

Gas generator sets for peak shaving in biomedical research laboratories

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HIMOINSA enables 500 researchers to work at the University of Murcia's Biomedical Research Laboratory (LAIB) with two gas generator sets. The gensets work in parallel with the grid during peak demand periods.

The Biomedical Research Laboratory is home to a biological sample bank and 144 laboratories equipped with cutting-edge technology, in which 500 researchers work. In certain months and at certain times of the year, the new building of the University of Murcia (Spain) experiences higher than normal energy consumption. The public grid cannot meet the demand, due to line saturation.

To cope with peaks of demand, HIMOINSA supplied two HGP 250 T5 NG gas generator sets. The generator sets are prepared to work in parallel with each other and with the public grid, delivering up to 500 kVA of continuous power. For this installation, HIMOINSA's Engineering team chose the HGP model with PSI engines, in view of its capacity to cope with load impacts of 100% of its rated output.

It is estimated that the generators will work an average of 700 hours per year for peak shaving. The rest of the time they will remain in stand-by and only start up in case of grid supply failure.

The starting and stopping of the generators, both in an emergency event and to cover peaks, is managed by a complex control system. This has been connected to the building's SCADA by means of a Modbus TCP/IP communication protocol.

Each generator incorporates a DEIF AGC-4 control unit, which enables the generators to work in parallel. In addition, HIMOINSA installed a control cabinet with a total of three control units: two DEIF AGC-245, to manage the motorised breakers of the two grid lines; and one DEIF AGC-244, to control the BTB (Bus Tie Breaker), which is also motorised.

Source: HIMOINSA