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Primetals Technologies upgraded E&A equipment of RH-plant and ladle furnace at CSN, Volta Redonda, Brazil

- **Electrics and automation system replaced with new equipment**
- **New remote IO panels added reduce potential of damages in case of any incident in E-rooms**
- **RH-plant and ladle furnace back in operation in a very short period of five months**

Primetals Technologies has successfully revamped electrics and automation systems at the Presidente Vargas Steelworks of Companhia Siderúrgica Nacional (CSN) in Volta Redonda, Rio de Janeiro State, Brazil. The electrics and automation systems of a RH degassing plant, a ladle furnace and the common alloy system were replaced with new versions. The RH plant and the ladle furnace were brought back into operation within only five months of order signing. The Provisional Acceptance Certificates have already been issued by CSN. To increase availability, new remote IO panels were added in case of any incident in the E-rooms.

Primetals Technologies' scope included the engineering for electrics and automation, HVAC (Heating, Ventilation, Air Conditioning)-systems, fire-fighting systems and the installation of all equipment supplied. The equipment comprised MCCs (Motor Control Centers), drives cubicles (both DC and AC), auxiliary panels for voltage distribution, lighting, and junction boxes, PLCs and remote IO, a gas analyzer, an electrodes control system, a data acquisition system, the HVAC, including condensers, evaporators and filters, control panel, detectors and valves for the fire-fighting system, as well as spare parts and installation materials like cables, trays, conduits and piping. In addition, Primetals Technologies offered erection services, the site supervision for erection and commissioning, and assisted operation.

The equipment of both plants was supplied, erected, commissioned and started-up in only 5 months after the contract signature. Primetals Technologies managed to start-up the ladle furnace even one week in advance to contractual schedule, even amidst all the difficulties and constrains imposed by the COVID-19 pandemic. Due to the bad conditions of a large amount of existing cables, vast quantities of

cables had to be replaced. Critical path for the success of the project was the timely identification of cables to be replaced and generation of new interconnection diagrams during the installation phase.

The existing electrode control system of the ladle furnace was replaced by the Melt Expert package from Primetals Technologies. Melt Expert was commissioned by local Primetals Technologies employees with remote training and support from Austria.

Founded in April of 1941, CSN was the first integrated flat steel producer in Brazil - a landmark in the country's industrialization process. Its steel enabled the creation of the first national industries, which were the birthplace of the current Brazilian industrial park. Privatized in 1993, the Company has, since then, modernized and diversified its activities. CSN has a sustainability vision that increases the efficiency of industrial processes and establishes gains with a business model based on the circular economy concept, which binds together all stakeholders in a chain of value generation. The company has a management focused on the development of its teams and harmonious coexistence with the communities in the cities where it operates, both in Brazil and abroad.

Presidente Vargas Steelworks is one of the largest steel producers in Latin America. It is located in Volta Redonda, Rio de Janeiro State, 141 km from the city of Rio de Janeiro, and has an annual production capacity of 5.8 million tons of steel. The two blast furnaces at Presidente Vargas Steelworks produce, together, 12.8 thousand tons of pig iron per day. The main production units are coke plant, sinter plant, melt shop, continuous casting, hot rolling, cold rolling, galvanizing, chromizing and electrolytic tinning.



Ladle Furnace during the first treatment

This press release and a press photo are available at www.primetals.com/press/

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