

## INDUSTRY CONTRACTS

### Ruukki: EUR 8 million for two construction projects

Steel frame constructor Ruukki, Norway, has been chosen as the steel structure contractor for the new head office of financial services group DnB NOR, and for construction projects for a new concert hall in Stavanger. The contracts are worth a total of around EUR 8 million.

DnB NOR's new head office to be built in the centre of the Norwegian capital of Oslo will have a specific honeycombed, multiportal structure. «Compatibility of the steel frame and other structures in this architecturally ambitious 17-storey building places special demands on the design of the steel frame structures,» says Project Director Øystein O. Ylvisåker from Oslos S Utvikling AS. Ruukki received the order from Oslos S Utvikling AS together with Spenncon, which will provide the prefabricated concrete elements.

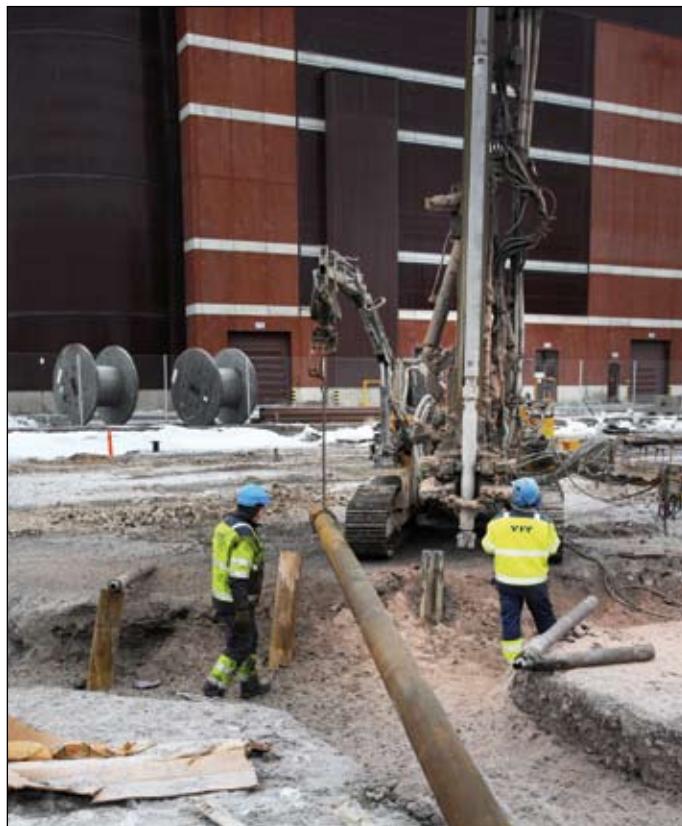
The frame structure of the entire building will be optimised by Ruukki in close cooperation with Spenncon. Ruukki is responsible for the design, manufacture, installation and fire protection of the steel frame in the head office project. In addition, large diameter RD drilled piles - developed by Ruukki and installed by drilling - will be utilised for

the first time in Norway in the project. This method means fewer piles are required and speeds up installation work. The solution also reduces adverse environmental impacts on the site. The pile casing serves as a drilling pipe during installation and as part of the load-bearing pile structure in the finished project.

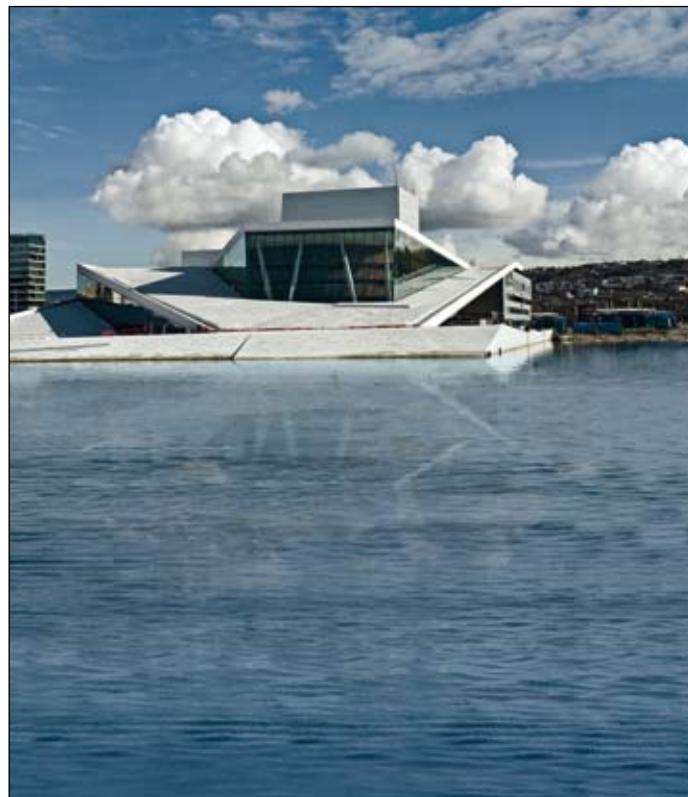
The steel frame structures will be manufactured at Ruukki's units in Peräseinäjoki and Ylivieska in Finland and in Balabanovo in Russia. Deliveries will start in May 2010 and the new head office is scheduled for completion in 2012.

In the Stavanger concert hall project, Ruukki is responsible for the manufacturing, fabrication design, installation and fire protection of the steel frame. Ruukki's customer in the frame structure contract for the concert hall is the Nytt konserthus i Stavanger (New Concert Hall in Stavanger) consortium established by the City of Stavanger and the county of Rogaland. The frame structures will be manufactured at Ruukki's unit in Peräseinäjoki, Finland and deliveries are due to begin in April 2010.

Ruukki has earlier taken part in the design and delivery of a number of similar projects in the Nordic countries: the new Oslo Opera house and Kolbotn cultural centre in Norway, and Gävle Concert Hall and Uppsala Konsert & Kongress building in Sweden. Ruukki is currently also taking part in the Stockholm Waterfront Congress Centre project in Sweden. In 2009 Ruukki delivered structures for new theatre and concert hall in Sørlandet, Norway.



The pile casing, a drilling pipe during installation, and part of the load-bearing pile structure.



In a previous project Ruukki supplied most of the steel structures of Oslo's opera house, "Operaen" - frame, foundation piles and retaining wall structures. The steel foundation piles extend to a depth of up to 60 metres and the largest are over 2.5 metres in diameter.

## Total UK orders Corus pipes

Corus has secured a letter of award for a pipeline order from Total E&P UK Ltd., worth nearly £200 million.

The order, for the Laggan-Tormore offshore gas field development in the west region of the Shetlands, will lead to production of over 150,000 tonnes of pipeline, around 500 km in length, at Corus' Hartlepool site. The pipe to be supplied will be 18" and 30" in diameter and will meet specification required for offshore environments.

"The pipe will be manufactured through 2010 and into 2011, securing both existing and additional employment for the area", Remco Blaauw, Managing Director of Corus Tubes said. "The order has been won against strong global competition."

According to Corus, the order will secure more than 350 jobs at Corus' site in Hartlepool, including approximately 100 new positions for the duration of the contract. First deliveries are required in March 2011. After the steel pipe has been manufactured, an anti-corrosion coating and concrete weight coating will be applied before delivery to Total.

## OMK to supply pipes for Nord Stream's second link

United Metallurgical Company (OMK) confirms it has become Russia's only supplier of pipes for the construction of the second link of the Nord Stream gas pipeline on the bed of the Baltic Sea from Russia to Germany. OMK obtained 25% of the contract, the total volume of which is approximately one billion euro.

The remaining part will be shared by European company Europipe (65%) and Japan's Sumitomo (10%) (see article in Rev. Met., Jan. 2010). Pipe delivery under this project is scheduled to start in May 2010.

OMK already participated in supplying pipes for Nord Stream's first link. From May 2008 to November 2009, Vyksa Steel Works (VSW, Nizhni Novgorod Region), part of OMK, shipped more than 260 thousand tonnes of large-diameter pipes (LDP) designed for subsea gas pipelines meeting the international standard of Norway's Det Norske Veritas (DNV) and the additional requirements of the customer specification.

For the first link of the gas pipeline, OMK manufactured a batch of x70 steel pipes of 41 mm in wall thickness. These pipes can withstand pressure of 220 atmospheres.

VSW started manufacturing LDP designed for subsea pipelines in 2006 and 2007 and obtained the certificate of conformity to the requirements of the DNV standard and the Nord Stream project specification. The company became Russia's and CIS's first qualified producer of pipes according to the installation of oil and gas pipelines standard DNV-OS-F101.



In the first phase of the project, OMK shipped more than 260 thousand tonnes of large-diameter pipes designed for subsea gas pipelines.

Source: Nord Stream AG



The Nord Stream Project, an offshore natural gas pipeline project due to link Russia and the European Union via the Baltic Sea, will result in two offshore pipelines, each being approximately 1,220 km in length, laid on the seabed of the Baltic Sea.

Source: Nord Stream AG

## Hamburg metro orders ThyssenKrupp steel

A new generation of metro trains is soon to enter service in Hamburg after the unveiling of the "DT5" multiple unit train. The new vehicle has been developed by the consortium Alstom/Bombardier Transportation under a contract from Hamburger Hochbahn AG, Germany's second largest urban transit company, which operates three metro lines and over 100 bus lines. The DT5 train is expected to be low on pollution, resource-friendly and quiet, while at the same time offering high safety standards and enhanced ride comfort. The vehicles are intended to replace the ageing DT3 fleet by 2015. They will run on Line U3 and the new Line U4 to HafenCity, which is due to open in spring 2012.

Alstom LHB, responsible for the design of the train, made extensive use of material from ThyssenKrupp Nirosta. The body of the DT5, based on a new lightweight design concept, is made completely from Nirosta 4318 stainless steel.

"With its high yield strength and good corrosion resistance, 1.4318 is ideal for lightweight construction," says Wolfgang Gebel from ThyssenKrupp Nirosta technical customer support. "Even thin panels displays high strength and rigidity." Besides, the less a vehicle weighs, the less energy is needed to set it in motion and the lower are emissions of greenhouse gases and air pollution.

"We decided to do without external painting altogether," says Andreas Knitter, Alstom CEO. "Stainless steel surfaces are easier to clean, make expensive painting superfluous, and the high stainless steel content translates into another benefit for the environment. The new vehicles are made of 95 percent recyclable material." To allow the DT5 to shine without painting, the stainless steel panels used for the outer structure were provided with a special ground finish at ThyssenKrupp Nirosta to make the surface less sensitive and give it a silky shine.

The full order includes the delivery of up to 67 vehicles by 2015. For ThyssenKrupp Nirosta, road and rail vehicles offer major growth poten-

tial. "Environmental protection is becoming more and more important all over the world," says Gebel. "We expect a renaissance of urban rail transit and a major expansion of networks, combined with modernization of the vehicle fleet, which we intend to benefit from. Various possibilities of use, very good formability and in particular sustainability mean that more and more manufacturers in the transportation sector are turning to stainless steel." Stainless steel from Krefeld has been used in a variety of projects: examples include Basel, where a total of 60 new trams of type "Tango" are to be deployed in the next ten years, the Bombardier cars for the metro in New Delhi, India, and the double-deck cars for Deutsche Bahn.

## PLANTS AND EQUIPMENTS

### ArcelorMittal plans rebar JV in Northern Iraq

ArcelorMittal has signed a memorandum of understanding to establish a joint venture with Turkish partner Dayen, to build a steel mini-mill with electric furnace in Sulaimaniyah, Northern Iraq.

The mill would produce in its initial phase up to 250,000 t per year of rebars from locally sourced scrap and require investment of USD 100m to USD 130m, jointly subscribed by ArcelorMittal and Dayen.

Construction is planned to start in the second quarter of 2010 and production is planned to commence early in Q4 2011. Production could eventually increase to 500,000 t per year. «There are many opportunities for ArcelorMittal to assist in the development of the country,» said Christophe Cornier, member of the Group Management Board. «There is great demand for steel products for the local construction industry, which we aim to meet, working closely with our partner Dayen and the local government in Northern Iraq.»

### New spray nozzle technology for refractory repair of electric arc furnace at ThyssenKrupp Nirosta

Electric arc furnaces need to be relined on a regular basis, a costly and time-consuming process. So as to optimise maintenance of the refractory material on the furnace walls, ThyssenKrupp Nirosta steel mill in Bochum now relies on a spraying robot fitted with state-of-the-art control technology.

The device is partially automated, and therefore able to carry out complex refractory material maintenance without manual control. The newly developed spray nozzle technology permits a higher spraying speed and reduces the amount of hot repair material used through optimum wetting.



67 vehicles to be delivered by 2015.  
Source: Hochbahn AG

At the same time, this technology ensures that the material is applied evenly at the desired thickness.

With the furnace running at full capacity, the refractory lining on its walls can usually withstand the temperatures of up to 1,650 degrees Celsius for two-and-a-half weeks, ThyssenKrupp mentions. According to the stainless steel flat products specialist, with the help of the spraying robot the period before the refractory bricks need to be renewed can be doubled. The robot is controlled via a digital operator interface. It enables the operator to select precisely which wall areas are to be sprayed with the wetted magnesite, an unformed, sand-like refractory material. Binder components ensure that the material hardens on contact with the damaged areas and "seals" them. The maintenance operation takes between five and ten minutes and ensures the continued availability of melting capacity.

"We have also realized a further advantage in terms of servicing the new spraying robot," explains Helge Mees, head of the melting team at the Bochum steel mill. "ThyssenKrupp is looking to insourcing rather than outsourcing here." In the past, robot maintenance was carried out by the manufacturer, Minteq. As part of the new acquisition, the American company provided two ThyssenKrupp team technicians with comprehensive training on how to service and maintain the modern equipment. "This enables us to act flexibly and be independent of third parties," he continues.

The new spraying robot must therefore maintain the production reliability of the electric arc furnace in Bochum, and reduce consumption of refractory compounds.

## Bohler Welding Group inaugurates extended plant in Indonesia

Following a major extension, welding consumables specialist PT Bohler Welding Group South East Asia, part of the Austrian voestalpine Group, has inaugurated its production plant and regional sales centre in Cikarang, close to the Indonesian capital Jakarta. The production plant, which was established in 1997, has undergone a substantial expansion over the last 6 months, the production area has been more than doubled to over 4.000 square metres. This is resulting in a substantial broadening of the product portfolio and in an increase in the production capacity for the manufacture of welding consumables to over 6.000 tonnes per year. The production plant services its customers in the Asia Pacific Region as well in the USA, Middle East and Africa. In the medium term, the workforce in this production and sales centre belonging to the Bohler Welding Group is set to increase to more than 100 employees.

The most important applications for welding consumables are petrochemicals and chemicals, construction of power generation plant and other plant, offshore oil and natural gas extraction, liquid gas (LNG tanks), pipeline construction, automotive manufacture and shipbuilding, foodstuffs, sugar processing, steel construction and apparatus engineering.

PT Bohler Welding Group has also expanded its regional sales centre headquartered in Cikarang, Jakarta. Besides the extension of the sales office also a regional training and demonstration center has been erected. With the objective to further strengthen its presence in South East Asia, PT Bohler Welding Group South East Asia, is opening sales offices in all major cities (Jakarta, Singapore, Bangkok and Kuala Lumpur) to cater its customer with a broad range of high quality products and service-based solutions.

## X-Cast combination continuous caster at Peiner Träger: casting of slabs and beam blanks completed

At Peiner Träger GmbH, a company of the Salzgitter Group, located at Peine in Germany, the first slabs have been successfully cast on an X-Cast combination continuous caster revamped by SMS Siemag, followed by the casting of beam blanks after the section-size change.

At the Peine location, the so-called Peiner Träger ("Peine Beams") are produced, as well as sectional steel grades, such as European steel beams, sheet piling sections and special sections.

The scope of supply of SMS Siemag comprised all strand guiding components required for the continuous slab caster, the slab mold as well as the X-Pact electrical and automation package including the technological process models. SMS Siemag also supplied segments for the beam blank caster.

Within the scope of its investment program, Peiner Träger has additionally placed an order with SMS Siemag for the supply of an X-Melt electric steelmaking plant. Once this steelworks has been commissioned, scheduled for this year, the current annual capacity of some 1 million t of steel will be almost doubled.



The first beam blanks produced on the X-Cast combination caster for slabs and beam blanks in the works of Peiner Träger, Germany.

## SAFs commissioned by SMS Siemag

SMS Siemag, Germany, has successfully commissioned two submerged arc furnaces (SAFs) at China Bluestar International Chemical.

China Bluestar International Chemical Co., Ltd. is a Chinese manufacturer of metallurgical silicon which is further processed into material for the semiconductors industry. The process involves the conversion of quartz to silicon using carbon in the submerged arc furnace.

In mid-2008 SMS Siemag had been awarded the contract for the supply of the submerged arc furnaces for the production of silicon metal at the Yongdeng, Gansu, works. The scope of supply includes the basic engineering for a new production plant and its ancillary units, the layout, design and supply of six electrode columns, the high-current line made of copper and the hydraulic system. SMS Siemag assisted with the installation and metallurgical commissioning.

In addition to 20,000 t of silicon per year, this plant will supply more than 9,000 tpy of fine SiO<sub>2</sub> dust as a valuable raw material for cement manufacturing. SMS Siemag had already modernized two silicon-metal furnaces at the same location in 2004.

## Posteel opens new pipe plant in Oman

Posteel, an affiliate of Posco, Korea, opened Gulf International Pipe Industry (GIPI), a new 250,000-ton production facility specializing in API pipes based in Sohar, Oman. Posteel has a 15 percent stake in GIPI, in which \$112.6 million has been invested.

The construction of the plant began in November 2008. It had been in a test phase since January, preparing production lines for 24-inch diameter pipes and coating facilities. GIPI is expected to increase Oman's



*Construction and machine installation completed in November 2009 and production for the first phase started in January 2010.*  
Source: Gulf International Pipe Industry

self-sufficiency in steel pipes and gas/petroleum-related technologies, as the new plant is designed to annually produce 250,000 tons of 1-inch casing and tubing pipes, as well as pipeline pipes in the near future.

GIPI plans to sell 50,000 tons of steel pipe products this year - 80 percent in the Omani market and 20 percent in Gulf Cooperation Council countries. Posteel will supply 100,000 tons of hot rolled coils annually to GIPI, which are needed to produce API pipes.

## 220 million euro for modernization project at ZKS

Zentralkokerei Saar GmbH (ZKS), the commonly owned subsidiary of AG der Dillinger Hüttenwerke and Saarstahl AG, has completed its new Battery B3 project.

Construction of the new battery, consisting of fifty coke-ovens featuring environmental protection technology, is considered a significant element in the programme of overall modernization started at ZKS in 2007 and scheduled to receive total investments of around 220 million euro. This series of projects aims to optimize coke production and reduce emissions - pollution-prevention technologies have been installed in Battery B3, for example independent pressure control in each individual coke oven chamber, a new system of charging-gas capture and transfer, and a new bag-filter installation. The by-products plant, the so-called «white side», i.e. all systems and plants for cleaning of the coke-oven gas and recovery of other useful products, has also been completely overhauled and all technology modernized to meet the latest standards in environmental protection.

Completion of the new Battery B3 is to be followed by the refurbishing of one of the existing coke-oven batteries (B1). Shut down some time ago, this battery will now be completely rebuilt, to the same standards as Battery B3. Once Battery B1 has been recommissioned, the second existing battery, B2, will be taken out of service. This investment project will implement the latest coke-oven and environmental safety technology, with ZKS's original annual production capacity of some 1.3 million tonnes of coke being reached by late 2011 or early 2012.

## NLMK implements hot rolling production upgrades

NLMK Steel resumed upgrading activities at continuous reheating furnace No.3 used for bringing slabs to forging temperature before hot-rolling. The capacity of the furnace is 320 tonnes of slab per hour. The project was launched in 2007, but afterwards, suspended.

Continuous reheating furnace No.3 will be the third unit of its kind to be upgraded at NLMK's main production site in Lipetsk (furnace No.5 was commissioned in 2004, furnace No.4 in 2007). Key hot-rolled sheet and coil consumers include such industries as construction, shipbuilding, automotive and pipe production, as well as NLMK's own cold-rolling facilities, including transformer steel plant in Yekaterinburg.

The design of the new furnace being constructed to replace the old one must ensure highly uniform slab heating and accurate strip parameters on further rolling. Resource-efficiency and ecological technologies must allow to cut energy consumption by 50% and reduce NO and CO emissions by 27%.

Foundation works have already been completed. The project is being implemented in collaboration with the Belgium CMI as part of the second stage of NLMK's technical upgrade program. Its total value exceeds RUR 2 billion.

The new furnace will be commissioned in 2011, increasing NLMK's hot-rolling capacities by 200,000 tpy of a wide variety of steel grades.

## *Siemens to increase caster capacity and product range at NTMK*

Siemens VAI Metals Technologies received an order from the Russian steel producer Nizhny Tagil Iron & Steel Works (NTMK) to increase the casting capability of the existing two-strand beam-blank/bloom combi-caster CCM3. The project scope includes the supply of engineering, equipment and systems, installation work and all required modification activities to enable the caster to cast up to four bloom strands in total to meet an increased demand for rail steel. In the bloom-casting mode, machine capacity will be increased from 700,000 t/a to 1,000,000 t/a. The order value is just under €30 million. Start-up of the modified caster is scheduled for November 2010.

In connection with a modernization campaign underway at NTMK, three of the LD (BOF) converters were already replaced by Siemens VAI and a fourth 160-ton-capacity converter is now being installed. With consideration to the higher steel production rate, the output of the continuous casting facilities also has to be increased. To this end, Siemens VAI will expand the casting capacity of the two-strand beam-blank/bloom combi-caster CCM3, originally supplied by Siemens VAI, which currently



Capacity will be increased from 700,000 t/a to 1,000,000 t/a.  
Source: Siemens

casts beam blanks in 395 mm (height) x 165 mm (web thickness) x 530 mm (width) formats, or blooms with a thickness of 200 mm and a width of 550 mm. The machine will be modified in such a way that it will be capable of simultaneously casting up to four bloom strands with rectangular formats of 300 x 380 mm, allowing an additional 300,000 tons of steel to be cast per year. External mold stirring will be provided to ensure a homogeneous internal strand quality of the high-carbon rail-steel and tube-steel grades to be produced.

Installation and modification work will be carried out to the greatest extent possible during regular casting operations, however, a caster-shutdown period of about 60 days will be necessary. The caster design is characterized by curved molds, a bow-radius of 12 m and a metallurgical length of 33 m. The mechanical equipment supply includes new molds, additional segments and withdrawal units. New media, electrical and Level 1 and Level 2 automation systems will also be installed in addition to a variety of technological packages such as Dynaflex hydraulic oscillators, the Levcon mold-level-control system and an integrated quality-control system. Advisory services for start-up and commissioning round off the Siemens VAI scope of supply.

## *Direct reduced iron plant project in Bahrain*

Kobe Steel, Japan, announces that it has been awarded a contract to supply a Midrex Direct reduction plant with an annual capacity of 1.5 million metric tons.

Kobe Steel is responsible for the design, equipment supply, construction, and start-up of the facility, which will make direct reduced iron. Direct reduced iron (DRI) is used as a supplement or substitute for high-quality scrap in electric steelmaking.

This is the second recent order for a Midrex Plant for the Kobe Steel Group. In December 2009, Midrex Technologies, Inc., a wholly owned subsidiary of Kobe Steel, received a contract to supply Midrex technology for a plant in India.



The plant will be located in the Bahraini capital of Manama, 14 km away from the Southeast Hidd region.

SULB's direct reduction plant will be constructed in the Hidd Industrial Area in Bahrain adjacent to an iron ore pellet plant that Kobe Steel constructed for Gulf Industrial Investment Co. With a capacity of 6 million metric tons a year, the plant went into operation in January 2010. Kobe Steel anticipates that the direct reduction plant contract will become effective in July 2010. Start up of the facility is aimed for early 2013.

SULB is a joint venture between Foulath in Bahrain and Yamato Kogyo Co., Ltd. in Japan. The SULB steel complex will also contain a melt shop and a heavy section rolling mill to be supplied by SMS Concast AG of Switzerland, SMS Meer GmbH of Germany, and Samsung Engineering Co., Ltd. of South Korea.

World direct reduced iron production reached 68 million metric tons in 2008, according to Kobe Steel; though world production in 2009 was lower, an upward trend is forecasted in 2010.

## MMK commissions secondary steel treatment

Russian steel producer MMK's producing complex encompasses the entire production chain, from preparation of iron ore to downstream processing of rolled steel. In 2009 the company produced 9.6 mm tonnes of crude steel and 8.8 mln tonnes of commercial steel products. Equipment supply contract for the complex was signed with SMS MEVAC in July, 2007. Commissioning of the new complex will allow to cast crude steel at continuous slab casting machine #6 in the amount of 2 mln tons per annum for production of thick plates at plate mill 5000. The treated steel will be used for production of pipe steel grades with strength characteristics up to X120. The engineering of the project was carried out by OJSC "Magnitogorsk Gipromez". General contractors for the project were OJSC "Prokatmontazh", OJSC "Stroitelny Komplex", and OJSC "PO Montazhnik".

The new process allows MMK to produce steel grades for high-quality pipes and automotive steel with carbon content to 0.003% and sulphur content up to 0.001%. Modern dust and gas suppression system, integrated into the complex, will allow to decrease emissions at oxygen converter shop.

## ENVIRONMENTAL OUTLOOK

### Korean steelmakers recycle 99.8% of metal slag

About 99.8 percent of metal slag, a by-product in steel production, was recycled by Korean steel makers last year, according to a report by the Korea Iron & Steel Association. Of the 16.7 million tons of slag produced in 2009, 16.67 million tons was recycled, surpassing the

95 percent target set by the government. Regulations on conservation of resources and enhancement of recycling require Korean makers to adhere to the government-set recycling target for metal slag, with efforts to improve the rate within a technically and economically available scope. By uses, all of the 8.86 million tons of blast furnace slag produced was recycled. Some 76.4 percent was used as an ingredient for cement, followed by 4.8 percent for siliceous fertilizer and 0.3 percent for aggregate fill-up. A total of 7.83 million tons of steel-making slag was produced last year, with 43.2 percent used for production of aggregate fill-up and 27.2 percent for roadwork.

This year, steel makers are expected to contribute to reduce carbon dioxide emissions and help establish a resource-recycling society by speeding up the development of technologies to expand uses of slag, including ways to use steel slag for marine purposes.

## ECONOMY WATCH

### Severstal aims at recovery in 2010

"2009 was a difficult year for the global steel industry but the decisive actions we took during the year leave the Company well positioned for 2010, according to Alexey Mordashov, Chief Executive of OAO Severstal. Solid economic growth in emerging markets and a gradual recovery of demand in mature markets have improved the outlook for 2010. Furthermore, growing demand from China for raw materials has already led to higher spot prices for iron ore and coking coal in 2010, a trend we believe will be sustained during the year."

The company revenue was \$13,054 million for 2009 (FY 08: \$22,393 million). Severstal's performance improved in Q4 as a more favourable trading environment and cost-cutting measures had a positive impact on the operational performance of all divisions. Against a background of stronger pricing, crude steel production increased by 2.3% quarter-on-quarter leading to higher capacity utilisation, especially in European operations. The production of coking coal concentrate and iron ore products increased by 40.6% and 3.2%, respectively, quarter-on-quarter. The main contributor to the increase in coking coal production was PBS Coals where production increased threefold quarter-on-quarter.

European operations showed growth in sales volumes in long products including rails. As part of its capital expenditure programme in 2010, Severstal plans to start construction of a mini-mill in Balakovo (Saratov region). By 2013 this mini-mill is expected to produce 1 million tonnes of long steel per year and will support organic growth in the Russian Steel division. Downstream expansion in Russia, including investments in production of fabricated box sections at Sheksna and in the second polymer coating line at Cherepovets, is aimed at increasing the share of customised products in portfolio mix.

In Russia, Severstal expects further measured recovery in the oil and gas, and construction sectors. Automotive and machinery producers are expected to increase production rates and incremental demand from these sectors should also support an increase in sales in 2010. The company expect export markets in Europe, the Middle East and Africa to continue to be an important source of sales for Russian Steel.

In North America, Severstal anticipates moderate recovery and believes there will be improvements in demand from the automotive and other steel consuming segments. Solid economic growth in emerging markets also improved the outlook for 2010. Growing demand from China for coking coal and iron ore has already led to higher spot prices for these raw materials to date in 2010. Severstal expects this trend to be sustained during the year, especially from Q2 onwards.

## *Stainless production drops in 2009 but results better than expected, according to ISSF*

The International Stainless Steel Forum (ISSF) has released preliminary stainless crude steel production figures which show that 24.6 million tons (Mt) of stainless was produced during 2009. This is a de-

**Table 1: Stainless crude steel production (in '000 tons): full year 2009 compared to 2008.**

Région	Full year		Y-o-Y +/-%	Full year		Y-o-Y +/-%
	2007	2008		2008	2009 (p)	
Western Europe/Africa	8,669	8,272	-4.6	8,272	6,449	-22.0
Central and Eastern Europe	364	333	-8.6	333	237	-28.9
The Americas	2,604	2,315	-11.1	2,315	1,958	-15.4
Asia (excluding China)	8,994	8,068	-10.3	8,068	7,130	-11.6
China	7,206	6,943	-3.6	6,943	8,805	26.8
World total	27,836	25,930	-6.8	25,930	24,579	-5.2

(p) = provisional. Source: International Stainless Steel Forum (ISSF)

**Table 2: Stainless crude steel production (in '000 tons): four quarters of 2009 compared to 2008.**

		Western Europe/Africa	Central and Eastern Europe	The Americas	Asia (excluding China)	China	World total
Quarter 1	2008	2,432	96	709	2,167	1,972	7,376
	2009	1,314	50	408	1,289	1,769	4,830
	Y-o-Y (+/- %)	-46.0	-48.1	-42.4	-40.5	-10.3	-34.5
Quarter 2	2008	2,433	98	685	2,317	1,889	7,421
	2009	1,571	50	438	1,670	2,298	6,028
	Y-o-Y (+/- %)	-35.4	-49.1	-36.0	-27.9	21.7	-18.8
Quarter 3	2008	1,908	89	548	2,079	1,653	6,277
	2009	1,752	75	650	2,042	2,502	7,021
	Y-o-Y (+/- %)	-8.1	-15.6	18.6	-1.8	51.4	11.9
Quarter 4	2008	1,499	50	373	1,505	1,430	4,856
	2009	1,811	62	461	2,130	2,236	6,700
	Y-o-Y (+/- %)	20.9	23.7	23.8	41.6	56.4	38.0

Source: International Stainless Steel Forum (ISSF)

cline of 5.2% on 2008. However, the decrease was not even around the world with some regions reporting that production declined by up to 30%, while in other areas stainless fabrication increased by up to 27%. Excluding China, Asian stainless production declined by 11.6% to 7.1 Mt. While the level of stainless fabrication remained flat in Korea during 2009, it increased by 13% in Taiwan, China. Production declined in Japan by 27% during the year while in India the drop was 11%.

China has been the driving force in the stainless industry and that trend continued in 2009. Production grew by 26.8% compared to 2008 to reach 8.8 Mt. Including China, Asia now makes almost 65% of the world's stainless steel. Production in the Western Europe/Africa region declined by 22% in 2009 with total volume reaching just 6.5 Mt. Except for South Africa, all countries in the region reported significant declines in production, some as high as 50%.

However, by the third quarter of 2009 there were clear signs of recovery with global production increasing by 11.9% compared to the same period of the previous year which corresponded to crisis beginning. Total production was over 7 Mt, one of the highest levels ever recorded for a third quarter. This may be an indication that replenishment of low stocks started then.

Over the past few years the stainless steel market has seen a major change in the grades of stainless utilised by the market. Chromium-manganese grades have grown in importance during this period. More recently there has been an increase in the utilisation of chromium grades. Based on available data, ISSF estimates the market share of the three categories of stainless steel.

**Table 3: Market share of stainless steel grades: preliminary estimated share for the four quarters of 2009.**

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year 2009
Chromium-manganese (200 series)	13.3	12.7	10.7	10.4	11.6
Chromium-nickel (300 series)	61.5	62.3	60.7	58.5	60.6
Chromium steels (400 series)	25.2	25.0	28.6	31.1	27.7

Source: International Stainless Steel Forum (ISSF)