METALS SOLUTIONS

ThyssenKrupp VDM material offers corrosion performance to resist acids

The research laboratories of ThyssenKrupp VDM have further developed the Alloy 31 material. The new Nicrofer 3426 hMo occupies a position between high-alloy nickel materials and stainless steels and is a superaustenitic. The development of the material was supported by computer simulation programs to optimize the composition of the entire alloy system. Initial commercial heats have been produced.

The new alloy not only offers corrosion resistance but also specific processing capabilities and properties. The high chromium content of 26 to 28 percent is due to guarantee stability in oxidizing media, i.e. it prevents the metal from combining with oxygen. The material has a stable austenitic microstructure and the alloying elements nickel and nitrogen make processing easier as a result of low solution annealing temperatures. In addition, a low carbon content improves resistance to intergranular corrosion, in which elements are removed from the metal matrix adjacent to grain boundaries.

Nicrofer 3426 hMo can thus be part of equipments for the chemical process industry, and in particular for the production and processing of sulfuric and phosphoric acid.

PLANTS AND EQUIPMENTS

MMK launches first stage of cold rolling complex

Magnitogorsk Iron and Steel Works (MMK) has launched its "Mill 2000" – the first stage of a new cold rolling complex. Mill 2000, with 2 mtpa capacity of finished products, will primarily produce cold-rolled and galvanized steel to be used in the production of exterior and interior car parts, as well as for use by home appliance manufacturers and the construction industry.

MMK's total investments in the Mill 2000 project will reach approximately 1500 M$. The company undertook the project in order to meet growing demand for cold-rolled steel, primarily from car makers. The first stage of Mill 2000, which has just been commissioned, includes a continuous pickling line coupled with a tandem mill. The second stage of the complex, which will include a continuous hot-dip galvanizing unit, a continuous annealing unit and a coil inspection unit, is planned to be commissioned in July 2012. The Mill 2000 complex was shipped by the German machine building company SMS Siemag. The new cold-rolling facility (Rolling Workshop No. 11) is also equipped with a continuous turbulent pickling line linked to a five-stand cold-rolling mill with a capacity of 2.1 mtpa, a continuous hot galvanizing unit (450 ktpa), a combined annealing/hot-galvanizing unit (650 ktpa), a working roll grinding and texturing unit, a coil inspection and slitting line, as well as cold-worked and galvanized coil packaging lines. The gauge of finished products can range from 0.28-3.0 mm-thick and 850-1,880 mm-wide cold-rolled sheets in coils weighing up to 43.5 metric tons.

MMK Board of Directors Chairman Victor Rashnikov said: "The launch of Mill 2000 will enable MMK to increase the share of cold-rolled and hot galvanized products in the company's product lineup".

Siemens to supply two long product rolling mills for new Evraz Group facilities

Siemens VAI Metals Technologies received orders from the Russian Evraz Group to supply two long product rolling mills for two of the company's new production facilities. A greenfield plant with an annual capacity of 450 000 t of bars, sections and coiled bars will be installed in the southern Russian town of Ust-Donetsk, Rostov Region, a second greenfield plant to roll rebars with annual capacity of 450 000 t, will be built in Kostanay, Kazakhstan. The two plants are scheduled to be in production in 2013. For both facilities, Siemens will supply the mechanical process equipment, a re-heating furnace, a water treatment plant, and the fluids systems.

The Evraz plant in Ust-Donetsk, Russia, will have a design capacity of 315 000 t of bars and 135 000 t of angles and channels per year. The rolling line will comprise a walking hearth furnace, a continuous rolling mill with 18 Red Ring stands and quick-change system in the finishing area, a cooling bed, straightening and cutting machines and finishing equipment for bundling, tying and dispatching. Bars are in-line quenched for enhancing the mechanical properties. The plant will be able to produce reinforcing steel in bars of 10 to 40 mm diameter, spooled bars of 10 to 16 mm diameter and sections. Smaller diameters will be produced via a multi slitting process to maximize productivity. The spooled bars will be produced on a spooling line operating at a maximum finishing speed of 23 m/s, with a four-stand finishing monoblock, shears, in-line cooling, two spooling machines, as well as automatic tying and weighing machines.

The rolling line in Kostanay, Kazakhstan, will consist of a walking hearth furnace, a continuous rolling mill with 18 Red Ring stands and quick-change system in the finishing line, in-line quenching, a cooling bed, cutting machines and finishing equipment for bundling, tying and dispatching. The mill will produce rebar with diameters of 10 to 40 mm in single, two-slit or three-slit rolling mode and features an in-line cooling system.

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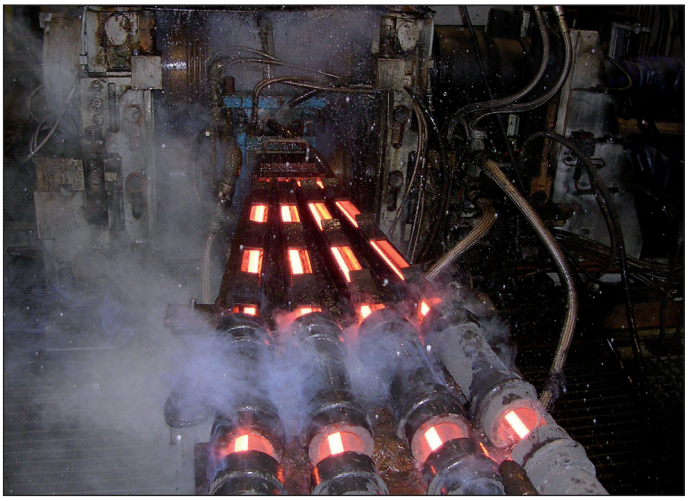

Siemens will supply the mechanical process equipment, a re-heating furnace, a water treatment plant, the fluids systems, and the complete electrical and automation equipment.

For both rolling mills, Siemens will also supply the complete electrical and automation equipment based on the Siroll concept for long rolling mills, including main transformers, main and auxiliary drives and motors. An integrated automation system will control the rolling mill line and the water treatment system. Material flow will be managed by a level 2 control system.

Integrated steel mill in Indonesia starts construction

POSCO has started construction of the main facilities on the integrated steel mill site in Cilegon, Indonesia. This first integrated steel mill construction project is being executed by a joint venture established in September 2010 between POSCO and Indonesia's state-run steelmaker Krakatau Steel with a 70:30 share ratio. Planned annual capacity will first be 3 Mt; the second phase of construction planned after the first phase completion in 2013 will expand the production scale to 6 Mt.

Indonesia has approximately 2200 Mt of iron ore and 93 400 Mt of coal reserves. The steel demand in India and Southeast Asia as well as Indonesia and India is increasing, suggesting a positive market prospective.

NLMK to increase cold-rolled steel production

NLMK has signed a EUR 10.4 million contract with Thermprocess, Germany, for 23 bell type annealing furnaces with an aggregate capacity of 480 ktpy to anneal low-carbon coils at the group's main site in Lipetsk. This project is part of the NLMK's plan to increase finished product output to 10.7 mtpy in 2013.

The new furnaces will replace 30 obsolete ones. The high speed of heating and cooling in a hydrogen atmosphere must result in better performance and improved quality of annealing.

Under the contract, Thermprocess is to supply the equipment in 2012. Two installation stages are planned, in 2012 and in 2013, in the cold-rolled and coated flats shop.

Capacity increase investment in Nippon Steel Bar & CH Wire

Nippon Steel Corporation, with respect to Nippon Steel Bar & CH Wire (China) (NBC China), a company manufacturing and selling steel wire for cold heading in China, has reached the decision, together with Matsubishi Metal Industry, Miyazaki Seiko, Sanyu, Toyota Tsusho Corporation, Metal One Corporation and Nippon Steel Trading, which are joint capital subscribers in NBC China, to increase its productive capacity and substantially expand the local fabrication setup.

NBC China, founded in 2006 and operated in 2007, underpinned by the growth of auto production in China, is now running at full existing capacity of 7000 tons/year.

Capacity increase of NBC China is intended to respond to the continuing growth of wire for cold heading in China. With the construction of a new integrated plant with pickling, wire-drawing, and heat-treating equipment, the company's productive capacity must reach 42 000 tons/year. The new plant must be oprational in March 2013.

Wire for cold heading are used as materials for automotive bolts, bearings and other safety parts.

ThyssenKrupp Duisburg's CRM produces 20 millionth ton of hot strip

The casting-rolling mill (CRM) at ThyssenKrupp Steel Europe AG in Duisburg-Bruckhausen recently produced its 20 millionth ton of hot strip. It was supplied as part of a 21 ton coil to ventilation specialists Lindab AB, who will use it to build air conditioning systems.

ThyssenKrupp Steel Europe started production on the CRM in 1999.

The CRM combines the normally separate production steps of casting and rolling in one continuous process. Material from the CRM has a

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ThyssenKrupp's casting-rolling mill in Duisburg-Bruckhausen: molten metal is turned into thin slabs of 48 to 53 mm thickness.
Photo courtesy of ThyssenKrupp

more homogeneous microstructure than conventionally produced hot strip. As a result, mechanical properties such as strength and elongation are also due to be more consistent. The technology of the connected rolling mill provides for close production tolerances and lower thicknesses on CRM hot strip.

Two new product lines from ThyssenKrupp Steel Europe were made possible by the CRM – SCALUR® and microalloyed steels with cold performance. After hot rolling, both products already possess a microstructure and dimensions with a level of uniformity and precision otherwise only attained through additional cold rolling.

Today the casting-rolling mill at ThyssenKrupp Steel Europe produces more than 50 different steel grades for customers in the automotive, appliance, construction and electrical sectors. These include grades which are regarded as difficult to produce due among other things to the higher casting speeds on CRMs.

For example, ThyssenKrupp Steel Europe produces large volumes of non-oriented electrical steel on the line, a soft-magnetic grade used in electric motors that helps significantly reduce energy losses. Another example of CRM products are manganese-boron steels for hot stamping, which are used among other things to produce safety-relevant automotive components.

Bhushan Steel puts a SMS Siemag continuous slab caster into operation

SMS Siemag, Germany, has commissioned a singlestrand continuous slab caster for the production of 1300 mm wide slabs at the Angul, Orissa, location of Bhushan Steel Ltd., New Delhi, India. On executing the first cast at the end of April 2011, 70 t of liquid steel were cast and the first three slabs were produced in peritectic grades for tube manufacture.

The SMS Siemag supply scope for the vertical bending machine comprises plant, process and automation engineering & equipment. This includes the mold with resonance oscillation, which is equipped with a model for optimized oscillation aimed at improving the surface quality of the strand, as well as the entire strand guide system. Also included are all of the casting floor and removal equipment items, the X-Pact® electrical and automation package and the supervision of erection and commissioning.

Bhushan Steel produces steel for the automotive industry and pipe grades for the Indian and international markets.

Harsco supplies resource recovery solutions to JSW

Industrial services and engineered products company Harsco Corporation has been awarded two new environmental solutions contracts by one of India's largest steelmakers, JSW Steel Ltd.

The contracts, valued at a combined total of more than $135 M over their 10-year contract period, add to Harsco's growing presence in India, a target in the company's emerging market growth strategies. JSW produces close to 7 Mt of steel annually, and with its recent acquisition of the Ispat Dolvi steelmaking operations – where Harsco also provides integrated services – JSW is poised to become India's largest steel producer in terms of installed crude steel capacity.

Harsco's environmental solutions will include the briquetting and micro-pelletizing of JSW's iron and steelmaking by-products at the Vijayanagar production facility, where JSW plans to produce approximately 10 Mt of flat and long products annually.

Harsco's resource recovery technologies must enable JSW to recover the iron content of its by-products for re-use in the production of new steel and iron.

Harsco already operates some 13 briquetting plants worldwide as well as three micro-pelletizing plants in Europe.

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Siemens VAI to modernize hot strip rolling for ThyssenKrupp

Siemens VAI Metals Technologies has received an order from ThyssenKrupp Steel Europe AG to modernize its hot strip rolling mill No. 1 in Duisburg-Bruckhausen (Germany). The objectives of the project are to further improve product quality and broaden the range of products.

Modernization of the hot strip rolling mill is scheduled to be completed in August 2012. Siemens VAI had previously received an order at the beginning of the year from ThyssenKrupp Steel Europe to modernize its medium-strip mill at Hoesch Hohenlimburg in Hagen, Germany.

The Bruckhausen location of ThyssenKrupp Steel Europe produces more than three million tons of cast steel slabs per annum. The plant can produce steels, and high-silicon electrical strip grades. It has a compact hot strip mill and a wide hot strip mill. Roughing down takes place in hot-strip mill No. 1 with the aid of a two-high reversing stand and a four-high intermediate stand. Siemens VAI will install a heavy edger on the reversing stand, as well as the hydraulic and lubricating systems. The edger must enable a wider range of slab widths to be rolled, and improve the width tolerances of the roughing down. The roll separating force of the intermediate stand will be increased, and it will be equipped with long-stroke cylinders for hydraulic automatic gauge control (HAGC).

The finishing mill has seven, four-high rolling stands. In the course of the modernization, Siemens will supply the strippers – each consisting of a looper and side guides – for all the stands. The entry guides on stand F0 will have driven rolls. Descaling and cooling stations will be installed downstream of stands F0 to F2, and stands F1 to F3 will be equipped with roll-gap lubrication and anti-peeling systems to safeguard the roll surfaces. The new equipment will reduce both the roll separating force required and the wear on the rolls. This must improve the standard of finish of the rolled strip. A system for selective lubrication of the work rolls near the edges of the strip will be installed on stands F4 to F6 to reduce contour defects.

All the stands in the finishing mill will be equipped with SmartCrown technology to improve the profile and flatness control. Stands F0 to F3 will also be fitted with devices to shift the work rolls and L-bending blocks. These will have integrated position sensors to facilitate control of the actual strip gauge in the stand control system. This will minimize gauge deviations, especially at the head end of the strip. Long-stroke cylinders will also be installed on all stands for the hydraulic automatic gauge control (HAGC). The profile and flatness control will be matched to the associated new actuators, and optimized. The same will apply to the controllers of the new hydraulic actuators in the roll screw, loopers and side guides. The scope of supply also includes all the technology packages required to run the plant. Siemens will also supply the equipment for changing the work and backup rolls on stands F0 to F3, and upgrade the bearings of the backup rolls, so as to allow higher rolling forces.

Siemens VAI will install a heavy edger on the reversing stand, as well as the hydraulic and lubricating systems.

POSCO establishes extra-wide steel plate production system

POSCO, after completing the annual 2 million ton steel plate factory at Gwangyang Steelworks this past March, succeeded in the test production of its 5 300 mm steel plate and is now producing 10 000 tons of 4 500 ~ 5 300mm width steel plates each month.

Extra-wide steel plates are used in creating the structures for shipbuilding, marine facilities and energy. Clients use extra-wide steel plates to not only produce various products, but also expect increased competitiveness such as cost reduction due to reduced error rates and welding overhead.

POSCO has developed an accelerated cooling process, which determines mechanical characteristics such as a product's strength and toughness as well as its evenness by utilizing several tens of thousands of tons of cooling water per hour after the rolling process which determines the product's size, quickly cooling steel materials.

POSCO plans to increase current monthly extra-wide steel plate production of 10 000 tons to 50 000 tons by the end year according to client demand. This demand is expected to increase once shipbuilding and marine client companies complete their investment in facilities to utilize extra-wide steel plates.

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NLMK's VIZ-Stal produces more GO steel

As part of its ongoing technical upgrade program, NLMK is revamping its GO steel production facilities to improve the quality of its existing product mix and master new premium-quality GO steel grades. Within this framework, VIZ-Stal, a subsidiary of NLMK Group, is to expand its GO (transformer) steel production capacities by 40%, up to 240 000 tonnes, as a result of the commissioning of a 75 ktpy reversing cold-rolling mill.

The VIZ-Stal RUR 1400 million project is the main stage in establishing a process route for the production of GO high-permeability steel (HPS). The planned production capacity for the mill, expected to be launched in Q4 2011, will be around 70 ktpy. The project is being implemented jointly with Andritz-Sundwig.

SMS Siemag receives order from JSW Steel

JSW Steel has placed an order with SMS Siemag, Germany, for the supply of a pickling line/tandem cold mill at its location in Toranagallu Vidyanagar (Bellary), India. The pickling line/tandem cold mill will have an annual capacity of 2.3 Mt of cold strip in widths up to 1890 mm. On the new pickling line/tandem cold mill, JSW will be producing strips as from 2013 and supplying these to the automotive industry.

The SMS Siemag supply scope includes the entry section, equipped with two payoff reel groups and with an SMS Siemag laser welder which enables also those strips of difficult weldability to be joined together. A tension leveler prepares the strip for the pickling process in the three downstream pickling tanks. The turbulence-pickling technology allows optimum descaling with low consumption of energy and acid as well as reduced maintenance and operating costs. In addition, an integrated trimming shear sets the desired strip width and straightens the strip edges. Altogether, three horizontal strip accumulators are integrated into the line and ensure continuous strip travel.

The five mill stands of the tandem mill are designed as six-high stands and are equipped with the new combined CVC® plus/ESS technology (continuously variable crown/enhanced shifting system). The roll-gap adjustment range made available by this technology allows optimum results as regards strip gage and flatness, even in cases where the product range is extremely broad. A further decisive argument for JSW was the possibility of retrofitting an EDC® system (edge drop control) without great expenditure. In the exit section, the strips are coiled by a carrousel reel at a minimum final gage of 0.3 mm. A compact design is achieved for the exit section of the tandem cold mill by combining the carrousel reel and the downstream inline strip inspection station.

The supply scope for JSW Steel Limited also includes the auxiliary facilities, comprising coil conveyor system, coil banding machine, exhaust systems, utility system and a separate inspection line for monitoring the strip quality.

Following a CCM® (compact cold mill) and a skin-pass mill, this is already the third cold rolling mill supplied by SMS Siemag to JSW Steel Limited.

Tokyo Steel starts new slab caster

Tokyo Steel has succesfully started continuous caster supplied by SMS Siemag. The vertical-bending caster with 16 segments and a metallurgical length of 35 m is designed for a maximum casting speed of 2.2 m/min and an annual production of 2.4 million t of steel slabs. The new continuous caster will produce slabs primarily for utilization in automotive manufacturing. SMS Siemag's supply scope consisted of the basic and detail engineering, all mechanical core components and the X-Pact® electrical equipment and automation system. Training of the customer personnel and the supervision of erection and commissioning were also included in the scope of SMS Siemag's services.

The equipment of the caster includes several Intelligent Slab Casting (ISC®) modules which determine quality and production. The hydraulically operated resonance oscillator and the remote-controlled mold narrow faces for width change during casting allow the casting width to be altered as required between 800 and 1,625 mm during operation. Dynamic Soft Reduction and the variable Spot Cooling as well as the width-dependent air-mist secondary cooling system and the technological process model Dynamic Solidification Control are due to ensure the production of slabs with a high inner quality. The roller table in the exit section of the two-strand slab caster allows conventional cooling in the slab store or a direct transfer to the rolling mill. The surface quality of the slabs increasingly allows direct charging, which also saves energy for reheating.

Siemens VAI modernizes hot-rolling mill at Hoesch Hohenlimburg

Siemens received a contract from the steel strip producer Hoesch Hohenlimburg GmbH, a subsidiary of ThyssenKrupp Steel Europe AG, to modernize the medium-wide-strip hot-rolling mill at the company's Hagen location. The order volume exceeds 20 million euros.

The finishing mill in the medium-wide-strip hot-rolling mill of Hoesch Hohenlimburg is comprised of nine rolling stands, seven of which are 4-high stands. In the course of the modernization project, five of these stands will be exchanged and two additional stands will

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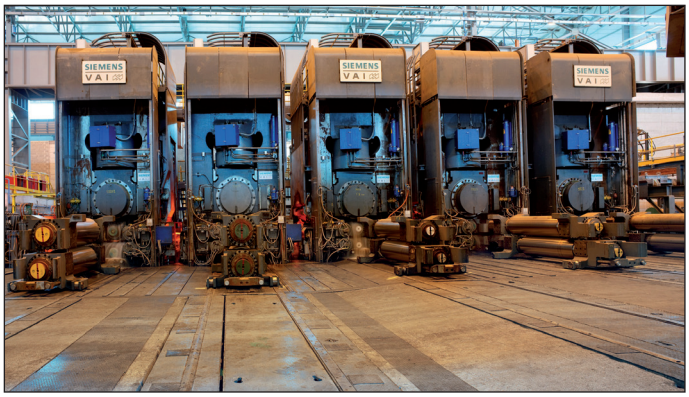

Siemens VAI-installed finishing stands in a hot-strip mill.

be revamped. All of the stands are being equipped with work-roll shifting devices for the installation of SmartCrown rolls and L-type bending blocks. This must allow improved control of strip profile and flatness parameters. Long-stroke cylinders for automatic thickness regulation (hydraulic automatic gauge control/HAGC), cooling systems and position transducers are also being installed in the bending blocks. Backup roll exchanges, which up until now have been executed with the use of an overhead crane, will be carried out after the revamp by means of hydraulic extraction of the backup rolls. The automation system, currently also being modernized by Siemens, will also be adapted during the course of project to the new rolling mill configuration.

Once the entire project has been completed, the rolling mill will have an annual capacity of 1.35 Mt of medium-wide strip with thicknesses ranging between 150 mm and 720 mm. The achievable strip thicknesses range between 1.3 mm and 16 mm with coil weights of up to 15 t. The modernized mill must allow Hoesch Hohenlimburg to expand its product range to include new high-strength steel grades. Narrower strip thickness and width tolerances combined with improved flatness and profile must contribute to improved product quality. Because the achievable minimum thickness of high-strength strip can be reduced, the hot-rolled strip product claims to replace cold-rolled products for a number of applications. Strip steering is also being improved, increasing operational safety. The integrated plant concept that is based on matched mechanical, electrical and automation components and systems additionally allows a more flexible setup of rolling schedules and longer rolling sequences. This must lead to higher system availability and increased mill yield.

The rolling mill modernization will be carried out in two phases during scheduled mill downtimes. Modernization of two of the operating rolling stands and installation of two new stands is scheduled for the summer of 2012. Installation of the remaining three new rolling stands is foreseen for December 2012. The automation systems in the roughing and finishing lines will be completely modernized on the basis of the Siroll HM platform specially developed for hot-rolling mills. Siemens previously modernized a downcoiler and the cooling line in the medium-strip rolling mill.

Mechel launches modernized steelmaking complex in Romania

Russia-based mining and metals company Mechel announces the launch of a modernized steelmaking complex at its Romanian-based subsidiary Ductil Steel Otelu Rosu.

The reconstructed steelmaking complex includes a new electric arc furnace with the COSS system, an upgraded continuous billets caster, and a scrap metal preparation section.

The electric arc furnace with the COSS system was developed by the German-based company Fuchs Technology. The new machine operates using heat from waste gases for preheating scrap metal, thus enabling savings on raw materials and power. The COSS-equipped furnace has the production capacity of 810 000 tonnes of steel a year. Investment in the plant's modernization program amounted to 48.7 million dollars.

Olympic Steel orders new temper mill and cut-to-length line

Steel service center Olympic Steel (Cleveland, Ohio) has signed agreements to purchase a new temper mill and cut-to-length line, and plans to locate it on U.S. Steel's Gary Works facility in Gary, Indiana.

The new temper mill project includes the purchase of an existing approximate 150 000 square foot facility to house a Butech cut-to-length line, a four-high temper mill supplied by I2S, and multiple pieces of plate burning equipment. The temper mill equipment is expected to be operational in the first half of 2012, and Olympic has an option with the equipment manufacturers to purchase a second temper mill and cut-to-length line. Once fully operational, the new equipment, depending on the steel processed, annually must add 150 000 to 180 000 new tons of tempered sheet capacity for Olympic Steel.

TENOVA I2S to supply cold rolling mill for Fuxing Precision Stainless Steel

Tenova I2S has signed a contract with Fuxing Precision Stainless Steel, China, to supply a new ZR22STG-52" precision 20 high cluster mill at the company's site at Hanchuan. The new facility will produce 100 000 tons of 200, 300 and 400 series stainless steel per year. The Tenova I2S 20 High Mill is a core component of this planned expansion for Fuxing Precision Stainless Steel to produce thin gauge stainless steel.

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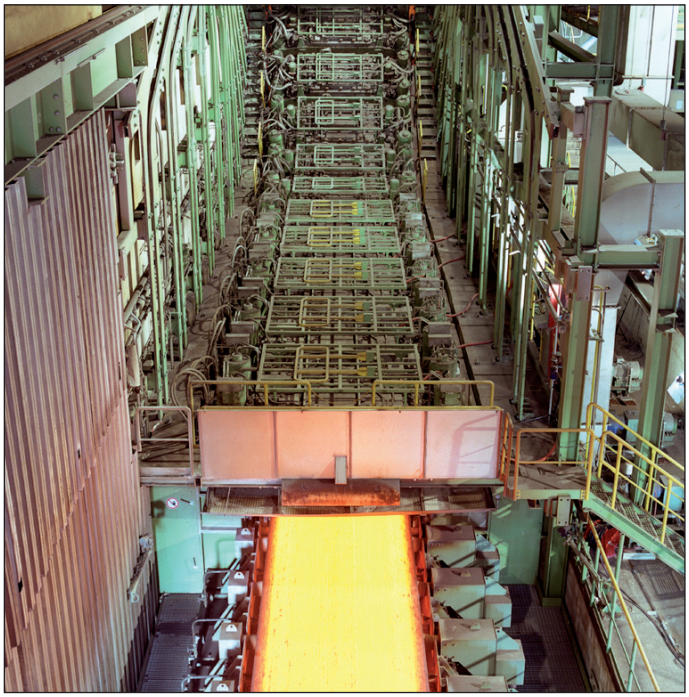
The Tenova I2S ZR22STG-52" 20 High Cluster Mill is equipped with Tenova I2S Super Thin Gauge (STG) Technology. The Tenova I2S mill is equipped with fully integrated control, automation and drive systems featuring automatic gauge control (AGC), automatic flatness control (AFC), Tenova I2S thickness gauges, remote monitoring and diagnostics and AC drives. It will produce 1300 mm wide strip to 0.08 mm thick at speeds of 600 MPM.

Expansion of continuous caster 3 at Salzgitter Flachstahl

Salzgitter Flachstahl has placed an order with SMS Siemag, Germany, for the expansion of the single-strand slab caster No. 3. The aim is to maintain and also increase the casting speed, in particular for small casting widths, thereby enhancing the production capacity. With continuous caster 3 supplied by SMS Siemag in 2004 for slabs with thicknesses of 250 mm and widths of 850 to 2100 mm, Salzgitter Flachstahl's range of steel grades was expanded with a focus on IF steels, C steels, I steels, microalloyed strengths and sourgas-resistant steels. The continuous caster was designed with a view to ensuring that it could be expanded to include three segment places, i.e. segments 13-15. Segment 13 will now be installed to increase the production capacity.

SMS Siemag's scope of supply essentially includes segment 13, the mechanical equipment, the adaptations of the electrical and automation systems and hydraulic equipment, the supervision of erection and time schedules as well as commissioning. The expansion will take place during a short shutdown phase and without interrupting the production of other continuous casters. Restarting has been scheduled for the spring of 2012.



Scope of supply includes segment 13, mechanical equipment, adaptations of the electrical and automation systems and hydraulic equipment.

Outotec to deliver alumina calcination technology to Ma'aden Alcoa

Outotec has agreed with Ma'aden Bauxite Alumina Company, a joint venture between Saudi Arabian Mining Company (Ma'aden) and Alcoa in Saudi Arabia, on the delivery of two calciners to the joint venture's integrated aluminum complex at Ras Al Khair (formerly Ras Az Zawr), Saudi Arabia. The overall investment cost for the calciners is approximately EUR 62 million.

Outotec's scope of delivery includes process technology and design, civil work, detail engineering and construction as well as spare parts for the two alumina calciners, each with a capacity of 3500 tonnes of alumina per day. The project is scheduled to be completed at the end of 2013.

Emirates Aluminium orders smelter technology from Outotec

Outotec and Emirates Aluminium (EMAL) have agreed to terms for two contracts with a total value of over EUR 100 million. The deal calls for Outotec to deliver aluminum smelter technology to the second phase of EMAL's smelter expansion project located at Al-Taweelah in Abu Dhabi.

Outotec will be providing technology, engineering, supply and installation of a green anode plant with one anode production line, along with a crushing plant for recycled carbon materials. Expanding the liquid pitch storage system and the plant operation center are also part of the overall scope.

In addition, the two companies also agreed that Outotec is to deliver an anode rodding shop and hot bath removal facility, including engineering, procurement and construction.

The massive smelter facility is scheduled to be commissioned by early 2014. Currently, EMAL is producing roughly 750 000 tonnes of aluminum annually, but it will be able to almost double that figure with a planned capacity of 1.3 million tonnes by the end of 2014.

Outotec previously worked with EMAL in 2007 providing similar technology to the first phase of the smelter project.

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Gas cleaning and sulfuric acid plant technology at AMMC

Outotec has signed a contract with Almalyk Mining & Metallurgical Company (AMMC) for the design and delivery of a gas cleaning and sulfuric acid plant to AMMC's existing copper production facilities, located near Almalyk, Uzbekistan. The contract is valued at approximately EUR 30 million.

The scope of Outotec's delivery includes process technology design, detail engineering, procurement and the supply of proprietary equipment, including all acid resistant parts made of Edmeston SX material. In addition, Outotec will also provide advisory services for construction and commissioning to the overall project scope. The overall project is expected to be completed within 32 months. The new acid plant complex will produce approximately 500 000 tonnes of sulfuric acid annually.

In the new installations, the off-gases of the existing copper plant will first be treated and cleaned in a gas cleaning unit before they are further processed in a new sulfuric acid plant.

Vale restarts furnace and ramps up production in Canada

Vale announced today that it has successfully restarted its #2 furnace and is ramping up production at its Copper Cliff smelter complex in Sudbury, Ontario, Canada. The #2 furnace restart followed a rebuilding process as a result of a tapping block failure that occurred in February.

"Numerous design and operational improvements to the #2 furnace will enhance furnace integrity and improve operational performance", according to Jeff McLaughlin, Vale's Vice-President of Smelting and Refining, North Atlantic Region. The furnace stoppage is estimated to have entailed an output loss of 12 200 t of finished nickel, representing approximately 4% of total nickel production planned for 2011.

INDUSTRY CONTRACTS

Tammerkoski rapids dam equipped with Outokumpu special stainless

Outokumpu delivers special stainless steel for the reconstruction of the dam in Tammerkoski rapids in Finland. All the main structural parts of the sluice and flood gates will be fabricated from Outokumpu's lean duplex LDX 2101®.

The Tammerkoski rapids flow through the centre of Tampere, running four hydroelectric power plants. In a rehabilitation project the dam walls will be renovated, and the dam structures that date back to the early 1900's will be replaced. "The strength of the material enables thinner and lighter structures which makes it easier to operate the gates. The high corrosion resistance ensures maintenance-free operation. Additionally, the hardness of the material surface protects the gates for example against load caused by ice", says Seppo Koli from Outokumpu. The project in Tampere will be completed during 2012.

Intrarussian offshore gas pipeline Dzhubga–Lazarevskoye–Sochi put into operation

The first intrarussian offshore gas pipeline Dzhubga–Lazarevskoye–Sochi has been put into operation. The gas pipeline's length is 171.6 km, with its offshore section accounting for 90%. The pipeline traverses the Black Sea, running parallel, approximately 4.5 km from the Russian coast.

All the pipes for the gas pipeline were made by Vyksa Steel Works (VSW, Nizhni Novgorod Region), part of United Metallurgical Company (OMK). They can withstand pressures up to 9.8 MPa. All in all, 49 951 tonnes of pipes were supplied for the construction of the Dzhubga-Lazarevskoye–Sochi gas pipeline. "At present, owing to the investment in the renovation of pipe facilities, our company can produce pipes at any complexity level", OMK President Vladimir Markin declared. "This is not our first experience in the production of pipes designed for subsea gas pipelines. OMK supplied its pipes for the Baydaratskaya Bay and Nevelski Strait gas pipelines, and in May the company finished its pipe shipments for Phase 2 of the Nord Stream gas pipeline. We supplied a total of 360 thousand tonnes of pipes for Europe's largest subsea gas pipeline".

Ruukki delivers steel structures for offshore wind farm

Ruukki delivered, from its Kalajoki plant (Finland), the first batch of steel structures for offshore wind tower foundations to the Norwegian company Kvaerner Verdal AS. Deliveries from Kalajoki for the Nordsee Ost offshore wind farm project in the North Sea will continue until summer 2012. Ruukki's delivery includes a total of 240 of individual structures to anchor the towers and join the structures together.

Each jacket requires one transition piece to join the wind turbine tower to the jacket foundation, which is partly submerged under the sea. The transition pieces Ruukki delivers are 12 metres in diameter and

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about five metres in height. Piles are used to anchor jacket foundations to the sea bed and Ruukki provides the pile clusters. Four pile clusters, which are around 3.5 metres in diameter and 5 metres in height, are required for each jacket.

RWE Innogy's Nordsee Ost wind farm will be located about 3.5 kilometres offshore to the northeast of Helgoland on the German coast. The sea depth in the area is in the range of around 22 to 25 metres. The wind farm will be commissioned in 2013 and, when completed, will produce approximately 1.1 terawatt-hours of power per year, equivalent to the annual supply of more than 310 000 households.

Ruukki: Over € 13 M steel structure contract for mine in Sweden

Rautaruukki has signed a contract with the construction company Peab AB, Sweden to manufacture and install the steel structures for the concentration mill and stockpile buildings at the Kaunisvaara iron ore mine in Pajala, Northern Sweden. The contract is worth over EUR 13 million.

Installation of Ruukki's piles on a construction site.

In the Kaunisvaara iron ore project, the Canadian mining company Northland Resources will exploit the Tapuli and Sahavaara iron ore deposits.

Ruukki's delivery consists of the process plant building and auxiliary buildings, two iron ore stockpile buildings and the frame structures for the truck workshop. The new iron ore processing plant will be over 200 metres long, 72 metres wide and 40 metres high.

Deliveries of steel structures for the project will begin in September and installation work is scheduled for completion during 2012. The steel structures will be manufactured mostly at Ruukki's plants in Ylivieska and Peräseinäjoki in Finland.

ENVIRONMENTAL OUTLOOK

Metinvest improves environmental safety at Yenakiieve Steel

Metinvest (Russia) is carrying out a set of capital repair works of steelmaking and power units at Yenakiieve Steel (included in Metinvest Group). This is the most large-scale repair campaign since the maintenance block-type system was introduced at the enterprise four years ago. Project investments will amount to approx. UAH 200M.

The most large-scale repair period was commenced in the beginning of July. The repair works scope covers all production subdivisions of the enterprise and comprises 29 main steelmaking units and power objects. One of the major tasks of these maintenance activities is to enhance environmental safety and functional reliability of the process equipment. Complete accomplishment of the repair works is scheduled on November current year.

"Specific feature of the capital repair works set in 2011 is the environmental focus, noted Alexandr Podkorytov, Yenakiieve Steel General Director. 70% of repair works is carried out within the framework of the Works' Ecological Programme on emissions reduction. We are expecting to get good result already this year".

Steel industry goes to European Court on EU emissions trading scheme

EUROFER has initiated action at the European Court of Justice (ECJ) for the annulment of the European Commission Decision of 27th April

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2011 on the rules for free allocation of emission allowances for industries covered by the EU Emissions Trading Directive (ETS). Article 10a of the ETS Directive aims to protect Europe from relocation of emissions, production and jobs to non-EU countries with lower levels of environmental performance ("carbon leakage"). It obliges the Commission to set benchmarks "at the average performance of 10% most efficient installations in a sector" (best performers). Sectors such as the steel industry determined to be at risk of carbon leakage are eligible for CO2 allowances free of charge at the level of the benchmarks. The best performers should get 100% of their allowances for free.

But according to Eurofer, the Commission's decision sets the benchmark for hot metal at a technically unachievable level, despite all the required data for setting the correct benchmark having been delivered by the steel industry to the Commission. "This is a clear infringement of the ETS Directive, as the best performers will be short of free allowances. Nowhere in the world is a steelworks that could operate its plants at the level of this benchmark", says Gordon Moffat, EUROFER's director general.

When setting the benchmark for hot metal, the Commission refused to assign the full carbon content in the waste gases (process gases) stemming from the steel production process and which are recovered for the production of electricity. The Commission argued the Directive does not allow for free allowances for electricity production and subtracted a part of the carbon in these gases, lowering the benchmark by about 10%.

However, the ETS Directive makes explicit provision for free allowances for electricity generated using recovered waste gases: "No free allocation shall be made in respect on any electricity production, except for […] electricity produced from waste gases" (Article 10a). Therefore there are no legal grounds for any artificial subtraction of CO2 from the steel benchmark for hot metal.

	Commission benchmark (contested by Eurofer)	Benchmark in accordance with Art. 10a ETS Directive	Average emissions of installations 2005-2008
Hot Metal	**1.328 t CO2**	1.475 t CO2	1.593 t CO2

According to Eurofer, the EU steel industry as a whole will from 2013 to 2020 receive 20 million fewer allowances per year than it would be eligible for if the Directive were implemented correctly. At a carbon price of EUR 30 (which is the level forecasters predict carbon prices will reach by then) this corresponds to additional costs of EUR 600 million per year if purchased on the market, or almost EUR 5000 million for the third trading period 2013/2020 alone.

This is on top of the EUR 6.5 billion of additional costs the EU steel industry already faces under a correct implementation of the Directive based on best performance and the application of achievable benchmarks. Beyond 2020, these unlawful additional costs will further increase significantly.

The whole procedure until a final decision by the Court may take up to two and a half years, unless the Court decides to go for a fast-track decision within one year.

EUROFER has applied for

- the annulment of the Commission Decision,

- a fast-track decision within one year as the provisions of the third trading phase of the ETS Directive and the Commission Decision will come in to effect from 1st January 2013,

- suspension of the Commission Decision for the duration of the Court procedure.

Eurofer recalls that, since the 1970s the European steel industry has reduced its CO2 emissions by 50% and in the period from 1990 to 2005 by over 20% without reducing production volumes. "However, current technologies are now at their limits for further significant improvement, Eurofer insists. The steel industry is therefore investing in ambitious programmes for the development of breakthrough technologies."

Novolipetsk reduces environmental footprint

NLMK has upgraded its aspiration system in the refractory shop at Lipetsk to improve the efficiency of its gas cleaning equipment. This project, worth RUR 57 million, is part of the company's plan to minimize the impact of steel production on local environment. Since the launch of Novolipetsk's technical upgrade program in 2000, investments into the Environmental Program have exceeded RUR 17000 million.

Atmospheric impact from production has been reduced by 22% over the last 10 years: as a result, in 2005 the city of Lipetsk was excluded from the list of Russian cities with the highest air pollution (compiled by Roshydromet).

According to NLMK, the revamp of the gas cleaning system, which includes the installation of a new type of filter installation and a more efficient end-of-pipe technology, has reduced emissions of dust generated by the initial material preparation process by almost 80%. All entrapped dust is recycled. Levels of residual dust in outgoing air must be reduced more than 6-fold.

Currently, as part of its technical upgrade program, Novolipetsk is upgrading the central aspiration system of sintering machines Nos. 3 and 4. Through the commissioning of new environmentally friendly equipment in 2011, Novolipetsk aims to achieve a 3.5-fold reduction of dusting from sintering machine No. 3. Similar levels of reduction are expected to be achieved at sintering machine No. 4 in 2012. A mixer department upgrade project and the construction of a secondary emission collection and cleaning system in BOF shop No.2 are also underway.

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STRATEGY AND ORGANISATION

ThyssenKrupp combines chassis activities of the Bilstein group and Presta Steering

On May 13 ThyssenKrupp AG decided on an integrated strategic development program that encompasses portfolio optimization and change management. The goals are to reduce debt, enable growth and increase income.

As part of the portfolio optimization the Group will combine the chassis activities of the Bilstein group and Presta Steering as well as seek a best-owner solution for the springs and stabilizers business and the Automotive Systems business in Brazil.

In this context, new management structure and management team have been selected for the unit emerging from the combination of Bilstein and Presta Steering: a holding company structure is planned, with a functional management board located in Eschen, Liechtenstein, performing strategic tasks and managing the operating sub-units.

The management team will be effective October 1, 2011:

• Guido Durrer (56) will be chairman of the management board, Thomas Müller (53) will take over the position of CFO, Steffen Schmidt (48) will be responsible for research and development, and Michael Wellenzohn (44) will be in charge of purchasing and sales.

In this connection there will also be changes at the operating companies:

• ThyssenKrupp Presta AG will be headed by Patrick Vith (37) as CEO and Dr. Lars Kogel (40) as CFO.

• Guido Grandi (40) is to be appointed CEO and Rainer Heid (41) CFO of ThyssenKrupp Bilstein Suspension GmbH. The composition of the management board including the human resources director will be decided in the next Supervisory Board meeting on August 25.

• There will also be a new management team in the springs and stabilizers business, which is intended for sale to a best owner, with Dr. Klaus Wolf (47) to be appointed as CEO and Matthias Koll (38) as CFO.

By consolidating expertise in dampers, steering systems and chassis modules in one unit, ThyssenKrupp means to meet future challenges in modern chassis systems, particularly from a technological point of view. The move must create a major chassis full-service provider, better able to respond to customer needs for integrated solutions.

ThyssenKrupp sales Metal Forming group to Gestamp Automoción

The sale of ThyssenKrupp's Metal Forming group to Gestamp Automoción S.L., Spain has been completed. After the European cartel authorities gave the go-ahead, transfer of ownership and payment (closing) took place on July 20, 2011. Dr. Heinrich Hiesinger, Executive Board Chairman of ThyssenKrupp AG, explains the significance of the transaction for the group: "As part of the process of focusing on our core businesses, we are looking for solutions for businesses for which there are stronger alternative strategic options outside the group. Following the successful placement of treasury stock, the disposal of Metal Forming represents a further contribution to improving the group's financial flexibility".

The Metal Forming group was no longer part of the core business of the ThyssenKrupp Steel Europe business area. Gestamp is present in the automotive supply sector with more than 70 locations and roughly 18 000 employees worldwide. In 2010 the company generated sales of around €3100 million in 20 countries in developing and producing metal components and structural parts for auto bodies.

ThyssenKrupp Metal Forming has production plants for chassis and body components in Germany, France, the UK, Spain, Poland, Turkey and China. The group employs around 5700 people and generated sales of almost €1100 million in the fiscal year ended September 30, 2010.

Tata Steel announces £7 million investment in Hartlepool

Tata Steel plans to improve productivity and customer service at its Hartlepool site in the UK by investing £7 million in enhanced welding and material handling capability.

The investment must improve the welding capabilities of two of the company's Hartlepool mills - the 42-inch submerged arc welding (SAW) mill and the 20-inch high frequency induction (HFI) mill - and upgrade both mills' handling equipment.

Tata Steel's 42-inch SAW mill is specialised in the supply of thick wall, small diameter line pipes used primarily in deepwater environments by the oil and gas industry. A new fifth welding line must increase the mill's internal welding output by 25%; it incorporates digital technology which is due to enhance accuracy and control of the welding process.

The 20-inch HFI mill produces a range of tubular products for the structural, mechanical, process plant and energy markets. A new

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1.8 megawatt solid-state induction welder will be installed at the mill to enhance weld integrity and increase manufacturing output.

The £7M investment will also include new cranes, handling equipment and storage at both mills, which must improve the quality of the finished product as well as customer service.

The investment is part of the company's five-year plan to increase the productivity and cost effectiveness of the Hartlepool plants. Preparatory work has already begun at the mills, and the installation and commissioning of the new plant and equipment is scheduled for the first six months of 2012.

Reliance Steel & Aluminum acquires Continental Alloys & Services

Reliance Steel & Aluminum, headquartered in Los Angeles, California, has completed the acquisition of all the outstanding capital securities of Continental Alloys & Services, and certain affiliated companies, for a transaction value of ca. $415 million. Continental, headquartered in Houston, Texas, and its affiliates combined comprise a materials management company focused on high-end steel and alloy pipe, tube and bar products and precision manufacturing of various tools designed for well completion programs of energy service companies and has 12 locations in seven countries including the United States, Canada, United Kingdom, Singapore, Malaysia, Dubai and Mexico.

Continental Alloys & Services will operate as a subsidiary of Reliance Steel & Aluminum Co. Current management will remain in place with Dale Benditz serving as Chief Executive Officer and David Sapunjis serving as President of Continental Alloys & Services.

Reliance Steel & Aluminum has a network of more than 200 locations in 38 american states and Belgium, Canada, China, Dubai, Malaysia, Mexico, Singapore, South Korea, and the United Kingdom; the Company provides metals processing services and distributes over 100 000 metal products to more than 125 000 customers. "Continental complements our existing businesses selling into energy market. This acquisition also aligns well with our diversification strategy adding OCTG products, new processing capabilities, and entry into new international markets", said David H. Hannah, Chairman and CEO of Reliance.

Tenova splits activities

The Tenova group, which is based in Milan and includes more than 33 companies spread over 5 continents, has experienced growth both internally and through mergers and acquisition activities. Consequently, a decision has been made to implement a new structure, splitting the group into two divisions: Tenova Iron & Steel, and Tenova Mining & Metals. "This is a complex operation", says Gianluigi Nova, CEO Tenova "put in place on a gradual basis to take into account all operational, management, and market variables. All this has a clear objective: to give Tenova new and more ambitious growth targets, by leveraging the greater synergies the business units in each division will develop."

NLMK creates US and European business divisions

Following the acquisition of the rolling business of Steel Invest and Finance (formerly a joint venture between NLMK and Duferco Group) on July 1, 2011, NLMK announces the creation of its new business divisions - NLMK Europe and NLMK USA.

NLMK also announces the new management structure of its international operations. Mr Horacio Malfatto, formerly Chief Executive Officer of Steel Invest and Finance, has been appointed Chief Executive Officer of NLMK Europe. NLMK Europe Strip Products, a business unit combining European flat strip operations, will be headed by Mr Ben de Vos, formerly a Director of La Louvière plant. Mr Igor Sarkits, formerly a Director of DanSteel, has been appointed CEO of NLMK Europe Plate Products. Mr Paul Fiore will continue as President & COO of all USA production companies. Mr Robert Miller has been appointed to the position of President, NLMK USA, responsible for strategic planning and procurement, finance, IT, sales and marketing.

NLMK Europe employs 3000 people at six production sites specialized in hot rolling (including thick plates manufacturing), cold rolling and coating (galvanizing and pre-painting) and a network of steel processing and distribution units. NLMK's industrial model is based on the supply of semi-finished products from Russia to European processing facilities, close to customers. NLMK has implemented this model at DanSteel, a Danish plate producer, where it has been applied since 2002.

NLMK Europe comprises two business units, Strip Products and Plate Products.

- Strip Products unit has an annual production capacity of 2.6 Mt at three production sites, NLMK La Louvière, NLMK Coating, NLMK Strasbourg, and a network of service centres.
- Plate Product unit has an annual production capacity of 1.93 Mt at three production sites, NLMK Clabecq, NLMK Verona, NLMK DanSteel. NLMK offers products ranging from very thin/narrow to very thick/wide plates, as well as tool steel.

NLMK USA has a diversified base of flat steel producing assets comprising three production sites at NLMK Indiana, NLMK Pennsylvania (formerly, Duferco Farrell) and Sharon Coating, manufacturing slabs, hot-rolled, cold-rolled and galvanized products. It has an electric arc furnace steelmaking capacity of approximately 730 000 t and hot-rolling capacity of 2.7 Mt. The new division brings synergies through a common

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distribution structure offering a range of steel products to the construction, pipe and tubes and machinery sectors.

Commercial Metals completes acquisition of G.A.M. Steel

Commercial Metals Company (CMC), headquartered in Irving, Texas, has completed the acquisition of G.A.M. Steel Pty. Ltd. (G.A.M.), a distributor and processor of steel long products and plate based in Melbourne, Australia. Servicing the structural fabrication, rural and manufacturing segments in the state of Victoria, G.A.M. offers a range of long products.

"Although we currently have a significant position in steel marketing and distribution in Australia, this acquisition gives us a new presence in Victoria, the strongest market for processed steel in Australia", said Joe Alvarado, President and Chief Operating Officer of CMC.

Commercial Metals Company and subsidiaries manufacture, recycle and market steel and metal products, related materials and services through a network including steel minimills, steel fabrication and processing plants, construction-related product warehouses, a copper tube mill, metal recycling facilities and marketing and distribution offices in the United States and in international markets.

Chicago Tube and Iron merges with Olympic Steel

Olympic Steel (Cleveland, Ohio), has entered into a merger agreement with Chicago Tube and Iron (Delaware). Olympic will acquire all of the outstanding common shares of CTI, and CTI will become a wholly-owned subsidiary of Olympic. The transaction purchase price is $150 million in cash, plus the assumption of approximately $6 million of indebtedness.

Founded in 1954, Olympic Steel is a metals service center focused on the direct sale and distribution of processed carbon, coated, aluminum and stainless steel flat-rolled sheet, coil and plate products. Headquartered in Cleveland, Ohio, the Company operates processing and distribution facilities in North America. Founded in 1914, CTI is a steel service center with ten operations throughout the Midwest. CTI inventories over 30 000 line items of tubing, pipe, bar, valves and fittings from worldwide manufacturers.

Tenova increases presence in India

Tenova, Italy, has reached 100% equity ownership in Tenova Multiform, the joint venture company within the strip processing lines and cold rolling mills business in India, established in 2009.

Headquartered in Mumbai, where its 2 production facilities are located with a workforce of 150, Tenova Multiform supplies cold rolling mills and strip processing lines to Indian steelmakers.

Tenova is also present with Tenova Hypertherm and LOI Wesman, which are active in the industrial furnace business. In the mining and cement business Tenova is present in the country with TAKRAF India based in Chennai.

Presently Tenova Multiform together with Tenova Strip Processing and Tenova Hypertherm are involved in India and Bangladesh in the execution of important contracts (Sail Bokaro) and in the field of hot dip galvanizing.

In Vietnam and Indonesia Tenova Multiform in cooperation with Tenova I2S (cold mills) and Tenova Key Technologies (acid regeneration plants) acquired several contracts for the supply of processing lines for a cold mill complex.

Metinvest decommissions open hearth furnace at Azovstal

Metinvest has implemented its decision to completely decommission the open hearth furnace at Azovstal Iron and Steel Works. This decision has been adopted within the framework of the modernization and reconstruction program implemented at the group's metallurgical enterprises envisaging reduction of environmental impact, which must allow to achieve full transition to converter steel making process shortly. Currently, converter-based rail steel production process mastering has been finalized.

Decommissioning of open hearth production process aims at gaining large scale environmental effects and reducing environmental burden of the region considerably: at the same time, elimination of open hearth production must not affect production volumes. All steel grades that used to be produced at the OHF production have been mastered within the converter production process and certified.

PEOPLE

SSAB appoints two new heads of business areas

SSAB today appointed new Heads of the SSAB Americas and SSAB EMEA Business Areas. Both will become members of SSAB's Group Executive Committee. Charles Schmitt will head the Americas Business

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Area. He is a member of SSAB America's management team and currently head of the Southern Business Unit in SSAB Americas. Melker Jernberg, currently SVP at the truck and bus manufacturer Scania, will be the new Head of EMEA.

Charles Schmitt, born in 1959, holds a Bachelor degree in Business Administration from the University of Texas at Arlington. He has spent his entire career within the steel industry. He began at US Steel Corporation and thereafter has worked for more than 20 years within IPSCO, subsequently SSAB, holding senior positions within marketing and sales.

Melker Jernberg, born 1968, holds an MSc in Engineering from KTH (the Royal Institute of Technology in Stockholm). Largely speaking, throughout his professional life since 1989 he has worked at Scania, where he has held a number of senior positions. Melker Jernberg is currently SVP with responsibility for the Buses and Coaches business area.

Timo Pirskanen appointed Vice President, Investor Relations at Rautaruukki

Timo Pirskanen, 42 has been appointed Vice President, Investor Relations at Rautaruukki with effect from 1 September 2011.

Timo Pirskanen joins Rautaruukki from Deutsche Bank, where he worked as Head of Equity Research at the Helsinki Branch. Prior to Deutsche Bank, Pirskanen held specialist and management positions at investment banks Advium Partners and Menire Advisors and was also an analyst at Carnegie.

Pirskanen will report to Rautaruukki's CFO, Markku Honkasalo.

ECONOMY WATCH

First half 2011: Vallourec reports sales growth

During Q2 2011, all of Vallourec's mills operated at high levels of activity: sales volume of 561 thousand tonnes was up 12% versus Q1 2011. For H1 2011, sales volume increased by 28% year on year to 1062 thousand tonnes. Consolidated sales in Q2 2011 increased by 12% sequentially to €1290 million. In addition to volume growth (+12%), sales benefited from a positive combined price/mix effect (+2%) with sales price increases partially offset by strong growth of lower priced non-energy sales. For H1 2011, sales increased by 22% year on year to €2438 million. The higher sales volume (+28%) and scope (+4%) was partly offset by a negative combined price/mix effect (-11%), whilst the currency translation effect was negligible. Total net income, Group share amounted to €112 million in Q2 2011, up 37% compared Q1 2011. For H1 2011, net income Group share amounted to €194 million, up 4% year on year.

Ongoing projects include:
- start-up of new capacity at Valinox Nucléaire, France;
- acquisition of 19.5% of Tianda Oil Pipe, China;
- project to acquire Zamil Pipes and construct new threading facility, Saudi Arabia.

Valinox Nucléaire, specialised in the production of stainless steel and high nickel alloy tubes for nuclear power plant steam generators, started its new plant at Montbard (Côte-d'Or department, France) in January 2011. With an order book filled for the next 3 years, Vallourec's nuclear division aims to triple its production capacity by the end of 2011.

"Our results reflect, however, the strong increase in raw material costs which we are progressively recovering in our sales prices", Philippe Crouzet, Chairman of the Management Board, stated. "The markets remain well oriented and our mills are operating at high utilisation rates. Our activity is going to progress in the second half. We should, nevertheless, continue to operate in a context marked by the volatility and high level of raw material costs as well as the strengthening of the euro against the dollar. The costs associated with the construction and start up of our new facilities will also continue to impact our margins. In this transition year several strategic projects are in progress to respond to growth".

Vallourec is investing in important projects to increase its industrial and commercial presence in the regions of the world where the Group's local customer demand is strong and growing: "The new mill VSB in Brazil is in the process of obtaining its certifications and the first orders have been taken for delivery in the fourth quarter. In the USA, the construction of our new tube mill is progressing well. Other projects underway will enable us to strengthen our local presence in regions of strong development such as China through our partnership with Tianda Oil Pipe and the construction of two new mills to serve the power generation market as well as in the Middle East with the acquisition of Zamil Pipes and the construction of a new finishing line".

For H1 2011, Energy sales amounted to €1775 million, up 13% year on year, representing 73% of total Group sales versus 79% of sales in H1 2010. Oil & Gas second quarter sales increased by 3% sequentially to €650 million, bringing sales for H1 2011 to €1280 million, up 28% year on year. In the USA, sales increased during the second quarter, driven by the high drilling activity in the shale plays. Vallourec's mills operated at full capacity, supported by imports of small diameter tubes from its European plants, to meet customer demand. High oil prices should continue to encourage drilling in new shale plays like Utica (Ohio) in the US. Offshore line pipe project activity in Brazil and West Africa should bring additional volumes in the second part of the year. In Power Generation, sales during H1 2011 remained significantly below prior year level, down 24%. With the start-up of the new capacities

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for steam generator tubes in France, sales will increase further in the second half of the year, supported by re-tubing projects in France and the ongoing construction of new nuclear power plants in China. Petrochemicals sales represented €180 million in H1 2011, up 13% compared to H1 2010. Sales included deliveries for a gas compression facility in Abu Dhabi and a steam-assisted gravity drainage (SAGD) facility in the Canadian oil sands.

In non-energy markets (Mechanical, Automotive, Construction and other) sales during H1 2011, amounted to €663 million, up 55% year on year. Mechanical Engineering sales continue to be driven by in the high activity of the German machine building industry. Sales to European and North American distributors also increased during the first half of the year. Automotive sales still benefited from robust demand in Brazil, particularly for heavy vehicles. In the second half of the year, sales will be principally supported by the dynamism of German exports.

2011 vs 2010 sales (in € million)

	H1 2011	H1 2010	ChangeYoY
Oil & Gas	1280	1000	+28%
Power Generation	315	413	-24%
Petrochemicals	180	159	+13%
Total Energy	1775	1572	+13%
% of total sales	73%	79%	
Mechanica	I311	181	+72%
Automotive	180	144	+25%
Construction & Other	172	102	+69%
Total non-Energy	663	427	+55%
% of total sales	27%	21%	
Total	**2438**	**1999**	**+22%**

Source: Vallourec.

ArcelorMittal is cautious about recovery

The first six months of 2011 have been a period of steady progress for ArcelorMittal: "We have increased profitability, but it is prudent to remain cautious about the pace of recovery", Lakshmi N. Mittal, Chairman and CEO, declares. "Steel demand in the developed world will not normalize for some time." During the six months ended June 30, 2011 ArcelorMittal benefited from improved demand for steel, increased shipment volumes and overall higher average selling prices.

From the beginning of 2011, ArcelorMittal's mining operations are presented as a separate operating segment. Iron ore production during the first half of 2011 increased to 29.5 Mt, of which 24.9 Mt was ArcelorMittal's own production, with an increase in total steel shipments for the period to 44.1 Mt compared to 43.3 Mt for the comparable period in the previous year. "We have made significant steps towards increasing the proportion of our raw materials that we own and produce ourselves, notably via the Baffinland acquisition and the expansion of our Mont-Wright mining complex and additional construction at Port-Cartier in Canada", Lakshmi N. Mittal mentions.

ArcelorMittal's sales were higher at $47 300 million for the six months ended June 30, 2011, up from $37 600 million for the six months ended June 30, 2010, primarily due to an increase in average steel selling prices and slightly higher shipments resulting from the global economic recovery and improved steel demand compared to a year earlier. ArcelorMittal's steel shipments increased by 1.9% to 44.1 million tonnes for the six months ended June 30, 2011, from 43.3 million tonnes for the six months ended June 30, 2010. Average steel selling prices increased by 22.7% for the six months ended June 30, 2011 as compared to the six months ended June 30, 2010.

- Sales in the Flat Carbon Americas segment increased 21% to $10 500 million for the six months ended June 30, 2011, from $8 700 million for the six months ended June 30, 2010, primarily due to a 4% increase in steel shipments and a 17% increase in average steel selling prices. Production increased in all operating units in anticipation of higher demand, except for the company's South American operations where production remained constrained due to disruptions in the local coal handling port.

- Sales in the Flat Carbon Europe segment increased 31% to $16 400 million for the six months ended June 30, 2011, from $12 500 million for the six months ended June 30, 2010, primarily due to a 1% increase in steel shipments and a 27% increase in average steel selling prices.

- Sales in the Long Carbon Americas and Europe segment increased 23% to $12 600 million for the six months ended June 30, 2011, from $10 200 million for the six months ended June 30, 2010, primarily due to a 3% increase in steel shipments and a 22% increase in average steel selling prices.

- Sales in the AACIS segment increased 17% to $5 400 million for the six months ended June 30, 2011, from $4 700 million for the six months ended June 30, 2010, despite a 3% decrease in steel shipments, which was more than offset by a 24% increase in average steel selling prices.

- Sales in the Distribution Solutions segment increased 24% to $9 300 million for the six months ended June 30, 2011 from $7 500 million for the six months ended June 30, 2010, despite a 2% decrease in shipments, which was more than offset by a 26% increase in average steel selling prices.

- Mining sales rose by 41% to $2 800 million in the first half of 2011 from $2 000 million for the six months ended June 30, 2010 due primarily to higher prices and shipments of iron ore and coal.

ArcelorMittal's operating income for the six months ended June 30, 2011 amounted to $3 700 million, compared to an operating income of $2 200 million for the six months ended June 30, 2010.

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Sales for the six months ended June 30, 2011, as compared to the six months ended June 30, 2010 (in million $)

	H1 2010	H1 2011	Change YoY
Flat Carbon Americas	8717	105 06	21%
Flat Carbon Europe	12 465	16 363	31%
Long Carbon Americas and Europe	10234	12553	23%
AACIS	4 651	5 427	17%
Distribution Solutions	7 491	9 280	24%
Mining	1 982	2 785	41%

Source: ArcelorMittal.

EU steel market 2011-2012: Eurofer expects solid growth

Eurofer's recent study (available at www.eurofer.org) forecasts significant growth in 2011-12, following moderate growth over the coming quarters. "The strength of Q1-2011 activity in the EU steel using industries has clearly surprised on the upside: total steel weigthed industrial production (SWIP) grew almost 12% y-o-y. All sectors except shipbuilding posted higher than expected growth in output", Eurofer points out. "Much milder weather in the first months of 2011 than in Q1-2010 partly explains the marked year-on-year gains. Also catching-up effects following a 2010 December month which was disrupted by severe winter conditions have been supportive to growth". The rise, however, also reflects that particularly the manufacturing sector is in a favourable shape owing to the improved order book situation: "In addition to still lively export demand for investment and intermediate goods, there has been a marked rebound in domestic investment in machinery and equipment", Eurofer mentions. In the remainder of this year a moderation of output growth is to be expected as the weather-related impulse disappears. SWIP growth is seen around 4% y-o-y in the 2nd half of this year. This will result in 6% output growth in the whole of 2011. For 2012, a growth rate of just below 4% seems plausible.

Development of the main steel using sectors – EUROFER forecast July 2011
% change year-on-year in the SWIP (Steel Weighted Industrial Production) index.

	% share in total consumption	Year 2010	Year 2011	Year 2012
Construction	27%	-2.5%	+1.9%	+3.5%
Structural steelwork	11%	+1.7%	+3.8%	+3.2%
Mechanical engineering	14%	+9.9%	+9.3%	+5.5%
Automotive	16%	+20.7%	+9.7%	+3.1%
Domestic appliances	4%	+2.7%	+4.7%	+5.8%
Shipyards	1%	-18.9%	-4.7%	+0.3%
Tubes	12%	+12.7%	+8.6%	+4.7%
Metal goods	12%	+8.2%	+7.6%	+4.3%
Miscellaneous	3%	+5.9%	+4.9%	+4.3%
TOTAL	**100%**	**+5.9%**	**+6.0%**	**+3.9%**

Source: Eurofer.

According to the Eurofer study, EU construction activity grew 8% y-o-y in the 1st quarter of 2011, despite large growth divergences at the country level. The expected moderate rebound in construction activity should particularly stimulate consumption of long steel products.

In the first quarter of 2011, output in the EU mechanical engineering industry grew almost 14% y-o-y. Mechanical engineering output in the EU is forecast to increase by almost 9.5% in 2011, a fairly similar growth as registered in 2010.

As regards the automotive sector, Eurofer forecasts moderate growth. Automotive output grew 18% y-o-y in Q1-2011; meanwhile, EU car market should see the correction in car sales due to incentive programmes coming to an end, easing in the months ahead.

Production in the steel tube industry in the EU increased by almost 19% y-o-y in the first quarter of 2011, Eurofer reports. The positive growth trend could be observed in all EU countries. Owing to the strong increases in Q1-2011 production in the automotive industry, the mechanical engineering and metal goods sector and high global activity levels in oil & gas exploration and drilling real consumption of steel tubes has become the major driver in tube demand.

Eurofer also reports sharp rise in imports in H1-2011, outpacing EU consumption. Total imports in 2011 ought to rise by more than 26% which is much faster than previously expected. "A key risk to this forecast is third country imports rising even faster or remaining longer than expected at elevated levels", Eurofer says.

Meanwhile, EU exports declined almost 5% in Q1-2011, and EU becomes net importer again. The latest forecasts from EUROFER's Economic Committee show EU steel exports in 2011 stabilising around the year earlier level due to the strengthening of the Euro against the US$ and the negative impact of geopolitical unrest on demand for steel products in the Middle East and North Africa.

The Eurofer full study can be downloaded from www.eurofer.org

Exports, and imports forecasts (changes y-o-y, in %)

	Imports third countries	Exports third countries	Deliveries into EU 27	Total deliveries
Year 2010	+29.7%	+5.6%	+20.8%	+18.2%
Year 2011 (forecast)	+26.0%	- 0.7%	+5.2%	+4.4%
Year 2012 (forecast)	+2.7%	+14.3%	+4.0%	+5.5%

Source: Eurofer.

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