustion processes in the coking plants and rolling mills. In 2014, nitrogen oxides emissions amounted to 3,485 tonnes (3,372).

Emissions of volatile organic compounds (VOC) occur in the use of coatings, as well as protective and profiling oils in the further processing of steel. In 2014, these emissions totaled 171 tonnes (194).

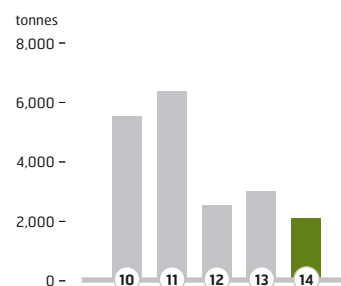
Carbon dioxide emissions



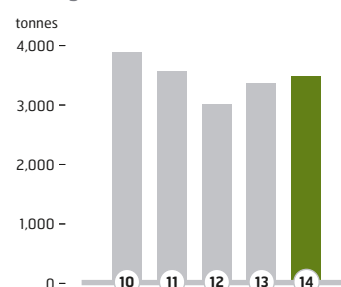
Particulate emissions¹⁾



Sulfur dioxide emissions¹⁾



Nitrogen oxides emissions¹⁾



* Data presented about other air emissions include main production sites in Sweden and Finland. For VOC emissions, Ruukki Construction is also included.

¹⁾ Includes main production sites in Sweden and Finland

Actions taken during 2014 to reduce emissions:

- The switch from oil to natural gas to fuel a reheating furnace in Borlänge will result in a reduction of 40,000 tonnes in annual CO₂ emissions and completely eliminate the sulfur dioxide emissions of 400 tonnes. Requirements to reduce nitrogen oxide emissions will also be met.
- To meet the requirements of the Best Available Techniques, SSAB is investing in the new quenching tower at the coke oven plant in Luleå, which will reduce particulate emissions starting in 2015 and beyond. The particulate emissions from the quenching tower will be halved, and this corresponds to a reduction of the annual emissions of around 20 tonnes.
- SSAB and EPV Energy Ltd (EPV) established a joint venture company Raahen Voima Oy, which bought Ruukki's existing power plant in Raahen and invested around EUR 121 million in a new power plant unit. SSAB owns 75% of the new company and EPV 25%. When the new unit is operational, it will result in a reduction of almost 120,000 tonnes of annual CO₂ emissions due to increased efficiency and taking the reduced need for external power production into account. The intention is to start up the new power plant unit in 2016.
- The color coating line in Hämeenlinna became 100% hexavalent chromium free at the beginning of 2014. The corrosion resistance of Hämeenlinna products is at the same level as before, and some of the characteristics even improve. Waste containing chromium is avoided.

Water usage and water effluents

Plentiful access to water is crucial for steel production, particularly in quenching, where water is used for the direct cooling of hot-rolled steel. Most of the water used in SSAB's production processes is recirculated in cooling systems. All operations are subject to environmental permits and guidelines regarding discharged water.

SSAB uses surface water at all its production sites. Both seawater and fresh water are used. Water is used mostly in processing, cooling and in scrubbing flue gases at the steel works and rolling mills. Water is also needed for electricity production and in slag granulation. Out of all the water used during the year, 99% was used for cooling purposes. Steel production or upgrading sites are not situated in groundwater areas. A large share of the water used in production passes water treatment to be re-used. In Montpelier and Mobile, millions of cubic meters of water used in the steel production process are recycled annually after being processed through water treatment

systems. All recycled water meets strict federal and state regulatory standards on water quality. At all SSAB's sites actions are taken to prevent the risk of contaminating local water resources and reduce effluents into water.

Discharges of effluent into the waterways consist of suspended solids, which contain calcium, magnesium and silicon compounds, and originate from the steel plants and blast furnaces. Oily emissions originate from the rolling processes. There are also some nitrogen and iron emissions into water. The following table shows chemical oxygen demand and oil discharge into the waterways.

Effluent discharge into waterways*

tonnes	2014	2013	2012
Chemical oxygen demand, COD	310	296	285
Oil	10	16	13

* Includes main production sites in Sweden and Finland

Raahen oil spill

An oil spill from the power plant in Raahen occurred in June 2014. The cleanup of soil and coastline due to the oil spill has been completed. The local police started investigations about the causes of the accident. SSAB has started co-operation with World Wildlife Fund (WWF) and offers oil spill cleanup training, which is open to local people. A survey of the waters and fisheries conducted off the coast of Raahen in the fall, found the oil spill had had only minor impacts on the water quality, bottom sediment, benthos and fish stocks. The results showed no changes compared to previous years and were either similar or even better than earlier samples taken.

Operating and regulatory environment

SSAB operates globally and is affected by many international agreements and especially by EU and US. regulation. SSAB actively monitors energy, climate and environmental legislation and proactively prepares for future changes. The most significant operations in terms of environmental impact are located in Finland, Sweden and the US. The most relevant issues from SSAB's perspective relating to environmental regulation are presented here.

EU energy and climate policies

In October 2014, the European Council summit set new more ambitious targets for carbon emissions, renewable energy and energy efficiency for 2030. The new target to reduce CO₂ emissions is to cut them by 40% compared to 1990. These targets risk further weakening our competitiveness in the global market, unless there will be a binding and as ambitious international agreement related to carbon emission reductions. In accordance with our own position, and that of the steel industry in Europe, the European Council summit agrees that the most efficient industrial operators exposed to international competition, should not be subject to a direct or indirect cost disadvantage resulting from EU's climate policy and EU's Emissions Trading System for 2030. For SSAB - and for all other steel producers in Europe - it is extremely important that the requirements of the EU Emissions Trading System do not lead to a significant economic disadvantage compared to our competitors outside the EU, regardless of our highly-efficient steelmaking and substantial investments made to lower carbon emissions.

Allocation of emission allowances

The allocation of free allowances for CO₂ emissions for the current trading period is not affected by the new EU climate target for 2030. Nevertheless, SSAB is of the view that the company was awarded an insufficient number of CO₂ allowances both in Sweden and Finland for the trading period of 2013–2020. Thus, both SSAB and the former Ruukki have appealed the current decision on free allocations to the Swedish Land and Environmental Court and the Finnish Supreme Administrative Court respectively. The cases are still pending in both Courts. The Finnish court has requested a preliminary ruling from the EU Court of Justice (EJ) that has been confirmed, and SSAB has asked the Swedish court to follow the same line.

Energy Efficiency Directive

The European Council Summit has set a target to increase energy efficiency by 30% by 2030, based on the 2005 reference scenario. In order for the EU to achieve this target, the industry needs to meet with the requirements that are implemented in the legislation at a national level. SSAB regularly carries out energy audits at sites and work systematically to continuously identify energy savings, which is in line with the European Energy Efficiency Directive.

Environmental protection legislation

SSAB's operations are subject to environmental permits with numerous environmental conditions governing various parameters regarding production levels, air emissions, water effluent and waste management. Various SSAB production sites have operations that require environmental permits.

Our Nordic production facilities are covered by the European Industrial Emissions Directive (IED) and preparations to comply with these requirements are in progress primarily in Luleå, Oxelösund and Raahé. In connection with the IED, the Best Available Techniques Reference Document is to be followed. Some of these techniques, such as Iron and Steel Production (IS), have been updated, some such as the Large Combustion Plants (LCP) are ongoing, and others such as the Ferrous Metals Processing Industry (FMP) are to be revised. As a result, SSAB is investing in a new coke quenching tower in Luleå, which will reduce particulate emissions during 2015 and the BAT level will be met. In addition, preparations are underway for status reporting of soil and groundwater contaminants within our industrial sites in Luleå, Oxelösund and Raahé. Corresponding requirements will follow for Borlänge and Hämeenlinna, when the FMP is revised.

Sulfur Directive

Sulfur Emission Control Areas (SECA) have been decided for maritime traffic in the Baltic

Sea, North Sea, English Channel and the Atlantic seaboard of the US. Specific requirements for emissions from vessels may not exceed 0.1% sulfur content. The amended Sulphur Directive entered into force on January 1, 2015. SSAB aims to minimize the financial effects of the directive. Examples of on-going actions include re-routing, optimizing of calls and changed modes of transport. A likely effect is also a modal back-shift from sea to truck. A modal shift from sea to train is not likely, since the track fees are estimated to increase significantly during 2010–2025. At the same time, the railway system in Sweden is suffering from high capacity utilization and eroded robustness. For inbound raw material and overseas outbound transports, nothing can really be done to avoid extra cost.

REACH

REACH, the European Union's chemicals regulation, aims to improve the protection of human health and the environment against the risks of chemicals and to enhance the competitiveness of the EU chemical industry.

SSAB is a manufacturer, importer and user of substances and articles that REACH applies to. We submit information about the registration of substances and of any hazardous substances in the supply chain. The chemical safety data sheets for our products comply with the requirements of Europe's revised chemical legislation. SSAB employs a chemical safety data sheet management system to improve management of up-to-date information about the use of chemicals. In addition, SSAB communicates with stakeholders about any requirements regarding REACH and SSAB's products when obligations change. SSAB works together with the supply chain to replace substances regulated by REACH with safer ones as soon as possible. Thanks to effective monitoring and active work with stakeholders, SSAB's products comply with the requirements of REACH.

Queries about REACH matters can be submitted to reach@ssab.com.



CE marking in compliance with the Construction Products Regulation

CE marking in accordance with the Construction Products Regulation (305/2011/EU) became compulsory in respect of load-bearing structures from July 1, 2014. SSAB's division Ruukki Construction introduced CE marking in all product groups already in May 2013. SSAB and Ruukki Construction have CE marking rights in sandwich panels, steel frame structures, welded steel structures, load-bearing sheets, steel piles used in foundations and guard rails for roads, among others. CE marking is also in use in some residential roofing products.

In the construction industry, CE marking enables the free movement of construction products throughout the European Economic Area (EEA) and the European Free Trade Asso-

ciation (EFTA). By affixing the CE mark on a product, a manufacturer declares conformity with all relevant legal requirements and in particular those ensuring health, safety, and environmental protection. The Construction Products Regulation requires a Declaration of Performance (DoP) to indicate the technical characteristics of CE-marked products. Ruukki Construction's customers receive a DoP with the product.

Ruukki Construction's declarations of conformity are available online at: <http://www.ruukki.com/Products-and-solutions/Certificates-EC--and-environmental-declarations>

Building standards and stakeholder requirements

During the year, SSAB and its division Ruukki Construction took part in developing a Nordic proposal for a European-wide standard for structural steel construction products' product category rules (PCR) for environmental product declarations. The proposal proceeded to the European Committee for Standardization CEN in December and work on the PCR will continue in 2015.

SSAB has long accumulated expertise in environmental certification systems for build-

ings and the aim is to support customers to apply for certification. Ruukki Construction has sandwich panels that can promote energy efficiency, reduce lifecycle costs and thus have an impact on points awarded in LEED and BREEAM certification systems for energy efficiency and sustainable materials. During 2014, Ruukki Construction offered further training for employees to increase their knowledge and better support customers in environmental certification systems like LEED and BREEAM.

Read more about Ruukki Construction's solutions affecting LEED and BREEAM points at: <http://www.ruukki.com/Our-focus/Energy-efficient-buildings/Environmental-certification-systems-LEED-and-BREEAM>

Social responsibility

Together we are stronger

The combination with Ruukki doubled the number of employees in SSAB. During the year, the focus was on ensuring successful integration of the two companies by combining the best competences of both into one high-performing organization. SSAB is determined to be one of the safest steel companies in the world and our objective is to achieve zero accidents and work-related injuries. To be able to reach this, all divisions run safety development programs, and best practices are shared across the company. In addition to human resources practices related to SSAB's own employees, social responsibility in SSAB also incorporates engagement with people in neighboring communities and in the supply chain. SSAB is a signatory to the UN's Global Compact initiative and its principles are applied also when working with suppliers and subcontractors.



High-performing organization

A high-performing organization is one of the cornerstones of SSAB's strategy. This involves long-term work on developing and strengthening the performance culture, reaching the objective of zero accidents and work-related injuries and continuing to be an attractive knowledge company.

Building a high-performing organization

Focus during the first part of 2014 was on planning and preparing for a successful integration of SSAB and Rautaruukki, and in parallel minimizing business disruption. Since September, the focus has been on three key areas to build a high-performing organization:

- Building and staffing the new SSAB's divisions and functions to ensure business agendas are supported by an effective organization as well as matching talent with opportunities.
- Strengthening the leadership. SSAB leaders are instrumental in managing change and thereby ensuring the organization is high-performing. A global process for management planning has been implemented in order to understand the development needs as well as the talent and leadership pipeline.
- Establishing a reward framework that supports performance in alignment with the goals and strategy of the new SSAB.

One month after the new SSAB was formed, a top management meeting was held with 80 senior managers. An important element during this meeting was to establish the foundation for a high-performing company culture. The vision, shared company values and a communication approach on how it should be communicated to the rest of the organization were agreed upon. In order to cascade outcomes from the Top Management meeting, communicate values, direction of the new SSAB and respond to questions, roadshows where the Group Executive Committee and Divisional management teams jointly visited major sites, were conducted during the fall.

In addition, employee development and creating exciting career opportunities continue to be important priorities to secure competence in the mid- to long term.

Responsible integration to secure a high-performing culture

Integration is carried out responsibly where company culture is recognized as an enabler for a successful integration. During the planning phase, principles for integration were defined and embedded in the ways of working:

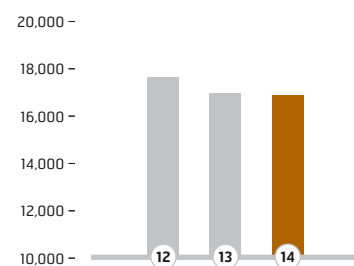
- Combining the best of both companies
- A fair and transparent integration process
- Building one high-performing company

In addition, a company culture survey was conducted among the project members to explore strengths, similarities as well as improvement opportunities and prepare for the upcoming integration.

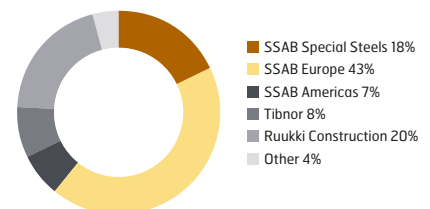
In September 2014, a broader survey was conducted where employees were invited to respond. A random sample of around 3,000 employees was invited to take part in a cultural survey in order to give a view on perceived strengths and improvement opportunities of the new SSAB's organization and existing culture. The response rate was 64%.

Among the top characteristics, currently and relevant for the future, that received the highest ranking were Customer focus, Being competitive and Team work. Speed of implementation was seen as the single most important improvement opportunity. Overall, the respondents were motivated and management received good grades. Clarity of work and communication were seen as areas with most room for development.

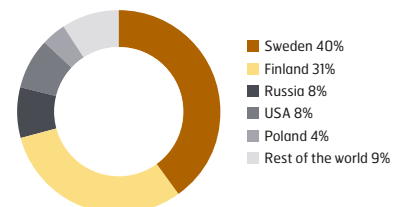
Permanent employees at year end



Permanent employees by division



Permanent employees by country



Diversity and equal opportunities

SSAB has employees in over 50 countries. Leveraging on diversity, when it comes to competence, experience and background, and providing equal opportunities are fundamental in the way results are being achieved.

The steel industry is traditionally male-dominated. An important starting point for our work with gender diversity is to increase the share of females in leading positions. During 2013, we participated, together with other companies, in a program called "Battle of the Numbers", which resulted in an improvement plan approved by our Group Executive Committee. Several of the initiatives were implemented prior to the combination with Rautaruukki, for example a gender diversity score card and diversity work-shops with top management.

SSAB has cooperated with municipalities to create internships for people with immigrant backgrounds. The working model was developed at SSAB in Borlänge and has recently been established in Luleå. In Borlänge 15 trainees have participated in the internship and in Luleå approximately 20 trainees began their internship in January 2015. The cooperation is well aligned with the ambitions of both SSAB and the municipalities, increased diversity as well as language training and offering participants an opportunity to learn more about the labor market in Sweden.

During 2015, SSAB will continue to focus on improving diversity. Together with other Swedish companies, SSAB will participate in the "Äntligen Jobb" program, which aims to provide internships to immigrants with an academic background.

Leadership and Competence

During the year, SSAB has been focusing on understanding the critical competence demands required for successfully delivering on the business agenda, as well as to under-

stand what kind of competencies are available in the new SSAB. The insights found have enabled us to define and staff new leadership teams for the Group, divisions and global functions, as well as matching the needs of individuals with opportunities provided by the integration.

Through the global annual Management Review process, SSAB works to ensure that internal leadership talents are identified and developed. In the process, all SSAB managers are assessed against the company's management criteria, and successor plans are established. An important function of the Management Review is to ensure that we have suitable internal candidates for managerial positions. The results from the Management Review will be used actively during the year for competence development, appointments and as a support in organizational development. The process will be based on the previously existing Management Review process of former SSAB with some improvements.

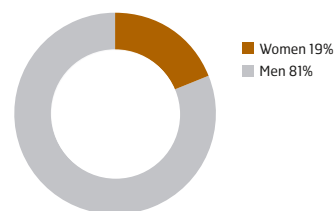
Engaging SSAB people for performance towards goals

Aligning individual performance with SSAB's strategic direction is a central element in being a high-performing organization. Clarity concerning goals and performance expectations as well as feedback are key elements and enablers to effectively manage our change journey.

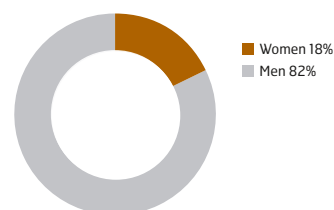
The annual performance dialogue between employee and manager is a key element in following up results, providing mutual feedback, discussion around the workplace atmosphere and planning future performance and individual development.

SSAB continuously reviews and aligns reward structures to ensure performance management processes are supported effectively.

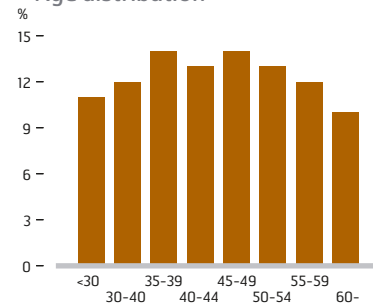
Permanent employees – Gender distribution



Permanent employees, managers – Gender distribution



Permanent employees – Age distribution



SSAB Manager Criteria:

1. Achieves result
2. Serves as a role model
3. Drives improvement
4. Has self-awareness
5. Generates energy
6. Gives employees a chance to develop

Social responsibility targets for 2014–2018

In 2013, SSAB set group level sustainability targets for the period 2014–2018. The baseline year was 2013 and the scope for the targets was former SSAB. Sustainability targets included also the following social responsibility objectives, aimed at achieving fairness for all involved.

- An annual reduction by at least 5% in lost time injuries per million work hours
- All employees shall have annual performance and planning dialogs
- An Employee Satisfaction Index of at least 90
- Ensuring compliance with SSAB's Code of

Business Ethics and behavior in accordance with our values

- All employees shall undergo courses in business ethics

Progress in 2014

- Lost time injuries per million work hours in the former SSAB were reduced from 7.9 in 2013 to 7.4 in 2014, which corresponds to an annual reduction of 6.3%
- Annual rate of conducted annual performance dialogs in the former SSAB was at the same level as in 2013, around 93%
- Due to the combination, the employee survey was postponed to 2015. This means we have not been able to measure

the Employee Satisfaction Index in 2014

- 95% of employees in the former SSAB have completed the business ethics e-learning launched in November 2012

New social responsibility targets for SSAB in 2015

Renewed sustainability targets for SSAB will be set during 2015 as part of our new sustainability agenda. The agenda will also include targets related to social responsibility. The renewed targets will be published on our sustainability website at: www.ssab.com/en/Sustainability.



The technical development program

The continuous development and growth of technical knowledge is essential for SSAB. The technical development program is a structured way of ensuring that know-how and experiences are shared from more senior employees to newly hired employees.

Each year, two to three young engineers (newly graduated or young professionals) are

hired in to the technical development program. The program is individually customized and runs for approximately 18 months and covers areas such as customer application development, product development and production across five different departments.

The program was initiated during 2013. Currently, there are five individuals, two of whom are woman, on the program.

Me & My City learning environment

SSAB seeks to provide opportunities for local communities to get to know the company as an employer, workplace and a member of a community. Also, it is important to invite young people to see the variety of job possibilities the company offers, before they start planning their paths for their future jobs. In Northern Ostrobothnia, in the region of SSAB's Raahе site in Finland, Me & My City learning environment sixth-class students visit SSAB and learn by doing what it takes to be a community member, consumer and employee. SSAB's participation has a positive impact on the

awareness of local people, as agreed with the city of Raahе, each year all sixth-grade students from schools in Raahе visit Me & MyCity.

Me & My City is a Finnish, award-winning educational innovation and learning concept about entrepreneurship, the economy and society. In November 2014, the "city" was opened in Oulu (80 km from Raahе). Local Me & MyCity reflects the economic structure of the region and introduces local employers to students and teachers.

Introduction training

During spring 2014, a cooperative project between the Swedish Public Employment Service (Arbetsförmedlingen), Lernia and SSAB, took place to offer long-term unemployed people vocational training and internship. The project was run in Luleå, Borlänge and Oxelösund. The training lasted 8–12 weeks and the content was based on individual plans based on matching the individual's previous knowledge with that required by the specific workplace. The training consisted of a combination of theoretical elements and practical on-the-job training. Every participant was assigned a coach during the program.

Nearly all of the 61 persons that participated in the training were hired as summer holiday substitutes at the sites where they were trained.

Safety first

SSAB is determined to be one of the safest steel companies in the world and its objective is to achieve zero accidents and work-related injuries. The provision of a safe and secure work environment for our employees, contractors and other partners is our top priority. Safe working is a basic requirement for working at SSAB. Occupational safety is part of the integrated management system and company values.

To achieve our objective of zero accidents and work-related injuries, SSAB will:

- ensure that safety is taken into consideration in all activities and decisions across the company
- cooperate to prevent accidents and work-related ill-health by identifying, evaluating and removing risks;
- systematically identify and eliminate the root causes of accidents and near misses, which have occurred to prevent them from happening again
- occupational safety is the management's and line organization's responsibility and they are assisted by occupational safety specialists. All SSAB employees are, however, responsible for their own safety and for that of others in their own working environment. We must intervene and instruct colleagues and contractors when they take a risk or fail to comply with established safety rules. All work which is not performed safely must be discontinued
- set a good example. Managers are responsible for the work environment and must set a good example and serve as good role models

- ensure that all employees are provided with all necessary instructions, as well as the training and equipment necessary for facilitating safe working practices
- comply with or exceed all statutory requirements, as well as requirements imposed by the authorities or other legal parties
- establish clear objectives and carry out regular monitoring to ensure that these objectives are fulfilled

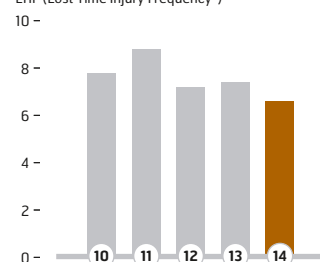
Safety performance in 2014

SSAB's lost time accident frequency resulting in an absence of more than one day was 6.6 (7.4). There were a total of 182 accidents.

At SSAB's Luleå site a fatal accident occurred on October 27 where a contractor driving a fork lift collided with a locomotive near the blast furnace. SSAB is co-operating with all relevant authorities in investigating the accident.

Accident frequency

LTIF (Lost Time Injury Frequency*)



* Number of accidents resulting in an absence of more than one day per million working hours

Safety precautions are a part of a normal working day at Tibnor

Tibnor in Sweden has, during the past two years, increased the number of risk observations made from an average of 1 to 5 observations per employee per year. One of the most important results of this is a safer work environment, with the number of lost time injuries halved.

The key to good development is to have a clear vision and working methods to encourage employees to be active in identifying and preventing everyday risks in operations. Ideally, employees not only minimize their own risks, but also proactively observe

and react to the safety risks at their whole workplace.

At Tibnor, much effort has gone into developing improved and safer working methods. By establishing daily routines and common working methods, all employees can be better involved in safety work. For example, at Tibnor's sites in Eskilstuna and Köping, employees collect, register and solve risk observations together in teams. Observations can be made in the employees' own working environment or in other work areas as well. After making observa-

tions, employees save them in a safety reporting system. The risks should be eliminated and required changes implemented within 45 days. Of course, some risk issues are solved faster where required.

Ensuring a safe working environment is not only the responsibility of the employees within Tibnor's logistics and production units. For example, Tibnor's management team conducted more than 15 safety rounds focusing on identifying and preventing risks at different sites during 2014.

A full-page background image showing two workers in a construction or industrial setting. They are wearing white hard hats with communication equipment, safety glasses, and high-visibility dark blue work jackets with reflective yellow-green stripes. The worker on the left is a man, and the worker on the right is a woman. They are both looking at a laptop held by the man. The background is a warm, orange-toned industrial environment with structural elements.

Towards our goal of becoming an accident-free working environment

SSAB Americas and Ruukki Construction were the best safety performers in 2014, serving as excellent internal benchmarks in safety for the rest of the company. However, good results have also been achieved in some units in Europe, showing that determined safety management and leadership bears fruit. To achieve the goal of being among the safest steel companies, all divisions are running safety development programs. At Group level, the focus of safety development is on setting common safety management principles, harmonizing safety reporting, sharing information on divisional activities and results, sharing best practises and information on serious incidents between the divisions, as well as recommendations on preventive actions.

Divisional safety programs will focus on leadership, training and the involvement of all employees in risk observation and executing corrective and preventive actions. Safety work will also be enhanced by aiming to improve incident data collection and tracking, as well as by utilizing a more systematic approach to analyzing the root causes of incidents. There will also be safety campaigns focusing on a particular risk area e.g. crane operations and lockout tag out procedures. Special emphasis will be given to contractor safety.

SSAB people recorded numerous proactive safety observations, which help us to reduce and eliminate the risks in the working environment. The safety observation frequency was 18,844 per million working hours. A total of 1.1 such observations were reported per employee. The reporting and fast implementation of corrective actions is the most important tool towards our goal of becoming an accident-free working environment.

Business ethics

SSAB continues to strive to ensure that the company maintains a global culture of respect, honesty and integrity. By providing a framework for business ethics and compliance, SSAB continues to focus on creating a mature organizational culture that encourages ethical conduct. This framework provides the required support and tools to meet SSAB's expectation that each and every employee acts with honesty, integrity and responsibility while performing their work.



Global business requires good management of business ethics

Business ethics are an important part of SSAB's sustainability and corporate social responsibility work. The need for training in business ethics increases as our business becomes more global and complex. This is also reflected in the tougher legislation enacted in several countries in recent years. SSAB sees great potential for steel products on emerging markets in Asia, Latin America and Eastern Europe. Several of the countries in these markets head international corruption indices, a factor, which requires SSAB to ensure its employees are aware of, and work against, corruption.

E-learning reaches many

Shared ethical guidelines are fundamental in a global group such as SSAB. With a global e-learning module, it is possible to reach out to all employees in order to provide basic training in business ethics and implement anti-corruption work. SSAB implemented an e-learning module in business ethics several years ago and, by the end of 2014, 95% of the former SSAB's employees had completed this

training. Also similarly, former Ruukki implemented an e-learning course in business ethics a couple of years ago.

Training in SSAB Americas

As a supplement to the Group's global compliance training, within SSAB Americas, employees receive compliance training in the form of webinars, in-person seminars, lunch events, toolbox talks, intranet publications, email advisories and desktop manuals on a variety of topics including the US Foreign Corrupt Practices Act and related anti-corruption laws, anti-trust rules, conflict minerals and harassment prevention training.

Review of business partners

At the beginning of 2014, SSAB introduced a new instruction for business ethics reviews of SSAB's business partners. This instruction mainly covers agents, certain distributors and consultants who represent SSAB against any third party. In most cases there is no need to review the integrity of a business partner more closely, but the instruction means that SSAB may not enter into or renew agreements with business partners that are within the typical

risk areas for corruption, before an initial assessment showing that such partners respect our fundamental rules of business ethics. The instruction applies to all operations within the SSAB Group. It is primarily the sales organization that is affected by the new instruction, and training seminars were held by Legal during spring 2014.

Seeking guidance or reporting of improprieties – Whistleblower

Everyone working at SSAB must feel a sense of responsibility to react when improprieties are suspected or uncovered. Several years ago, SSAB established a Group whistleblowing function where employees can seek guidance on or report serious improprieties and violations of the Company's policies. Employees can report anonymously and are protected against reprisals or punishment.

Anti-corruption manual

During the year, internal audit has developed an anti-corruption manual to audit fraud and corruption risks and introduced a number of audits in subsidiaries based on this manual. These audits have not revealed any specific irregularities, but have identified potential to further reduce risks from this perspective. Defined risk mitigation measures are implemented according to agreed action plans. The ambition is to conduct more audits during 2015. In addition, SSAB's Business Ethics function will conduct the Global Compact self-assessment analysis, which will provide further direction for upcoming work.

Responsible sourcing

SSAB has a large number of suppliers in different parts of the world. Raw materials used in iron and steel production are SSAB's most significant purchases. SSAB's suppliers need to comply with SSAB's own policies and international social and environmental guidelines.

Responsibility in the supply chain

SSAB is a major buyer of raw materials, products and services in most of the countries it operates. SSAB seeks to enter into long-term contracts with suppliers and to develop cooperation with them. Since the supply chain is global, it is important to evaluate supplier risks and suppliers' ability to address social and environmental issues. At SSAB, sustainability is an integral aspect of sourcing operations and supply chain management.

The general terms and conditions of supplier contracts take into account SSAB's Code of Business Ethics and values. SSAB also takes environmental aspects into consideration when choosing a supplier.

Guidelines and governance

SSAB is a signatory to the UN's Global Compact initiative and its principles are applied in the work with suppliers. SSAB's Code of Business Ethics reflects Global Compact principles and represents the most important control document as regards work with suppliers.

SSAB's Code of Business Ethics is included in supplier contracts and asks the suppliers to adhere to the Code. SSAB also has anti-bribery instructions, which provide employees with information on how SSAB defines bribery and improper benefits, and how employees are

expected to act in relation to suppliers, customers and other business partners.

Identification and evaluation of supplier risks

The Group underwent reorganization during the year as a result of the acquisition of Rautaruukki. To ensure the new SSAB is efficiently managing social responsibility in the supply chain, SSAB is reviewing its internal processes to identify the best practices within the new company.

The former SSAB has systematically identified the risks relating to the Group's suppliers. This was done by placing suppliers in various risk categories depending on which countries they operate in. Classification in this way illustrates the risks relating to, for example, human rights, labor conditions and corruption and shows that only a few suppliers have a high risk profile. SSAB will step up its monitoring of suppliers located in what is considered to be high-risk countries. Suppliers who are placed in the medium- or high-risk group will be required to complete a self-assessment questionnaire containing questions about, for example, their social conditions and environmental credentials. Unsatisfactory answers are investigated. During 2014, SSAB sent out about 170 self-assessment questionnaires to medium-

and high-risk suppliers and about 80 self-assessment questionnaires to major or critical suppliers. Former Rautaruukki's supplier evaluation database currently holds around 375 supplier evaluations. During 2014, the former Rautaruukki performed 11 supplier evaluations of new potential suppliers and of existing suppliers who are deemed critical and whose performance requires improvement. Criticality and performance can refer to, for example, delivery reliability, the characteristics of a product or service or environmental or social conditions¹⁾.

SSAB also conducts regular visits to major suppliers of raw materials around the world, including high risk suppliers. During these visits, purchasers and quality managers visit production sites and conduct quality inspections. Aspects such as a supplier's social conditions and environmental performance are important and will be the subject of even greater focus in conjunction with future visits to suppliers.

No conflict minerals in SSAB's steel

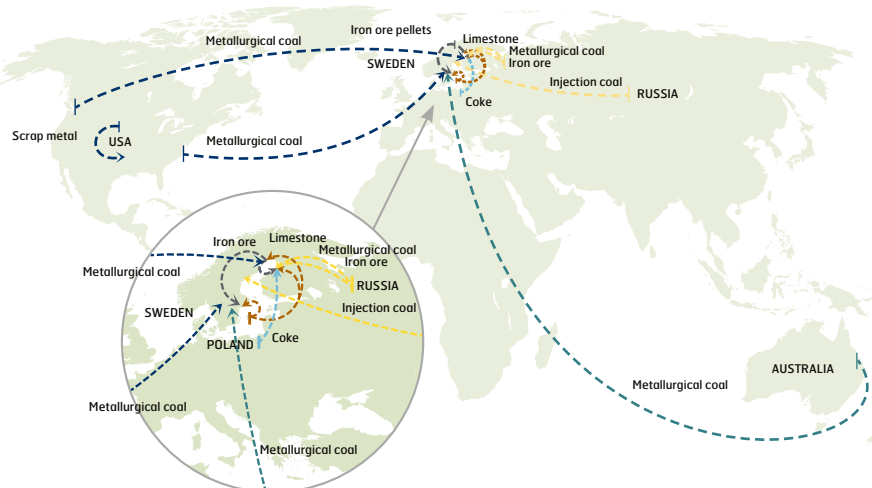
SSAB does not use conflict minerals (including gold, tin, tungsten and tantalum) and, upon request, provides customers with certification affirming this.²⁾

Sources of SSAB's raw materials

SSAB purchases iron ore pellets from the Swedish supplier, LKAB and a smaller share from the Russian supplier, Severstal. Metallurgical coal is purchased from major suppliers in Australia, Canada, the US, and a smaller share from a Russian supplier. The injection coal is sourced from a specific mine in Russia. Scrap metal is purchased locally in the US, Sweden and Finland. Supportive blast furnace coke is purchased in Poland to the Raahemäki site, when needed. Limestone is purchased for all steel making from Sweden. Alloys are purchased from some 40 different suppliers.

¹⁾ Social conditions includes e.g. labor rights, health and safety, working conditions, child and forced labor

²⁾ Conflict minerals is a term used for minerals from areas characterized by large-scale internal strife, where mining of minerals risks contributing to, or financing, continued conflict and violation of human rights.



SSAB in the community

SSAB actively engages with communities in which it operates. SSAB contributes to, and supports, projects of importance to its employees and acts as a responsible employer locally. SSAB maintains an open dialog with local politicians, governmental agencies, the media and the public with the aim of increasing the general knowledge about steel and steel production.

Supporting local communities in Sweden and Finland

In the communities in which it operates in Sweden and Finland, SSAB contributes to creating a wide range of recreational activities in which SSAB's employees, their families and also the local community can participate. Examples include sponsorship of local sports organizations and exchange of knowledge with schools. SSAB also supports associations in which employees are involved, primarily within sport and culture.

Strong community involvement in SSAB Americas

SSAB Americas has a long tradition of community involvement. This takes place not only in the form of financial contributions, but also through participation in various initiatives or support projects during the year. One of the largest organizations supported by SSAB is United Way, a charitable organization which supports the needy through donations, education and volunteer work. Employees' contri-

butions are matched by Company. Another example of charity work is recycling of scrap tires in Mobile, for use as a raw material in steel production. The financial savings generated are invested in an educational foundation, which each year donates money to local school partners.

SSAB's employees in Montpelier sponsor and support The Make-a-Wish Foundation, an organization which aims to realize the dreams of sick children. Support from the Company in Montpelier also goes to The Community Foundation of Greater Muscatine, which supports smaller organizations and charitable projects in the region.

Donations to charity

In 2012, SSAB entered into a cooperation project with the SOS Children's Villages organization to support a children's village in the Central African Republic, one of the poorest countries in the world. Construction of the village was delayed due to turmoil in the country and SSAB therefore decided that the initial



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VILLAGES
SWEDEN**

donation would be used to support SOS Children's Villages' emergency aid program in the area. Instead of giving a Christmas gift to its employees in 2014, SSAB made another donation in support of SOS Children's Villages in the Central African Republic. We also supported a family-strengthening program in Ukraine.

About this report

SSAB's Sustainability Report 2014 is comprised of information on SSAB's sustainability related activities and performance. The report also constitutes Communication on Progress (CoP) reporting to UN's Global Compact, where activities and results related to Global Compact's principles are reported. SSAB's combination with Rautaruukki was completed on July 29, 2014. SSAB's sustainability reporting from 2014 has its basis on the indicators of the Global Reporting Initiative's (GRI) G3.1 Guidelines that both former SSAB and Rautaruukki have used in their sustainability and corporate responsibility reporting. Both companies had started preparations to report in accordance with the new GRI G4 guidelines as from the 2014 reporting year. Because of the combination, it was decided to postpone migration to G4 by one year. For this report, indicators that are relevant to SSAB and our stakeholders were selected from the G3.1 Guidelines. Also there were restrictions with data availability from the new SSAB that affected the selection of indicators.

The scope of reporting is the SSAB Group, former SSAB AB and former Rautaruukki Oyj com-

bined. The reported data is pro-forma figures, i.e. as if Rautaruukki Corporation had been part of SSAB the whole reporting period from Jan 1 to Dec 31, 2014, unless otherwise stated. Also the comparison years' data has been re-stated to cover the new SSAB. Figures in brackets refer to the comparison period 2013.

The report is intended to be read together with SSAB's Annual Report 2014, where more extensive information can be found regarding SSAB's business, strategy, financial performance and corporate governance.

SSAB's Sustainability Report 2014 is published in English in PDF format and is available on SSAB's sustainability website at: <http://www.ssab.com/en/Sustainability/>.

DATA COLLECTION

The financial information contained in this report is based on SSAB's consolidated financial statements, which have been prepared in compliance with IFRS. The financial information disclosed in the report is subject to audit.

Information about the employees has been collected from the company's personnel information systems. The HR data reported in this report covers whole SSAB, unless otherwise stated.

Environmental data have been combined from the former SSAB's and former Rautaruukki's reporting systems. The environmental data refers mainly to the main production sites in Sweden and Finland and for some data also to the North American operations. The scope of the data collected depends on the significance of environmental impacts at each site, when examined from the environmental perspectives of the entire Group and also on current data availability.

This sustainability report has not been verified by an external party. The data has been checked by comparing it with the data for previous years at both the site and Group level. Any divergences have been analyzed.

ABC of steel – a glossary of terms

A

Advanced high-strength steels – Multi-phase steels which contain martensite, bainite and/or retained austenite to achieve an improved balance of strength and formability as compared to conventional high-strength steels

After-treatment – Heat treatment, cooling, etc., in order to endow the steel with certain qualities; also galvanizing, organic coating, and cutting to size

Alloy – A substance composed of two or more metals or a metal and a non-metal

Alloy steel – An iron-based mixture is considered to be an alloy when minimum quantities of alloying elements are present, e.g. silicon, manganese, chromium, nickel and molybdenum

Alloying material – Material that is added to the molten metal during the steelmaking process and which combines with iron or other metals and changes the metal's qualities

Annealing – A thermal cycle involving heating to, and holding at a suitable temperature, and then cooling at a suitable rate for such purposes as reducing hardness, improving machinability, facilitating cold working, producing a desired microstructure, or obtaining desired mechanical or other properties

Application – Area of use; a product which uses a certain grade of steel

Applications engineer – Trained specialists in the qualities of the material and its applications; problem solvers and developers

B

Briquette – A block of flammable matter used as fuel to start and maintain a fire. Common types of briquettes are charcoal briquettes and biomass briquettes

Blast furnace – Continuously operating shaft furnace for the reduction of iron ore. The end product in the blast furnace is called pig iron or hot metal

Blast air – Heated air which is blown into the blast furnace under high pressure

Best Available Technique (BAT) – BAT is identifying the most effective techniques (e.g. power generation, water treatment) that reduce emissions and the impact on the environment, and that are economically and technically available for industry. In the European Union, EU's industrial emissions legislation is based on regular development of defining Best Available Technique.

By-product – A secondary product derived from a manufacturing process or chemical reaction. It is not the primary product or service being produced.

C

Carbon dioxide – CO₂, a colorless gas, soluble in water to form carbonic acid; included in carbonated drinks and comprises 0.04% of the atmosphere and is identified as a greenhouse gas

Carbon monoxide – CO, a colorless and odorless energy-rich gas which burns with a blue flame; noxious. Upon combustion, carbon dioxide is formed

Carbon steel – Unalloyed steel

Charging – The act of loading material into a vessel. For example, iron ore, coke, and limestone are charged into a blast furnace; a basic oxygen furnace is charged with scrap and hot metal, and an electric arc furnace is charged with steel scrap and fluxes

Chemical oxygen demand, COD – COD determines the amount of organic pollutants found in surface water (e.g. lakes and rivers) or wastewater, making COD a useful measure of water quality. It is expressed in milligrams per liter (mg/l) also referred to as ppm (parts per million), which indicates the mass of oxygen consumed per liter of solution.

Cladding – A covering of a building's façade that can include solar panels, glass, color coated steel, aluminum, etc. used for new building and renovation construction

Coilbox – Rolling machinery; box for coiled steel employed to promote temperature uniformity during the hot-rolling process

Coiler – Mechanical part which captures strip from the rolling mill and coils it

Coke – Dry distilled coal, the basic fuel consumed in blast furnaces in the reduction of iron ore

Cold-formed steel section – An open steel profile. A steel strip is gradually and continuously cold formed with several rolls into various shapes of cross section. Cold formed steel sections are commonly used in steel frames and structures

Cold rolling – Metalworking process in which the thickness of a sheet, strip or plate is reduced by rolling at ambient temperature

Color coating/Coil Coating – A process where usually cold-rolled and metal-coated strip is additionally coated with an organic paint to improve corrosion protection and achieve a decorative, pleasing appearance

Continuous casting – A process by which molten metal is solidified into a semi-finished billet, bloom, or slab for subsequent rolling

Construction steel – See structural steel

Corrosion protection – The minimization of corrosion by coating with a protective metal

Cowper stoves – Heating apparatus; ceramic towers used for pre-heating blast air, also called hot stoves

Crude steel – Steel in its solidified state directly after casting. This is then further processed by rolling or other treatments, which can change its properties

Cutting station – Place for cutting the steel strand into slabs

D

Dry distillation process – Combustion without entry of oxygen

Dual-phase steel (DP) – High-strength steel that has a one soft (ferrite) and one hard (martensite) microstructure which allows for the desired combination of good formability with high strength

E

Electric arc furnace (EAF) – Steelmaking furnace where scrap is generally 100% of the charge. Heat is supplied from electricity that arcs from the graphite electrodes to the metal bath

Environmental product declaration (EPD) – An environmental product declaration tells the story of the environmental impacts of product's life cycle in a written report.

F

Fatigue – The progressive and localized structural damage that occurs when a material is subjected to cyclic loading at stresses considerably below the ultimate tensile strength

Formatting – Marking, wrapping or cutting the steel into the required dimensions

Four-high rolling mill – Mechanical equipment; comprises four cylindrical rollers with extremely high pressure which press slabs into plate by repeatedly rolling backwards and forwards

Frames – Prefabricated steel frame structures make it possible to create spacious and adaptable interiors. Steel is the perfect choice for strong, light and slender frame structures that are quick and safe to install. Steel frames can be tailored and easily optimized in terms of clear height and column spacing

G

Galvanization – The process of applying a protective zinc coating to steel or iron to prevent rusting or corrosion

H

Hardening – Process that increases the hardness of steel, i.e. the degree to which steel will resist cutting, abrasion, penetration, bending and stretching

Hearth – Lower part of the blast furnace; area for the collection of molten hot metal

Heat treatment – Heating and cooling a steel product so as to obtain desired conditions or properties

Hematite – Fe₂O₃, a non-magnetic iron ore or red iron ore

High-strength steels – Steels that can bear high static or dynamic loads without breaking

Hollow section – A circular, square or rectangular tube that can be generally used in welded steel frames. In manufacturing hollow sections, a welded tube goes through a series of shaping stands, which form the round tube into the final square or rectangular shape

Hot-dip galvanization – Method for adding a rust protection surface layer. For example, adding zinc and aluminum in hot, molten form on the steel. The opposite to zinc-plating, an electrochemical method of applying a coat of molten zinc to the surface of steel for the purpose of enhancing corrosion resistance

Hot metal – The name for the molten iron produced in a blast furnace. It proceeds to the basic oxygen furnace in molten form or is cast as pig iron

Hot strip rolling mill – A mill for rolling heated slabs through a series of rolling stands to produce sheet steel in coil form

Hot rolling – A metalworking process in which slabs are heated to high temperatures and then deformed between rollers to form thinner cross-sections

I

Injection coal – Coal powder which is injected into the blast furnace under high pressure without being converted to coke

Iron ore pellets – Iron ore particles rolled into small balls and thermally processed into hard spheres

L

Ladle – A "bucket" lined with refractory (heat resistant) bricks, used to transport molten steel from process to process in a steel mill

Ladle change – Switch from an empty to a full container of steel

Ladle metallurgy furnace (LMF) – An intermediate steel processing unit that further refines the chemistry and temperature of molten steel while it is still in the ladle. The ladle metallurgy step comes after the steel is melted and refined in the electric arc or basic oxygen furnace, but before the steel is sent to the continuous caster

Ladle treatment method – Different methods for ladle metallurgy

LD converter (Linz Donawitz) – Oxygen steelmaking process employing a converter (vessel) and top blowing oxygen lance to refine the blast furnace hot metal into crude steel. The name comes from the Austrian cities of Linz and Donawitz

Lifecycle – Definition of the product raw material extraction, material production, product manufacturing, use phase, repair and recycling of the product and its materials including distribution in all phases..

Lifecycle assessment (LCA) – Environmental impact assessment of the complete product lifecycle from "cradle to grave".

Load-bearing sheets – Load-bearing profiled sheets are made of high-quality raw materials for the roof construction of commercial and industrial buildings. They are a cost-effective roof solution for achieving long spans, which eliminates secondary steelwork. They may also be designed as a stressed skin to distribute horizontal loads to the frame/foundations

Low alloyed steel grades – steel, other than carbon steel that requires the minimum content for each specified alloying element to be lower than the applicable limit for the definition for alloy steel

M

Magnetite – Fe₃O₄, magnetic iron ore, black iron oxide

Martensitic steel – Steel with a very hard form of steel crystalline structure called martensite that is formed by displacive transition. The martensite is formed by rapid cooling (quenching) of austenite which traps carbon atoms that do not have time to diffuse out of the crystal structure

Material design – Control of the steel chemical composition and processing to achieve a microstructure that offers a combination of properties desirable for an intended product or application

Metal coating – see Hot-dip galvanization

Metallurgy – The science and technology of metals

Microalloying – In the case of advanced fine grain steels with particularly stringent yield strength and tensile strength requirements, small quantities of alloying elements such as niobium, vanadium or titanium are added

Mold – Casting mold

N

Niche products – In SSAB's case, advanced high-strength steels and quenched steels

Nitrogen oxides – A generic term for the mono-nitrogen oxides NO and NO₂. They are produced from the reaction of nitrogen and oxygen gases in the air during combustion, especially at high temperatures. In the atmosphere, nitrogen oxides can contribute to formation of photochemical ozone, smog, can impair visibility, and have health consequences.

O

Ore car – Railcar for the transportation of lump ore, iron ore concentrate or pellets

Oxide scale – An oxide of iron which forms on the surface of hot-rolled steel

Oxygen lance – Pipe-shaped lance for treatment using oxygen

P

Pair of rollers – A pair of cylindrical rollers for rolling steel to thinner dimensions under high pressure

Particulate emissions – Particulate emissions are emissions characterized by the presence of small particles of solids and liquids.

Particulates filter – Purification plant for gas or air in which particulates are separated and condensed for recycling

Phases – Steel has different crystal structures at various temperatures and the phase(s) present depend on heat treatment, alloy quantity, hardening, quenching, etc. Best known are the martensite (quick hardening) phase, ferrite phase (pure iron) austenite (nonmagnetic) phase and bainite phase

Pickling line – A processing line which chemically removes oxide or scale from the steel surface to obtain a clean surface for subsequent processing

Plate – Flat rolled steel product which is typically classified as over 1,200 mm (48") in width and 4.5 mm (0.180") in thickness

Process gas – Gas from metallurgical processes; often energy rich

Process water – Water from cooling or treatment in the processes. Always undergoes purification and can often be re-circulated

Profiled – Profiled (or corrugated) steel which is pressed in order to corrugate the steel

Protection steel – Structural steel with ballistic properties

Purlin – Purlins are cold-formed open profiles used in construction as a load-bearing element of roofing and cladding

Q

Quenched steels – Hardened and/or tempered steel. SSAB's quenched steels are also high strength

R

Rain water systems (RWS) – The rainwater systems of a steel roof consist of guttering, downpipes, water tunnels, and other elements to channel rainwater efficiently into the sewer system

Recycling – Return of used products or by-products to enter a new cycle of production and use

Reduction agents – Carbon or hydrogen used to remove oxygen from iron ore to produce iron

Refining – In oxygen-blown steelmaking processes, the reduction of the hot metal's carbon content during refining by the use of gaseous oxygen

Rolling mill – Any of the mills in which metal undergoes a rolling process. For plate, sheet and strip, these include the slabbing mill, hot rolling mills, cold rolling mills, and temper mills. Any operating unit that reduces gauge by application of loads through revolving cylindrical rolls; operation can be hot or cold. The elevated temperature rolling mill is the Hot Mill and is capable of reducing the gauge of a slab 92–99%

Roll pass – Number of times a billet or slab passes through a pair of rollers

Roofing – A steel roof made of roofing sheets. Usually also includes understructures, rainwater systems, roof safety products, flashings and other elements and accessories

Rougher/Roughing mill – Two rough cylindrical rollers which press the steel to thinner dimensions prior to hot rolling

Runner – Ceramic-lined spout for controlling molten, hot metal

S

Sandwich panel – Sandwich panels are prefabricated elements that consist of an inner insulation core between two color-coated steel sheet layers. The insulating core can be mineral wool, polyurethane or polystyrene. Sandwich panels are used in façades, partition walls and ceilings. The most typical applications include industrial, office and commercial buildings, sports halls, warehouses and power plants. The panels are also suitable for food industry construction and demanding clean room applications

Scrap – Ferrous (iron-containing) material that generally is re-melted and re-cast into new steel

SEN – Submerged entry nozzle, a ceramic pipe which protects the steel from exposure to air, in conjunction with casting

Sheet pile wall – Long structural sections with a vertical interlocking system that creates a continuous wall. The walls are most often used to retain either soil or water

Shot blasting – Cleaning and descaling metal by means of a stream of abrasive powder or shot. The shot can be sand, small steel balls of various diameters, granules of silicon carbide, etc.

Sintering – A process that combines iron-bearing particles into small pellets

Skirt – Pipe around the blast furnace for the supply and allocation of hot blast air, also known as a bustle pipe

Slab furnace – Furnace for heating steel slabs to rolling temperatures

Slabs – The most common type of semi-finished steel, used for production of flat steel products

Slag – Solution of mainly liquid oxides. Flux such as limestone may be added to foster the congregation of undesired elements into a slag. Because slag is lighter than iron, it will float on top of the pool, where it can be skimmed

Slitting – A metalworking process involving shearing which is typically employed to cut a wider steel coil into one or more narrower coils

Smelting reduction process – Reduction of iron ore which takes place in a smelting phase

Special steel – Alloyed steel

Standard steels – Steels with lower strength (yield strength often 235–355 MPa (or N/mm²)). Used within more conventional applications within the engineering industry and construction sector

Steckel mill – A four-high reversing rolling mill, a Steckel mill allows the rolling of a large slab by providing heated coil furnaces or boxes on both sides of the mill to store the increased length produced during rolling

Steel – Alloy of iron and carbon with a carbon content of less than 1.7%

Steel bath – The hot, molten steel in a container

Steel shuttle – Train system for transportation of steel slabs between Luleå, Borlänge and Oxelösund production facilities

Strand – The continuous cast slab within the continuous casting machine prior to cutting into individual slabs

Strength – Properties related to the ability of steel to oppose applied forces. Forms of strength include withstanding imposed loads without a permanent change in shape or structure and resistance to stretching

Strip – Thin, flat steel that resembles hot-rolled sheet, but it is normally narrower and produced to more closely controlled thicknesses

Structure – The steel's molecular form following different treatment methods; crystalline structure. May also refer to the size, shape, and arrangement of phases within the steel

Structural steel – Steel intended for, e.g. load-bearing structures, e.g. crane girders. Important qualities include strength, weldability, bendability and toughness

Sulfur dioxide – Sulfur dioxide is released primarily from burning fuels that contain sulfur (such as coal and oil). Sulfur dioxide is also a primary contributor to acid rain, which causes acidification of lakes and can damage trees and historic statues. High concentrations of sulfur dioxide affect health.

Sulfur purification – Method for removing sulfur from the hot metal or the steel, e.g. through the addition of caustic lime

Surface treatment – Cleaning, polishing or coating of surfaces; for example, through galvanization or organic coating

Suspended solids – Suspended solids is the amount of tiny solid particles, inorganic or organic, that remain suspended in water and act as colloid. The measurement of suspended solids is one way of gauging water quality. Physical alterations caused by suspended solids include reduced penetration of light, temperature changes, and infilling of channels and reservoirs when solids are deposited.

T

Temper mill – A type of cold rolling mill, usually a four-high, single stand mill, used to provide a relatively light, cold-rolling reduction to hot-rolled, cold-rolled, or coated flat steel products to improve flatness, minimize surface imperfections/flaws such as coil breaks, and to alter mechanical properties

Tempering – Heating to 200–700°C degrees to make steel tougher and less brittle

Tensile strength – Ability to withstand tensile stress. (See Strength)

Thermo-mechanical treatment – A manufacturing method that gives steel the desired strength etc. properties by a careful combination of mechanical work (rolling) and temperature control

Torpedo – Cylinder-shaped brick-lined railway car used for transporting hot, molten metal

Tube – Round or square tube is made in the same way as pipe. During the manufacturing process, a flat steel strip is gradually forced into shape to become round, and the edges are presented ready to weld. The edges are then welded together to form the tube. In making a square or rectangular cross-section, a welded tube goes through a series of shaping stands, which form the round tube into the final shape

Tundish – An intermediate container in the casting process to facilitate ladle change without disruption in the process

V

Vacuum degassing – An advanced steel refining facility that removes oxygen, hydrogen and nitrogen under low pressures (in a vacuum) to produce high-quality steel for demanding applications

Volatile organic compounds (VOC) – variety of organic chemicals that have a high vapor pressure at ordinary room temperature. Some VOCs are dangerous to human health or cause harm to the environment.

W

Wear resistance – Ability to resist the erosion of material from the surface as a result of mechanical action, e.g. abrasion and friction

Wear steel – Steel with qualities adapted to withstand wear, e.g. abrasion

Y

Yield strength – Is defined in engineering and materials science as the stress at which a material begins to deform plastically. Prior to the yield point the material will deform elastically and will return to its original shape when the applied stress is removed. Once the yield point is passed, some fraction of the deformation will be permanent and non-reversible.

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