

ABP system to become the basis for lighthouse project for the future orientation of WESO Aurorahütte GmbH

ABP's technical expertise intensifies market development for its customers – even in challenging installation environments

WESO-Aurorahütte GmbH has a very broad product range on the market. It supplies innovative products to the most prominent branches of industry, such as drive technology, agricultural-and heating technology, pump, valve and gear construction, and railroad technology. In order to achieve an even stronger market position, WESO is planning to step up its involvement in the production of spheroidal cast iron. With this aim in mind, a new unheated ABP pouring system type OCU 38 will be installed in the summer of 2021. For WESO-Aurorahütte GmbH, the expansion represents a lighthouse project to further consolidate its position in the market.

WESO specializes in high-quality iron castings for the global market and operates two molding lines in its foundry. These include a box-bound, horizontal molding plant with average casting weights of approx. 150 kg, and in addition a boxless, vertical molding plant with average casting weights of approx. 50 kg. The two molding lines are alternately supplied with molten iron from two hot blast cupola furnaces with a melting rate of 15 t/h. The box molding plant is currently supplied primarily for the production of gray iron castings (GJL) via a pressurized gas-operated channel-type induction furnace with a useful capacity of 10 tons of liquid iron.

WESO is also a system partner and supports customers right from the design stage, looks for optimum production processes in the foundry and ensures the best product results with subsequent machining of the parts. The range of services is further rounded off by the assembly of the parts into ready-to-install sub-assemblies. In addition to this, WESO would like to offer an even broader portfolio. In response to existing market requirements, WESO will therefore increasingly expand the production of castings made of spheroidal cast iron (GJS) and equip the box molding plant with a second pouring line and additional pouring equipment.

This is where ABP Induction Systems GmbH comes into play by supplying a new unheated pouring system. The pressurized gas operated unheated pouring system type OCU 38 has a useful capacity of 3,200 kg and a total capacity of 4,150 kg. ABP supplies the unheated pouring system consisting of the essential components, such as molds for refractory lining, chassis (longitudinally and transversely movable), hydraulic tilting device, gas pressure system, electrically operated tamping system and a device for rotating the tamping in the pouring block and for cleaning the pouring block. Cleaning takes place by means of pressure surges via an oxygen lance. Magnesium oxides are removed using an oxygen lance in the area of the discharge stone – a very efficient and trouble-free method, especially in comparison to mechanical cleaning using conventional pressure tappets.

A key element is the electrical power supply with control cabinet, control panel (ABP OPTIPOUR® Basic) and cable-connected operating point as a fixed position for moving as well as tilting the pouring equipment and for operating the pouring lid. The equipment package also features a radio control bottle with which the forklift operator can actuate the sprue lid and a monitoring camera for observing the pouring situation in the area of the mold box, the pouring stream and the pouring funnel. An installation with foresight: The installation situation is identical to the position of the camera in the later planned expansion with the OPTIPOUR® camera pouring level control system. The

installation, commissioning and training of operating personnel as well as spare parts, including a spare furnace vessel for quick change, round off the overall package.

A main objective for WESO is to be able to cast GJS materials automatically and efficiently on a new pouring line with an unheated pouring system, while retaining the key benefits associated with the operation of the pressurized gas-operated pouring furnace.

ABP not only succeeded in convincing the customer with the technology itself, but also with its special expertise with regard to the installation: The extremely tight space conditions at the pouring position of the molding plant call for high engineering skills. Here ABP already has experience, which was demonstrated to WESO by conducting a reference visit to a German customer, where a very similar production process is already being implemented with great success.

After the contract was concluded in January 2021, the engineering activities were completed. Assembly is scheduled for weeks 30 and 31, with cold commissioning to take place the following week. Right on schedule, hot commissioning will then take place in week 34.

About ABP Induction Systems GmbH

ABP is a leading manufacturer of induction furnaces and systems for inductive melting and holding for the metal and metalworking industries. ABP is an expert in melting, pouring, holding and heating iron, steel and non-ferrous metals with design, production, assembly and services for foundries, forges and steelworks. The ABP Induction Systems Group with over 400 employees has companies in the USA, Mexico, Sweden, Germany, South Africa, Russia, India, Thailand and China. It is represented by service and sales partners in most of the world's industrialized countries.

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