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White Paper

SSAB and carbon dioxide emissions

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1 SSAB AND THE ENVIRONMENT

SSAB's vision is "a stronger, lighter and more sustainable world." The vision is based on the strategy for being the leader in high strength steel products. With the help of high strength steel it is possible to produce products that weigh less and are more durable than products made of ordinary steel.

SSAB must be one of the best companies in the steel industry regarding environmental issues. Despite high emissions of carbon dioxide (CO_2), SSAB is still among the world's leaders when it comes to controlling emissions from manufacturing. The total emissions from SSAB's steel production is 6-7 million tonnes per year. In this paper, we describe how we are currently operating and how we in the short and long terms will contribute to further improvements.

1.1 SSAB's products deliver lower emissions

SSAB's investment in high strength steels is an investment in a better environment. Light and high strength steel structures save material and energy in production as well as for the end-user. High strength steels are stronger than ordinary steels. This means less steel is needed in the production, which in turn reduces emissions. Vehicles, excavators and cranes made of SSAB's steel reduce their fuel consumption and the products last longer, which in turn also reduces emissions.

Some examples from the Swedish Steel Prize:

- One of the finalists from the 2012 Swedish Steel Prize was the Czech company Borcad CZ s.r.o that has redesigned an already light commuter train seat using SSAB's high strength steel Docol 1200 M, which reduced the weight by 25%, or 12 kg, per seat. It provides significantly lower power consumption for the commuter trains which frequently need to brake and accelerate.
- Another finalist from the 2012 Swedish Steel Prize was the Swedish company Gremo AB that has used SSAB's high strength steels Domex 700, Weldox 700 and Hardox 450 to produce a so-called forwarder which transports timber from the logging site to the road. The design delivers a reduced plate thickness of 10 mm, and the weight of the chassis has been reduced by 15%, reducing fuel consumption relative to payload.
- The winner of the 2010 Swedish Steel Prize was the South African company Van Reenen Steel Ltd., which has designed a new dumper body intended for the transportation of ore in opens pit using SSAB's high strength steels Hardox 400, Hardox 450, Hardox 500 and Weldox 700. The design reduced the weight by 8 tonnes (from 43 tonnes to 35 tonnes) and enhanced the product's life considerably.

SSAB delivered 1,585,000 tonnes of high strength steel in 2012[1], which corresponds to 38% of the company's total deliveries. SSAB's strategy is to increase the supply of high strength steel to 50% of total volumes by 2015.

1.2 New initiatives to reduce emissions from production

SSAB is one of the most advanced steel companies in the world on limiting emissions from production. With the technology that exists today, you cannot proceed much further in limiting emissions from iron ore-based steel production. However, SSAB still takes measures in the short term to reduce emissions from the production even further. Investments in long-term projects to radically reduce emissions are also being made.

1.2.1 Short-term – Reducing carbon dioxide emissions by continuous improvement

SSAB already has a well-developed process to minimize carbon dioxide emissions. By continuing take into account carbon dioxide reductions in the daily process of improvement, it is possible to in a few years reduce emissions of carbon dioxide from fossil fuels and reducing agents by up to 100,000 tonnes based on a year's worth of emissions, but greater reductions require completely new technologies.

1SSAB's Annual Report 2012

Some comparisons of what 100,000 tonnes of carbon dioxide are equivalent to:

- **Cars – The same environmental benefit that converting to 50,000 electric cars would provide.**
  According to the Swedish Department of Transportation, newly registered gasoline and diesel cars from 2012 emit an average of 135 grams of carbon dioxide per kilometer. If you replace 50,000 of these cars with electric cars that drive 15,000 km per year, it would reduce carbon dioxide emissions by 100,000 tonnes.
- **Vacation Travel – Corresponds to the same emissions as flying 88,100 people from Sweden to Thailand**
  According to ICAO (International Civil Aviation Organization), a return trip from Stockholm in Sweden to Bangkok in Thailand results in emissions of 1.13507 tonnes of carbon dioxide per person. 100,000 tonnes of carbon dioxide is therefore equivalent to 88,100 people flying from Stockholm to Bangkok and back.

1.2.2 Long-term – Creating the conditions for new steelmaking technologies with significant reductions in CO_2 emissions

Along with the rest of the world's steel industry, SSAB drives long-term development to develop new breakthrough technologies applicable for the production of steel. This takes place in the European research project ULCOS (Ultra Low Carbon Dioxide Steelmaking). The goal is to develop new technologies for steel production resulting in at least 50% less carbon dioxide emissions. The new technology for steel production can be applied commercially after 2020 at the earliest. Besides this, SSAB supports the corresponding program in the United States, the so-called "CO_2 Breakthrough Program" within the AISI (American Iron and Steel Institute).

1.2.3 Long-term – Explore opportunities for carbon dioxide storage

SSAB has an active role in exploring the possibility of storing carbon dioxide in the southern Baltic Sea, which is part of the so-called CCS technology[2]. Along with other Swedish heavy industry, the geological formations about 1,000 meters below sea level are examined for suitability for storage. As the southern Baltic Sea involves several countries, the project has been in contact with all the countries concerned. The project, which is named Bastor, also includes infrastructure and acceptance issues and is supported by the Swedish Department of Energy and others.

2 BACKGROUND

2.1 Why is steel needed?

Steel is one of the foundations of a modern, functioning society. It makes up the backbone of buildings, bridges and railways and is used in many different machines and vehicles. Therefore, the demand for steel increases as societies develop, and the demand is growing fastest in emerging countries.

The global production of crude steel, according to the World Steel Association, amounted in 2012 to 1,510 million tonnes, and China accounted for 47% of the production. (SSAB manufactured 5 million tonnes of crude steel in 2012.)

2.2 Why does SSAB emit carbon dioxide?

Steel production includes several steps that are critical in environmental terms. SSAB's environmental work aims to continually develop more efficient processes to reduce the environmental impact. Two different processing methods are used in the production of SSAB's steel.

In Sweden, ore-based hot metal is produced using iron ore pellets in SSAB's three blast furnaces in Luleå and Oxelösund. The production of iron is done by reducing iron ore using coal and coke in the blast furnaces. This process results in the creation of carbon dioxide. With the current method it is impossible to produce steel

2 CCS stands for Carbon Capture and Storage and is a project undertaken to capture and store carbon dioxide.

without generating CO_2. The process, which has been used for hundreds of years, has been continually developed and improved to become very efficient, and the residual energy is recovered in the form of district heating and electricity production. In order to take advantage of the material as much as possible, a variety of useful by-products are also produced. International comparisons show that SSAB's blast furnaces are one of the best when it comes to low CO_2 emissions per tonne of hot metal. There are several reasons for this: high quality raw materials in the form of iron ore pellets, high quality coke, and efficient processes. It is also important that the blast furnaces can operate without interruption.

SSAB's plants in the U.S. manufactures steel using recycled scrap metal in electric arc furnaces. A certain amount of coal and natural gas is used in the production process, but electric power is mostly used in the smelting of steel scrap. Overall, it produces only one-tenth as much carbon dioxide emissions as the production of steel from iron ore. Our scrap-based plants emit roughly 0.3 tonnes of carbon dioxide per ton of finished steel, compared with just over 2 tonnes for ore-based works, not including emissions for the production of electricity.

SSAB's total production of crude steel in 2012 was based on 54% from iron ore and blast furnaces, and 46% from recycled scrap metal and electric arc furnaces. (The crude steel from iron ore-based production contains about 20% of internally captured scrap metal and if included in the calculations, the conditions are basically reversed, 43% and 57%, respectively.) This can be compared to the international average, where 29% of the steel produced was produced by electric arc furnaces and 69% via blast furnaces in 2011, according to the World Steel Association.

The liquid steel produced in the above processes is refined and alloyed in different finishing stages, before being cast in the continuous casting machines. The slabs manufactured in the continuous casting machines are further processed in rolling mills to various forms of steel. SSAB currently produces both sheet metal and heavy plate in Sweden and heavy plate in the United States.

Besides steel, the processes produce significant amounts of heat, gas, slag and dust that are widely utilized in the form of by-products. It also has a positive effect on carbon dioxide emissions in general. For example, coke oven gas is a source of energy in our various furnaces.

2.3 Is it possible to reduce carbon dioxide emissions from the blast furnace?

2.3.1 Other manufacturing processes

Iron is produced using natural gas on a smaller scale. It also contains carbon, but also hydrogen as a reducing agent. The reduction from ore (= iron oxide) to iron then occurs in a solid form to DRI (Direct Reduced Iron), which in Swedish is called sponge iron. Iron produced in this manner must then be melted for it to be further refined to the desired steel quality and cast into the desired shape. Melting normally takes place using electricity in electric arc furnaces.

Experiments have been carried out to reduce iron ore using pure hydrogen. Hydrogen can be produced using electricity, but the world's electricity production today is largely based on coal, although in Sweden it is mostly obtained from hydropower and nuclear power. In laboratory environments, the reduction of iron ore has also been carried out using electrolysis, i.e. only using electricity.

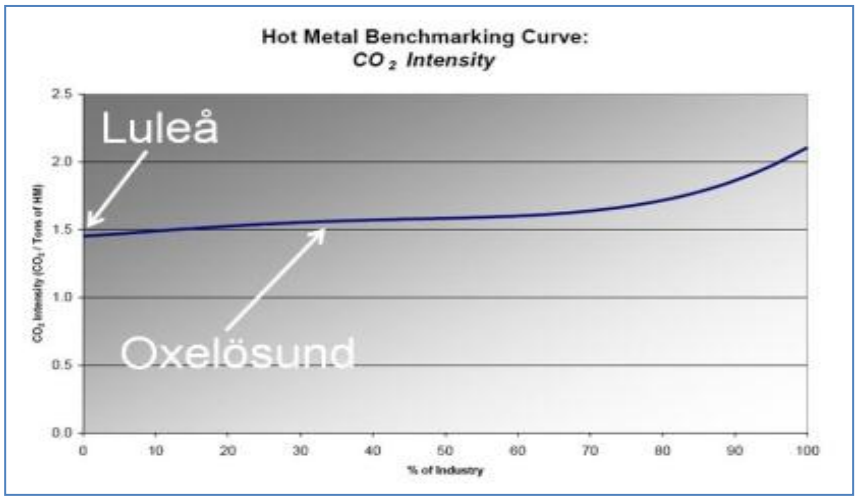
A technological change where "clean" electricity is used for pig iron production may work in the future, but until such electricity is available on a large scale and before the new technology for the reduction of iron ore is adapted for this, a few more decades of development will be needed. SSAB believes that a safer and faster development of steelmaking technology is to focus on capturing carbon dioxide produced in the steelmaking process and store this in a safe place deep underground. This technology is known as CCS. Development of the CCS technology is ongoing and carbon sequestration has been tested in LKAB's experimental blast furnace in Luleå in the European steel industry research program ULCOS. CCS is a part of the aim to develop steelmaking processes that reduce carbon dioxide emissions by 50%. A first commercial plant of this type will not be operational before 2020.

The Swedish Environmental Protection Agency's action plan for achieving zero carbon dioxide emissions for Sweden by 2050 highlights carbon capture and storage (CCS) from the manufacturing industry as a key component. SSAB has a central role in projects where the Swedish industry examines the possibility and desirability of storing carbon dioxide deep below the ground in the southern Baltic Sea. It will, however, not happen until after 2020 for a repository to be put into operation, even if it is considered to be a realistic solution.

2.3.2 Our position compared with others

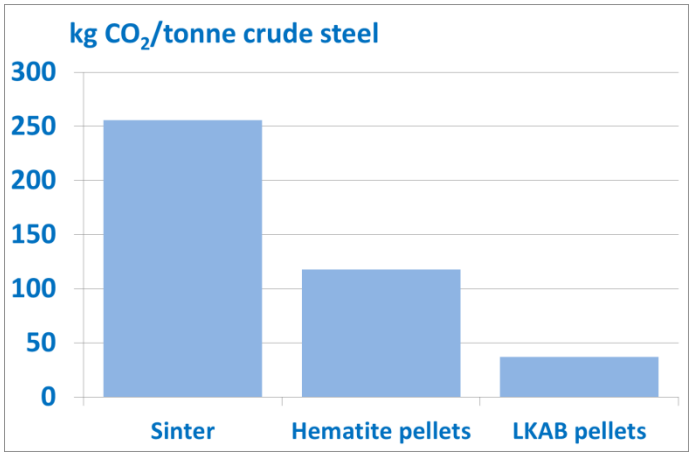
SSAB has for many years worked hard to bring down carbon dioxide emissions from our manufacturing. SSAB is today among the most efficient steel companies in the world when it comes to keeping carbon dioxide emissions low. Eurofer compiled benchmark values for blast furnace-based carbon dioxide emissions ahead of the EU's trade period for CO_2 2013–2020. In the compilation, SSAB's blast furnace in Luleå was ranked as having the lowest emissions; see the graph below from Eurofer which is supplemented with indications for SSAB's blast furnaces

SSAB's emissions are among the lowest in the world



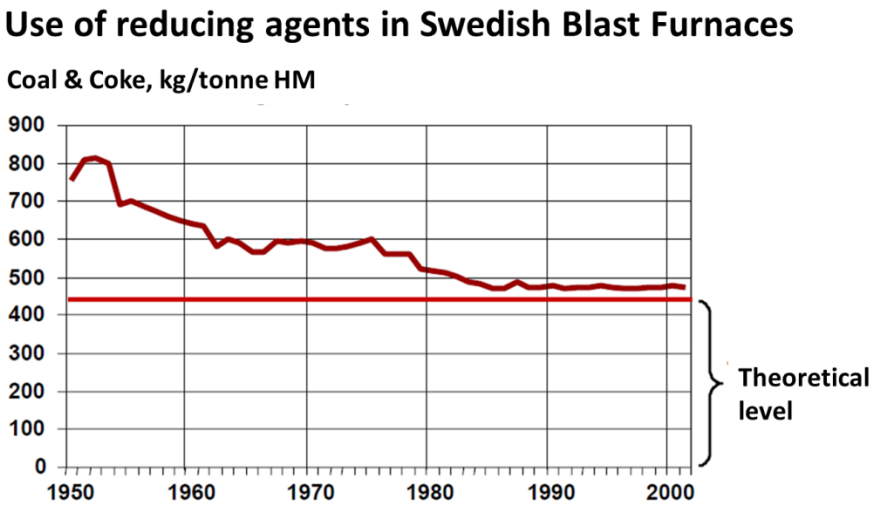
Source: Eurofer

The difference in performance is partly due to the conditions that exist with regard to the quality of iron ore and coke, and in some cases even the hot metal quality being sought. SSAB's blast furnaces use LKAB's iron ore pellets with very high iron content. Thanks to the use of iron ore pellets from LKAB, the environmental impact has been reduced by more than 200 kg of carbon dioxide per tonne of steel, compared to a normal steel mill that uses other iron raw materials.



Source: www.lkab.com (redrawn)

Comparisons over time show that there has been a dramatic reduction in the use of coal and coke. Blast furnace technology today is very close to the theoretical limit of what can be achieved in the reduction of carbon dioxide emissions; see the figure below from Jernkontoret (the Swedish Steel Producers' Association).



Source: Jernkontoret (the Swedish Steel Producers' Association)

To significantly reduce carbon dioxide emissions from the blast furnace, compared to what has already been done, therefore requires a shift in technology and capture and storage of carbon dioxide, as mentioned above. Before the shift in technology is implemented, it is inevitable that emissions will increase if output increases.

2.4 Why not use only scrap?

As mentioned above, the carbon dioxide emissions are only a tenth for a scrap-based works compared with a blast furnace-based works. SSAB in Sweden has blast furnaces only, but in all cases use about 20% scrap in the steel converter. SSAB in the U.S. uses electrical arc furnaces and are based on 100% scrap. Of the entire world's steel production only about 29% are completely scrap-based in the same way as SSAB in the U.S. Although steel can be reused basically an infinite number of times, there just is not enough scrap. Scrap metal is currently in short supply, since steel production in the world is increasing, with China accounting for the largest increase. If SSAB would go over to scrap-based steel production in Sweden, the production would have to be replaced by ore-based production elsewhere, which would not benefit the emissions of carbon dioxide, particularly as SSAB has Europe's and probably the world's most efficient blast furnace.

3 SSAB'S CURRENT ENVIRONMENTAL WORK WITH CARBON DIOXIDE EMISSIONS

SSAB's vision is "A stronger, lighter and more sustainable world." The text is supplemented by the following lines: "Together with our customers, we will go further than anyone else to realize the full value of lighter, stronger and more sustainable steel products." In that spirit, we have set a goal that our deliveries of high strength steel will increase and make up 50% of our total by 2015. Being able to produce stronger, lighter and more sustainable products are by far the most effective way for SSAB to help reduce carbon dioxide emissions on a global level. SSAB is also working to raise awareness of how the use of advanced high strength steels will make our customers' products more energy efficient and environmentally friendly.

SSAB's Environmental and Sustainability policy further states when it comes to our use of resources: "We use raw materials and energy efficiently in our operations while minimizing the generation of waste." This means that SSAB manufactures products and uses facilities which effectively conserve raw materials, energy and other natural resources. SSAB also aims to recycle as much as possible by returning materials and energy back to the processes and by producing sought-after by-products. Environmental work is thus conducted in a systematic, goal-oriented and proactive manner to continually reduce the environmental impact.

3.1 SSAB's products

Global focus on climate change and increased awareness of the environment in all markets make SSAB's high strength steels attractive. Construction using durable and high strength steel requires less steel than using traditional steel. Reduced material consumption reduces the environmental impact. High strength steel makes it possible to create designs for vehicles that weigh significantly less; it increases loading efficiency and reduces emissions from transportation. Compared with ordinary steel, high strength steels provide much lower carbon dioxide emissions from a lifecycle perspective.

The research project Stålkretsloppet (the Steel Eco-Cycle) used data in the table below in order to demonstrate the impact from a lifecycle perspective when 1.3 tonnes of ordinary steel is replaced by 1.0 tonnes of high strength steel; the amount differs because you can make lighter designs. It appears that the major benefit arises from the use and not the production, although it requires less raw materials and energy.

Potential	Carbon dioxide	Energy
Raw materials production	200 000 tonnes	1 200 GWh
Steel production	400 000 tonnes	2 100 GWh
Usage of steel	7 400 000 tonnes	25 200 GWh
Total	**8 000 000 tonnes**	**28 500 GWh**

An example of eco-friendly products is the South African company Van Reenen Steel Ltd's winning entry to the Swedish Steel Prize in 2010. They have developed a truck body intended for the transportation of ore in an open pit mine with a much longer life than a traditional design. The platform floor and sides are built in Hardox wear steel with side bars, the substructure and protective screen made of Weldox. For users, this means a reduced vehicle weight by 8 tonnes, or 19%, and a reduced fuel consumption of 10%.

Source: Swedish Steel Prize 2010 Truck body from Van Reenen Steel Ltd - South Africa

Another example is taken from the finalists of the Swedish Steel Prize 2012. Lightweight passenger train seats "Regio and Regio+" – Borcad CZ s.r.o in the Czech Republic. Borcad, which has a strong market position for light train seats, has with a clever design using Docol 1200 M, a high strength steel from SSAB, developed the next generation light train seat for commuter trains. The slim yet sturdy seats are 25% lighter than their predecessors. The reduced weight is particularly important for commuter trains which brake and accelerate many times. The result is lower energy consumption as well as faster acceleration. At the same time they meet the established requirements for strength and crashworthiness by a wide margin. The high strength of the steel also means destruction by vandalism becomes more difficult.

Source: Swedish Steel Prize 2012: Light train seats from Borcad CZ s.r.o - Czech Republic

3.2 SSAB's investments

The focus on niche products has been important for SSAB's earnings. It is to further build on this strategy that SSAB recently invested in to develop the production of high strength steels. Most recently, a new quenching line was opened in the fall of 2012 in Mobile. It can now produce two of our most high quality, high strength steels, Hardox and Weldox, in a facility that is certainly the best in the U.S., and probably in the world. This, together with the production of heavy plate in Oxelösund and the new quenching line in Borlänge, where we produce the thinner materials, allows us to offer the market a unique breadth of high strength steel.

3.3 SSAB's production

3.3.1 Examples of measures for more efficient production

- In early 2012, SSAB could see the full impact of the investment in the new hot stoves at the smaller blast furnace in Oxelösund which was made in 2010. They make the hot blast air that is blown into the furnace even hotter than before. The hot metal process then requires less injection coal and coke per tonne of iron, lowering carbon dioxide emissions. The gains are significant both from an environmental and economic perspective.
- During 2011 and 2012, intensive efforts have been ongoing to increase the recycling of scrap metal that comes with different slags generated in the processes. The scrap is recycled in our blast furnaces in the form of briquettes and in lump form, which reduces the need for iron ore as well as coke, which in turn reduce carbon dioxide emissions.
- In late 2012, the new energy recovery facility in Finspång was inaugurated. By taking advantage of the exhaust gases from the color coating line, 1,500 homes in Finspång are supplied with district heating, which reduces carbon dioxide emissions on a municipal level.
- In Kunshan, SSAB APAC installed equipment for regenerative thermal oxidation (RTO) which is used to break down the organic hydrocarbons which originate from solvents in the paint line. RTO means that the heat from the burners in the equipment is re-used by pre-heating the gas with the organic hydrocarbons before it is burned. In this way, the actual burners require much less energy.
- More efficient burners for heating the steel have been installed in several plants within SSAB's operations.
- Increasing the transportation filling capacities is something that Tibnor and others are working on. This results in fewer transports and hence less carbon dioxide emissions.
- The possibility to replace oil with natural gas for heating the furnaces in Borlänge is being investigated.
- The possibility to replace a certain amount of fossil fuels with bio-energy is being investigated in various collaborative projects.

3.4 Research and investments in reducing carbon dioxide emissions

3.4.1 ULCOS (Ultra Low Carbon Dioxide Steelmaking)

SSAB conducts long-term development to develop new breakthrough technologies applicable to the production of steel along with the rest of the world's steel industry. This takes place in the European research project ULCOS (Ultra Low Carbon Dioxide Steelmaking). The goal is to develop new technologies for steel production, resulting in at least 50% less carbon dioxide emissions. The new technology for steel production can be applied on a commercial basis after 2020 at the earliest.

3.4.2 The CCS project

One way to reduce emissions in the steelmaking process is to capture and store the carbon dioxide deep underground. This method is called CCS (Carbon Capture and Storage). In regards to carbon capture technology; it is part of the ULCOS project as mentioned in the section above. When it comes to storage possibilities for carbon dioxide, SSAB has, along with a number of other Swedish industrial companies, taken an active role in a project called BASTOR to investigate whether carbon dioxide can be stored in the deep sandstone formations far below the ocean floor of the southern Baltic Sea. The project takes a holistic approach and will also describe the consequences from both environmental and social perspectives, as well as legal aspects. It also examines the need for any infrastructure required for the transport of carbon dioxide. Since the proposed storage site affects our neighboring countries around the Baltic Sea, the project has also been in contact with these countries. The project is supported by the Swedish Department of Energy and the Global CCS Institute.

3.4.3 Steel Eco-Cycle

SSAB, along with the Swedish steel industry and Mistra (the Foundation for Strategic Environmental Research), has participated in the jointly funded research program Steel Eco-Cycle which was recently completed. The program lasted for 8 years between 2004 and 2012. The focus of the program has been on the management of natural resources, energy and recycling. The vision *was "Closing the loop in the manufacture and use of steel in society."* SSAB has been particularly active in the areas of: capturing vanadium from slag and also producing reusable slag, developing high strength steels in an energy-efficient manner, and cleaning scrap from zinc coating, so that both scrap and zinc can be recycled. Steel is often treated with zinc to protect it against corrosion, but such scraps complicate today's processes. Taking advantage of the findings of the program and implementing them in the production now proceeds without additional funding from Mistra.

3.5 Transports

Railways and ships are primarily used for transportation, but also trucks are used. SSAB's logistics departments aim to make transport as efficient and economical as possible. No other company in Sweden carries as much freight by rail as SSAB.

Raw materials are transported to Luleå and Oxelösund by rail or ship. The slabs are transported by train to Borlänge both from Luleå and Oxelösund. Returning cars are utilized for transporting sheet metal to the export harbor in Oxelösund and to customers in the north. Scrap produced in Borlänge mostly returns to Luleå where it is recycled in the steel mill. Goods to and from SSAB constitute the single largest railway tonnage in Sweden.

The impact on the railway system in Sweden is high, and is often a congested sector. One way to increase the capacity of the infrastructure is to increase the payload of the cars. SSAB has participated in several projects where the payload has significantly increased, among other things, through reduction in the weight of the car itself. An example is the pellet train between LKAB in Kiruna and SSAB in Luleå, which is manufactured in high strength steels. The payload has been increased by 25%.

SSAB in Sweden has for several years received the Green Cargo “Climate Certificate for Transport”, which means that the company meets the Swedish Society for Nature Conservation’s transport criteria for Good Environmental Choice. Activities are underway to reduce emissions of particulates and nitrogen oxide emissions from transport.

The electric arc furnaces in Montpelier and Mobile were customized with respect to the potential market and the availability of scrap metal. This strategy minimizes the environmental impact of transportation since all plants have access to railways. In North America, the inland waterway system is also used.

3.6 Recycling

SSAB uses about 20% of scrap in steel production in Sweden and 100% in the U.S. Since we are using blast furnace-based technology in Sweden, there is only a small possibility to increase the share of scrap. When we recycle scrap in the steel process this reduces carbon dioxide emissions because we do not need to produce as much hot metal. Within SSAB, a number of exchange projects are ongoing where the amount of finished steel in relation to hot metal increases.

A constant effort to minimize waste is underway by returning as much as possible to the processes or by creating desirable by-products. Certain materials containing carbon such as dust in the blast furnace gas and used car tires in the U.S. can be returned respectively to the blast furnaces and electric arc furnaces. In this way, SSAB reduces both the waste and the purchase of coal for the production of new steel.

3.7 The by-products

SSAB’s production processes also create by-products that are sold for various purposes. The meticulous process management of steel production results in valuable by-products that are well defined and quality adapted.

SSAB has a wholly owned subsidiary in Sweden called Merox, which has the main task of managing and developing SSAB’s lifecycle for our Swedish facilities in Oxelösund, Luleå and Borlänge. This work is intended primarily to return the waste products to our processes, where they partially replace iron ore, coal, coke, limestone and alloys. When not appropriate, external sales in the form of customized products such as Hyttsten for road construction, Merit 5000 as an additive in concrete, Paddex for equestrian trails, M-kalk as a soil additive, ammonium sulphate as fertilizer, and Merox Ferric Oxide for ferrous magnets used in all modern electronics, from cell phones to cars, and also as a pigment in Swedish Match’s matches - worldwide! Correctly utilizing Merox by-products has the potential to reduce global carbon dioxide emissions by approximately 400,000 tonnes per year simply by using slag products to replace quicklime.

SSAB conducts active research projects together with others to find new areas where waste products can be used as raw materials, thereby minimizing waste from steel production.

3.8 Electricity supply and district heating

The energy-rich gas from the coke furnaces, blast furnaces and steel converters (LD gas) which is not consumed in the production of steel is used in power plants, among other things, to supply SSAB with approximately 50% of our electricity needs in the Swedish operations. In addition, district heating is supplied to over 70% of the population in the urban areas of Oxelösund and Luleå, and to 15% of the population in the urban areas of Borlänge. In late 2012, the new energy recovery facility in Finspång was inaugurated. By taking advantage of exhaust gases from the color coating line, 1,500 homes in Finspång are supplied with district heating.

4 EMISSIONS TRADING AND ALLOWANCES

The Emission Trading System of EU started in January 2005 and currently covers around 12,000 facilities, 800 of which are in Sweden, primarily in the industrial and energy production sectors. SSAB's plants in Oxelösund, Luleå and Borlänge were included from the beginning, while Finspång was included in 2013. The trade is regulated by a specific directive that covers all EU member countries. Emissions' trading is an essential tool for achieving the EU's commitment to reduce greenhouse gas emissions under the Kyoto Protocol. The goal is to create an effective European carbon market with the least possible negative impact on economic development and employment within the EU.

The trading system's first phase ran from 2005 to 2007. During the 2008-2012 trading period, at least 90% of the allowances would be distributed free to the included facilities. The system has been changed for the 2013-2020 trading period. A lower ceiling is set for available allowances, so that the EU is guaranteed to match its goal of a 20% reduction in emissions by 2020 compared to 1990. In addition, new sectors like aviation are included in the trading system. Industries operating in the global marketplace, and which would be likely to move production outside the EU if the costs became too high, get free allocation of emission allowances as before. The allocation principle has also been modified so that those who reach the best European performance levels will get the most free allocations. The steel industry, and thus SSAB, belongs to these so-called carbon leakage exposed sectors.