

Primetals Technology Germany GmbH Willstätt Commissioning of furnaces Switchgears

Project description

Within the steel industry, there is the traditional blast furnace route as well as the more energy efficient electrical arc furnace route. In this process, steel scrap is melted and subjected to metallurgical refining in the ladle furnace after which the liquid metal is casted into slabs or billets, which are further processed into steel sheet or long products. The arc furnaces are fed by special furnace transformers supplying very high secondary currents exceeding 100kA. Due to operational safety reasons, these transformers need to be switched on and off up to 100 times a day.

Primetals supplies furnace switchgears for the switching of such furnace transformers including busbar systems, disconnecting/ground switch and the required protective circuits (RC elements and surge arresters) for the protection of the furnace transformer against the switching transients generated by the vacuum breakers used.



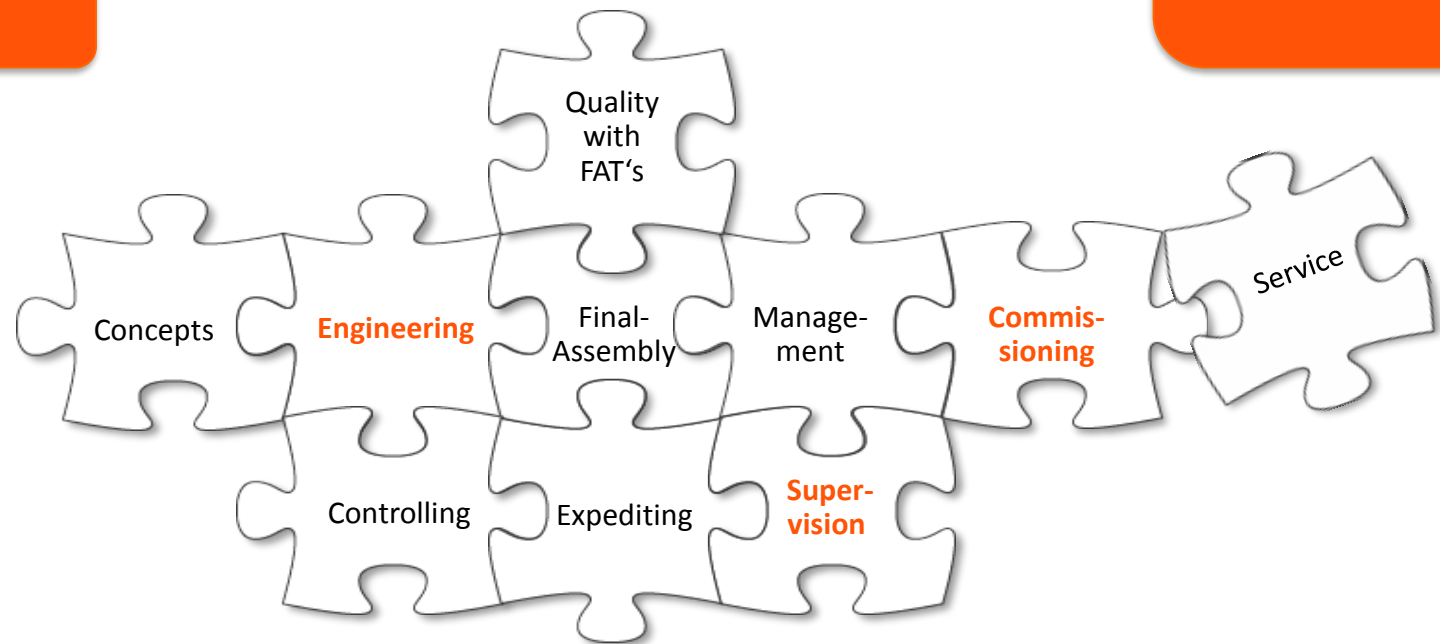
The role of INP Switzerland

INP Switzerland is in charge of commissioning the switchgears on site in the steel mill and is responsible for verifying the installation, the engineering of the protection settings and all necessary checks until the furnace transformer is energized for the first time.

Selection of executed systems: RIG Oy, Tornio, Finland / SIPAR Gerdau Pérez, Argentina / Arvedi Cremona, Italy

Smart E-Engineering-Services

Flexibility Throughout the Project



- Verification of the installation
- Assembly supervision for reworking and completion of the assembly
- Signal checks using automation and protection systems
- Testing of the interlocks
- Functional checking of the breakers, disconnectors and grounding switches
- Voltage tests
- Short circuit and protection setting calculations
- Checking of the selectivity
- Parametrising and testing the protection relays used
- Documentation of the work and preparation of the handover documents
- Execution of the first transformer energization



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