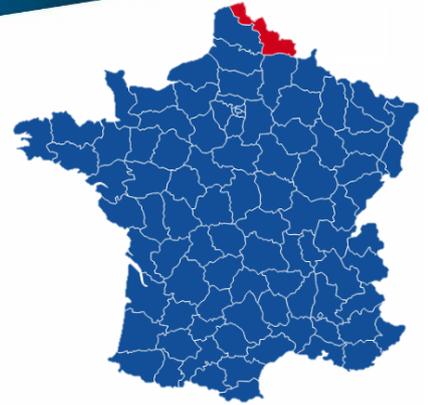


POWER PLANT: 1 X 1100 kVA

LOCATION: GRANDE-SYNTHÉ, FRANCE



KOHLER-SDMO PROVIDES BACKUP ELECTRICITY FOR THE STEEL INDUSTRY

INDUSTRY

After wood, steel is the most-used material in the world ahead of concrete and plastics. We find it everywhere: from food cans to transportation, machines and household appliances. It is also increasingly being used in architecture as it is more resistant than concrete and offers ideal resistance to temperature change and corrosion.

The raw material used in steel production is iron, which in its natural state is found in combination with oxygen, called iron oxide. This material is extracted in mines, most of which are located in Sweden, Mauritania, Brazil and Australia. The metal is then routed via ships able to hold up to 230,000 tonnes of ore. To be able to accept these giants of the sea, two sites have been constructed in deep water in France, one of which is located near Dunkirk.

This ideal geographical position is the location for a company specialising in the production of manganese ore alloys. Its customers are mostly composed of European steelworks.

Just like iron, manganese is an ore that can be mixed with iron to make a steel with interesting properties. It offers a certain elasticity, hardness and resistance to wear and abrasion, enabling such steel to be used to manufacture safes, railway lines and points and hi-tech components.

To produce these alloys, the company mixes manganese ore and coke (a pure form of coal free of impurities) in an electric furnace. During the fusion process the oxygen in the manganese ore combines with the coke and is eliminated. Ferromanganese or silico-manganese is produced, which is used in the steel production processes of the company's customers.



EXPRESSION OF NEED: A GENERATING SET TO ENSURE CONTINUITY OF STEEL PRODUCTION

The electricity demand in a steelworks is significant. At the national level this sector is estimated to have the highest consumption just behind the chemicals industry. As in other industries, a reliable energy supply is vital in order to maintain uninterrupted production. A voltage drop or even a short-lived outage can seriously affect production.

To avoid such complications the company Grand-Synthoise decided to acquire a 1100 kVA generating set as backup in the event of any grid failure in order to maintain the effectiveness of the two pumps and two fans that cool the electric furnace. The challenge is to ensure that the metal in fusion does not solidify in the furnace. The metal must remain pourable to maintain production continuity.

The steel company therefore needed a turnkey solution including the supply of the genset, installation and all connections required to enable the genset to operate.



PROJECT IMPLEMENTATION: SELECTION OF A 1100 kVA KOHLER-SDMO GENERATING SET FROM THE KD SERIES

The company was won over by the KD1100 generating set by KOHLER-SDMO and its brand new KD SERIES on the market since October 2016 after 6 years in development. With this range KOHLER-SDMO now offers its own KOHLER engines manufactured in Europe.

The new engines combined with an injection and engine management system create a compact package providing state-of-the-art power output and optimum levels of performance.



KOHLER-SDMO SOLUTION: FULL COMPLIANCE WITH SPECIFICATIONS AND TURNKEY SOLUTIONS

KOHLER-SDMO was able to offer a turnkey solution in full compliance with the initial specifications established by the client. The services provided included installation of the generating set in a new specially constructed equipment room.



Pic. 1: A brand new equipment room to house the KD1100 generating set

The company was also able to adapt to the environmental constraints applicable to the industry. A "dusty atmosphere" device was notably added to the air filter to combat the particles of ore circulated on the wind.

Finally, special attention was paid to sound levels; the generating set is fitted with an M427 enclosure and exhaust silencer.

Just some of the winning solutions able to win over the steel company.



Pic. 2: The brand new KD1100 in the enclosure version in the equipment room

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