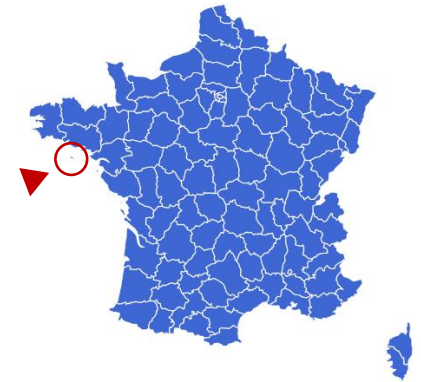


APPLICATION: HEALTHCARE

CUSTOMER: BELLE-ÎLE-EN-MER HOSPITAL

POWER PLANT: 2 X 550 kVA

LOCATION : BELLE-ÎLE-EN-MER (France)



A KOHLER-SDMO POWER PLANT TO PROVIDE SECURE STAND-BY POWER FOR BELLE-ÎLE-EN-MER HOSPITAL

Two soundproofed, redundant generating sets installed in a dedicated building

A reliable electrical power supply is crucial for hospital facilities. These establishments are actually legally obliged to ensure both the safety of patients and continuity of care in the event of a mains power outage. It is therefore essential that they have 3 separate electrical power supply sources.

As part of the project to build the new Belle-Île-en-Mer hospital, the old hospital building was demolished. The objective of the project is to combine several healthcare services in a single location to create a veritable "healthcare hub" for the island, and to modernize all of the equipment. The hospital will now have a capacity of 150 beds. It will also have an on-site retirement home with a capacity of 68 beds.

The stand-by power plant had to be redesigned to adapt it to the establishment's new requirements.

The energy section of the new structure integrates:

- a 630 kVA medium voltage transformer station,
- a low voltage switchboard input,
- a fuel oil boiler room,
- a generator building,
- and a storeroom for the spare oxygen.

In the configuration adopted, which includes a mains grid input and two generating sets, KOHLER-SDMO was given the responsibility of supplying and installing two 550 kVA generating sets.

Each of the two generating sets is controlled by a low voltage control and automation cabinet. A third "shared" cabinet controls the entire installation.



Two backup generating sets compliant with standard NF E 37-312

The two generating sets are identical and each is able to produce the output required to supply 100 % of the electricity requirements. This concept of redundancy enables one of the generating sets to act as backup for the other if required. Therefore, if there is a mains grid outage, the two generating sets start up, then one of the two takes over the full load. The second generating set is then able to shut down.

The two KOHLER-SDMO generating sets used in this project comply with standard NF E 37-312 which governs generating sets used as an emergency standby source for supply of safety installations.



There are two underground tanks on the site: one for the generating sets and one for the fuel oil boiler room

Particular attention has been paid to the soundproofing

The maximum sound level permitted near to the building is 35 dB(A) at 2 m. To comply with this, the generating sets have been equipped with silencers and soundproofed enclosures. In addition, sounds traps have been positioned in the building and the wall has been reinforced with 45 mm thick rockwool acoustic panels. Two exhaust flues allow the fumes to be evacuated outside of the generator building.

A 500-liter daily service tank has also been installed in the room and there is a 12,000-liter underground tank.

Of course, because the site is located on an island, the generating sets had to make the crossing by boat.

The new hospital will open at the end of 2019.

