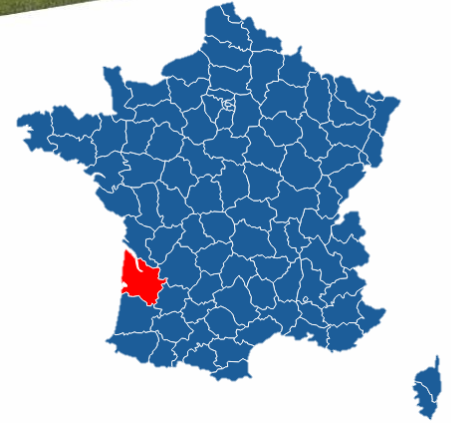


CUSTOMER: CH LIBOURNE

POWER STATION:
3 x 2000 kVA

LOCATION: LIBOURNE - FRANCE



KOHLER-SDMO: ENERGY PROTECTING PEOPLE AND HEALTH

HOSPITAL

Located near Bordeaux, the Centre Hospitalier de Libourne provides treatment for a diverse population and covers a wide territory, ranging from the east of Bordeaux right up to the Dordogne and Charentes, making the centre one of the largest establishments in the region of Aquitaine. It performs a major role in the local health sector with significant numbers of patients receiving treatment each year. It has an extensive operational structure: it consists of three main establishments, namely Fondation Sabatié, Hôpital R. Boulin and Hôpital Garderose which together offer 1,260 beds and a capacity of 31,000 direct admissions each year in Medicine, Surgery and Obstetrics over a total surface area of 92,500m².

Lives are always at stake in the health sector and any power outage can have serious consequences. In order to ensure that the electrical infrastructure is able to function without any outage, power supply via generating sets is vital for ensuring continuous availability.

"In the hospital environment, generating sets are of fundamental importance in so many respects: for guaranteeing electricity distribution in the event of a grid problem, 24 hours a day and 356 days a year, not only for the patients but also for health professionals to ensure that they are able to operate their equipment in complete safety."

Laurent DELIGNAC, Deputy Electrical Maintenance & Operations Manager, CH Libourne.



EXPRESSION OF NEED: CONTINUALLY EVOLVING HOSPITAL DYNAMICS WITH GROWING ENERGY REQUIREMENTS

Initiated in 2011 with the active support of the Aquitaine regional health authority, Centre Hospitalier de Libourne is managing a major project to create a new and modern hospital group, incorporating a reconfiguration of its current site due to be completed in 2017. The entire hospital complex has been fundamentally reviewed and reorganised to transfer MCO activities to a new building covering some 55,000m², resulting in increased energy demand.

This is why Centre Hospitalier de Libourne placed its trust in a company renowned for its technical expertise, for the quality and reliability of its products to successfully implement this major project and to be in a position to face up to new challenges as they arise.

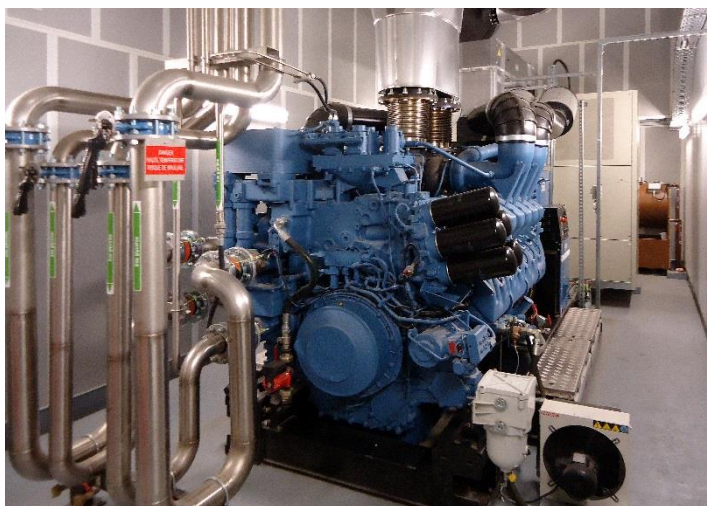


PROJECT IMPLEMENTATION: INSTALLATION OF 3 x 2000 kVA GENERATING SETS TO MEET THE INCREASED ENERGY REQUIREMENTS

Three generating sets with nominal back-up output of 2,000 kVA have been installed with associated equipment (electrical cabinets, auxiliaries, ventilation, soundproofing, cooling system and fuel distribution). These generating sets are replacing generating sets previously installed by competitors.

The technical challenge was focussed on 3 major constraints:

- Continuous availability without power outage (even throughout the installation phase).
- Equipment room and two control rooms to be fitted into limited available space.
- Avoid causing disruption to occupants and the general vicinity: it was vital to minimise sound levels emanating from the generating sets and equipment room.



Pic. 1: One of the three gensets installed in the premises



Pic. 2: Electrical cabinets of the gensets



Pic. 3: Medium-voltage cells



KOHLER - SDMO SOLUTION: LONG-TERM MONITORING AND CUSTOMISED SUPPORT

The project was designed in its totality to meet all of the hospital's requirements, from dismantling the old generators and creating a new equipment room housing the generating sets, right up to the installation of the new generators within the new environment.

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The generating sets have been coupled with the grid to ensure continuous service without power outage (during load management and periodic testing). This also enables a generating set to function automatically on its own. Coupling is in permanent mode (management of power set points and multiple adjustment modes) and temporary mode (return to the grid without outage). Each generating set is separated by a firewall to reduce the risk of any fire taking hold and subsequently spreading.

To optimise the available space and provide a new and secure structure, an equipment room of 350m² has been constructed next to the former premises.



Pic. 4: Premises of 350m² containing the generators

In order to provide a solution as silent as possible, the equipment room and generating sets have been designed to operate at the lowest possible noise levels. An absorbent covering was applied to the walls of the room with materials providing an average absorption factor of over 90%. The generating sets have also been fitted with silencers and with sound traps on the air inlets and outlets.

The unit has been designed to allow the installation of a fourth generating set to cater for the hospital's continued development.

"SDMO has proven itself to be a genuine partner by adopting a global approach right from the outset, with full involvement both during and after completion."

Laurent DELIGNAC, Deputy Electrical Maintenance & Operations Manager, CH Libourne

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