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## Primetals Technologies' modernization of welding machine in Brazil boosts availability and functionality

- **Comprehensive upgrade of welding machine has resulted in higher availability and secured supply of spare parts**
- **Newly designed solution increases efficiency of maintenance work**

Brazilian steel producer Usiminas has recently granted the provisional acceptance certificate (PAC) to Primetals Technologies for the modernization of Usiminas' welding machine at a steel plant in the city of Ipatinga, located in the south-eastern part of Brazil. A part of the recoiling line, the welding machine at the steel plant in Ipatinga ensures that the strip is straightened according to the desired quality levels before being sent off to customers.

### State-of-the-art software

Thanks to the new solution, the availability and operational functionality of the welding machine has been improved. In addition, the position of the controller has been modified so that maintenance work is easier to execute. The new system uses state-of-the-art software, like the TIA portal, which now makes it possible for Usiminas to process new types of materials.

"One challenge was to find a new solution for the welding machine's control system. The new technology is very well-developed by the team from Primetals Technologies. Thanks to the new supervision system, the operational team gets greater agility and the possibility to register new classes of materials in the weld recipes table. The previous system, which was 20 years old, was less flexible. For example, the operators had to perform trial-and-error cycles for weld materials not included in the existing table," says Usiminas project manager Fernando Martins Soares.

The scope of supply comprises engineering and implementation of a new network system including new human-machine interface (HMI) and control systems. The key functions of the new solution include a thyristor bridge control system, a technology package for the welding current control system, an electric drive for the welding carriage, and a valve amplifier for controlling pressure and positioning of hydraulic and servo valves.

### Successful projects

Primetals Technologies and Usiminas have recently partnered in several modernization projects, among them a new Level 2 automation system for slab caster No. 2 at the Ipatinga plant, an upgrade of the main drives of the tandem cold mill, and a modernization of the entry section drives for the pickling line and tandem cold mill (PLTCM). Positive experiences from these projects along with Primetals

Technologies' extensive expertise in the field of drives systems contributed to Usiminas choice of supplier for the most recent modernization project at the steel plant in Ipatinga.

Founded in 1956, Usiminas produces thick plates, hot strip, as well as cold rolled, electrogalvanized, and hot dip galvanized steel.



The commissioning team, with representatives from Usiminas and Primetals Technologies, on site at the steel plant in Ipatinga, Brazil.



Side view of the welding machine at the steel plant in Ipatinga.

This press release and a press photo are available at [www.primetals.com/press/](http://www.primetals.com/press/)

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