CASE STUDY

Replacement Petbow AP800 Generator Control System

The Project

The Generator Company were asked to design, manufacture, install and commission a replacement Petbow AP800 Generator Control System.

Client

Large investment bank in Canary Wharf, Docklands

Job No: 7622TGC

Unit 12 Stirling Park,
Laker Road, Rochester, Kent
ME1 3QR

t 01634 668090
e sales@tgc.uk.com
www.tgc.uk.com

THE Generator COMPANY A DIVISION OF TGC INTERNATIONAL LTD

CASE STUDY

Controls specification

The control system was designed to operate with the 2 existing 1750kVA Generators which operate at 415Volts AC, 50 Hz, 3 phase and neutral.

The Generator Company was able to keep one generator on line for the duration of this project so that the site always had a back-up power supply. This offered project cost savings as rental generators were not required.

The new generator control system needed to incorporate all of the original AP800 requirements, including a manual means of synchronising that was achieved by utilising a Programmable Logic Controller.

The new generator synchronising panel also incorporated load management, therefore when the Bank was running on generators and the load dropped below a predetermined point, one of the generators would shut down to save fuel and further maintenance costs on the generators.

The new control system consisted of a 2mm sheet steel welded enclosure rated at IP52. The enclosure provided front access to all of the sections and top cable entry. The control panel is painted in a textured paint finish to BS4800 16E53 – Aquamarine. The new enclosure was custom built and designed specifically for the requirements of the project.

The common section of the control panel was fitted with an engraved mimic label indicating a single line diagram of the electrical scheme to indicate the status of each of the following:

- Local Generator Breakers
- 2 x Generator Paralleling Circuit Breakers

The control system incorporated a Mitsubishi FX series programmable logic controller (PLC). The system was designed to start each of the generators automatically if a Utility power failure is detected via a Remote Start Signal provided by the sites 7 x Automatic Transfer Switches located in various parts of the building.

Unit 12 Stirling Park,
Laker Road, Rochester, Kent
ME1 3QR

t 01634 668090
e sales@tgc.uk.com
www.tgc.uk.com

THE Generator COMPANY A DIVISION OF TGC INTERNATIONAL LTD