

## OTTO JUNKER commissions medium-frequency induction melting plant at Eisenwerke Erzgebirge 1566 GmbH

At **Eisenwerke Erzgebirge 1566 GmbH** based in Schönheide/Germany, the new **OTTO JUNKER** medium-frequency coreless induction furnace system has been put into operation. The company has a long-standing tradition and is a source of high-grade castings for the automotive industry, making items such as, e.g., differential housings.

With its new coreless furnaces the company aims to safeguard its viability in tomorrow's markets and intends to establish itself as a supplier of grey cast iron and spheroidal graphite iron (SGI) products. Its stated goal is to become a flexible contract foundry producing small lot sizes of castings in whiteheart and blackheart malleable iron, grey cast iron and SGI.

The new melting furnace system consists of two 6,000 kg furnaces operated in tandem off a 4,800 kW converter. The DUOMELT set-up allows for an infinitely variable power split between the two furnaces. The converter employed features modern IGBT modules, enabling the plant to run with a constantly high power factor ( $\cos \phi = 1.0$  at the converter input). Multi-Frequency technology (250 Hz /125 Hz) provides a melt stirring capability for carburizing and alloying work.

Automatic process management is provided on the basis of a JOKS touch control system in this application. The bidirectionally tiltable extractor hood collects the fumes released in the melting process. An OCP (Optical Coil Protection) system is fitted for continuous monitoring of the temperature on the inside of the coil. This ensures an early detection of crucible defects and prevents coil damage and melt breakthrough. The furnaces are mechanically filled with the necessary raw materials by means of the charging machines. This solution improves operator safety on the one hand while also facilitating an optimum utilization of the furnace's melting capacity due to adjustability of the charging speed.

The pouring process is fully automated thanks to the use of the 1.2 tonne stoppered ladle that was part of OTTO JUNKER's scope of supply.

The system distinguishes itself by high ease of maintenance and hence, superior equipment availability. It thus impressively demonstrates the level of equipment technology available from OTTO JUNKER today.

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