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**P R E S S
R E L E A S E**

Tenova Pyromet: A force in international mining

06 March 2008

Internationally recognised as a leading company in the design and supply of high-capacity electric submerged-arc smelting furnaces, Tenova Pyromet also specialises in the provision of complete smelting plants for the production of ferroalloys, as well as for base metal reduction, slag cleaning and alloy refining.

With its long and successful history in the ferrochrome industry, Tenova Pyromet has built most of the ferroalloy furnaces in operation in South Africa. The company is also a world-wide supplier of integrated solutions with advanced technologies and products and services for the metal and mining industries.

Combined process automation and metallurgical expertise enhance the value delivered to clients, even while Tenova Pyromet continues to develop its technology in the areas that impact the future of the industries it serves: Quality of products, energy saving and environmental safeguards.

What's more, Tenova Pyromet interfaces with its customers through a network of 30 companies based in 16 different countries, designing and supplying supplementary systems and equipment for material handling and pre-treatment, alloy conversion and refining, furnace copper cooling, copper launders and tap hole systems, granulation of metal, matte and slag, metal from slag recovery, treatment of hazardous dusts and wastes and environmental protection.

The company's track record is characterised by projects completed on time, meeting and exceeding emission control requirements and, above all, by the supply of the most reliable and efficient plants and equipment. Tenova Pyromet has been certified to ISO 9001:2000 for "The Design and Supply of Smelting Technology and Equipment". The ISO 9001:2000 certification ensures consistent attention to customer focus and the meeting of clients' needs.

Overview of projects

Taking advantage of Tenova Pyromet's innovative technology and work ethic, French company Bus Valera commissioned Pyromet to rebuild its Number One furnace in July 2006. The plant, which was switched on in August 2007, required using Bus Valera's existing transformer but increasing the furnace power by 10 percent.

Designed by Tenova Pyromet, the furnace shell is fitted with copper coolers to provide a freeze lining. The coolers cool the slag which then freezes onto the inside of the furnace, thereby creating protection for the refractory lining. Tenova Pyromet also designed the furnace roof, the furnace control system and supplied its patented electrode holders.

Another highly significant project was awarded in March 2007 by Norwegian-based Elkem Solar - a division of one of Norway's largest industrial companies. Tenova Pyromet was contracted to design and supply a slag furnace for Elkem Solar's patented metallurgical process for the production of solar grade silicon.



The project team comprised seven people from Tenova Pyromet on what is the first production plant of its kind in the world. Tenova Pyromet's high intensity MAXICOOL™ sidewall copper cooling system is employed together with an oil-based cooling fluid instead of cooling water.

Xstrata Technology, a leading global marketer of processing technologies in mineral processing, leaching, refining and smelting, also contracted Tenova Pyromet to supply the sidewall copper cooling system and shell for the first-ever ISACONVERT™ furnace for Mopani Copper Mines plc.

Hugo Joubert, Tenova Pyromet's executive manager sales and marketing base metals, says: "We are working together with Xstrata Technology on the design of the furnace shell, which we will supply together with our MAXICOOL™ copper cooling system."

Joubert is proud of the fact that this is the first commercial scale ISACONVERT™ furnace to be built. "Xstrata Technology has developed the process based on its successful ISASMELT™ process and we are subcontracted to them. The furnace will be installed at Mopani Copper Mines' copper smelter in Mufulira, Zambia."

Tenova Pyromet's supply portion of the project is expected to be complete in July 2008.

Biggest South African project yet

In what has been its biggest project yet in South Africa, Tenova Pyromet was awarded the China-based ASA Metals project for the design fabrication, installation and commissioning of two 66-MVA ferrochrome furnaces with pre-heaters at Dilokong Chrome Mine in the Polokwane area.

The contract, signed in October 2007, includes the company taking responsibility for raw materials handling, civils, structural, mechanical, electrical and automation. Around 100 Tenova Pyromet staff; some 700 locally-sourced unskilled workers will ensure the project is complete by **October 2009**.

What's more, Tenova Pyromet was also awarded the Henan Sunshine Silicon Metal project in China which involves the design, fabrication and supply of the technical equipment for two 39-MVA Silicon Metal furnaces for a 25MW plant in the city of Luoyang, Henan Province, P.R. China.

The furnace shell is fitted with a rotating mechanism that can rotate the furnace in either direction at specific speeds. This forms part of the process of producing Silicon metal. The electrodes were designed around a pre-baked carbon electrode. The option is available to change the electrode from the pre-baked carbon electrode to the composite electrode. The project requires a technical support team of eight people, with Tenova Pyromet's project team numbering 12.

Tenova Pyromet's steady growth path has seen the company take these projects and others head on, meeting both strict deadlines and intense safety requirements. With these challenges comes the experience that continues to enhance the Tenova Pyromet offering around the globe.

Tenova Pyromet Ferroalloys Sales and Marketing Director **Chris Oertel** says that the company is well placed to partner with clients in finding the most appropriate and cost effective solutions for the client's requirements.

"We are confident that our ability to plan early and well makes a difference to our clients. We begin well in advance securing the right engineering skills for the job, then forecasting challenges that may occur. Our international experience as a whole enables us to bring a global intellectual capacity to every project, with results that usually have clients request our services on other projects."

Notes to the Editor



The trademarked ISASMELT™ and ISACONVERT™ furnaces are based on Top Submerged Lance (TSL) technology used for smelting and converting ores for production of copper and other base metals. A mixture of oxygen and air is injected through the lance into the melt, resulting in the oxidation of sulphur in the melt and the subsequent exothermic release of energy for melting fresh feed.

Tenova, former Techint Technologies, designs and supplies advanced technologies, products and services for the metal and mining industries. Tenova operates close to its customers through a network of 30 companies based in 16 different countries. For more information visit our website at www.tenovagroup.com.