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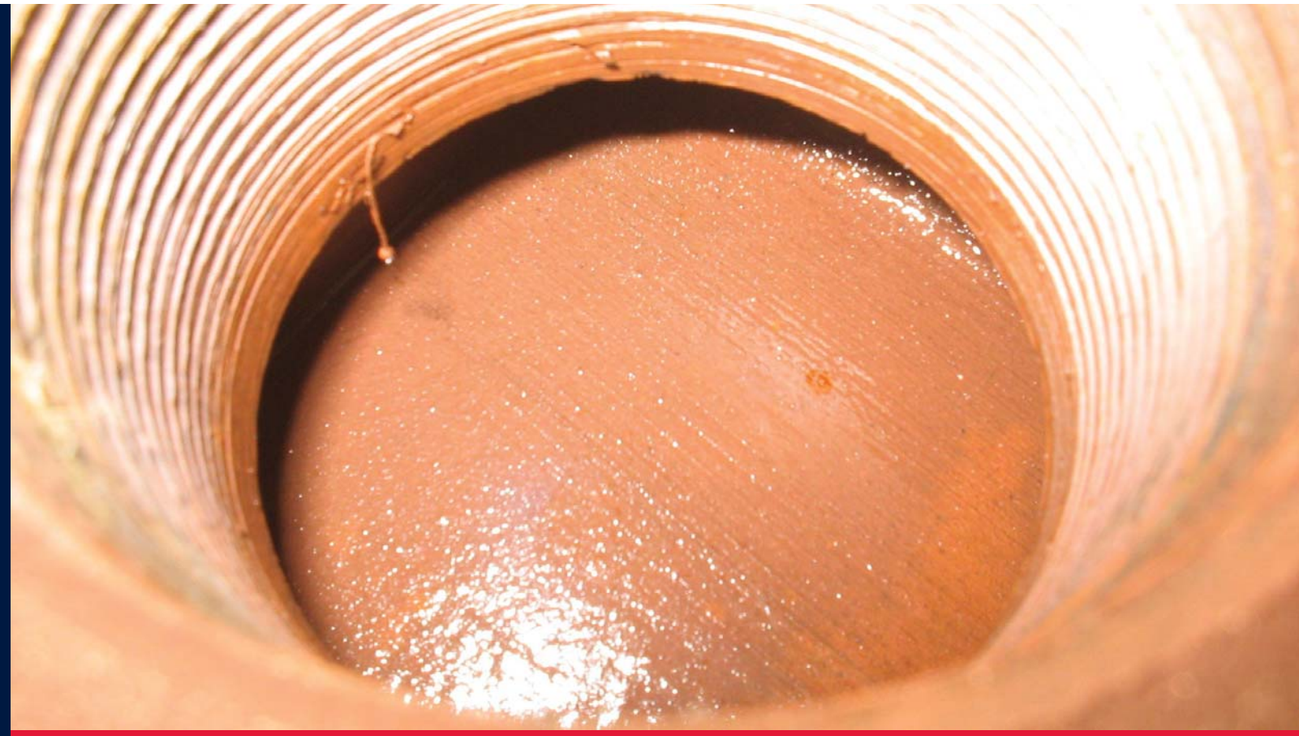

Befesa Valera S.A.S. Upgrade Furnace 1 Project

TENOVA is a world-wide supplier of advanced technologies, product and services for the metal and mining industries.

Tenova is a worldwide supplier of advanced technologies, products and services for the metal and mining industries providing innovative integrated solutions. Combined process automation and metallurgical know-how enhance the value delivered to the customers. Tenova is committed further to develop its technology in the areas that mostly impact the future of the industries it serves: quality of the products delivered by the customers, energy saving and environmental safeguard.

Tenova Pyromet is a leading company in the design and supply of high-capacity electric submerged-arc smelting furnaces and complete smelting plants for the production of ferroalloys, base metals, slag cleaning and alloy refining.
Tenova Pyromet has a long and successful history in the ferroalloy industry and also designs and supplies equipent for material handling and pre-treatment, alloy conversion and refining, granulation of metal, matte and slag, furnace off-gas fume collection and treatment, treatment of hazardous dusts and wastes.
The company has been certified to ISO 9001:2008 for "The Design and Supply of Smelting Technology and Equipment".

Background and Project Description

French company Bus Valera SAS commissioned Tenova Pyromet to rebuild its Number One furnace in July 2006. The plant, switched in on 08 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's biggest challenge was to fit the new equipment into the existing space.

Bus Valera required the rebuilt furnace for the treatment of steel plant dusts. Tenova Pyromet also designed the furnace roof, the furnace control system and supplied its patented electrode holders.

The fabrication of the roof for the furnace was undertaken in Tenova's new workshop in China during November 2006.

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.

The existing transformer was used but the new design increased the furnace power input by 10 percent.

The new Bus Valera furnace uses the Pyromet controller, to controller electrode penetration and furnace power. The Pyromet controller uses a number of advance algorithms to try and get the most power into the furnace without exceeding design specifications.

Project Information

Project name:	Upgrade Furnace 1
Client:	Befesa Valera S.A.S.
Site:	Gravelines, France
Project description:	Design, supply and guarantee furnace upgrade and electrode supply.
Produces:	Redesign of furnace to handle increased power.
Plant capacity:	12 MW
Project duration:	13 months
Project award:	07/07/2006
Commissioned:	08/08/2007

Project Statistics

Steel structures:	Existing modified by client
Plate work:	Supplied by client
Electric cabling:	Supplied by client
Pyromet project team:	6 People
Project site team:	Technical support of 4 people
Project site team:	320 persons (at peak)