



Standby Power

Case History

Bank of New York Mellon

Powering Your Business

YORPOWER

Location:

Manchester, England

Product:

2 No. 1800kVA MTU based Diesel Generators, in containers, synchronised in parallel in N+1 mode

Purpose:

To provide back up power for a Bank Data Centre.

Primary Choice Factor:

The single most reliable standby power available on the market.

Introduction and Background

After completion of a generator installation for N G Bailey on Phase 1 of a new development in Hardman Street, Manchester, YorPower was approached by the clients' consultant with a request for an 'end to end' solution for a standby power system on the adjacent site. To provide back-up power in the event of a mains failure, the new Bank required 2 No. 1800kVA MTU based Diesel Generators, in containers, synchronised in parallel in N+1 mode, to be mounted on a roof. Each generator weighed 14 tonnes.

Procurement

From the time we got the green light from the client and after procurement of major components, assembly and build, we were ready to deliver in 18 weeks.

Logistics and Installation

A huge operation was required at ground level in order to lift and crane each diesel generator set into position. The project required both 14 tonne generators to be lifted up 150 feet and installed on top of a 15-storey office block. The crane, at 200 tonnes and with a 30m reach, ably guided by a



banksman and a team of fantastic ground staff (and a man from the Bank) manoeuvred each diesel generator into position. Due to the scale of operation at ground level, permission was required and granted by the Council to close off the road from Friday afternoon to Monday morning. It took the whole of Friday night to build and erect the crane to be ready to go into action by morning. The installation and lift took place over a winter weekend. Originally scheduled for completion on Saturday, wind levels were too high to allow the lift to take place on that day. Ainscough (crane hire specialists) was employed to manage the project on a full 'contract lift' basis and the Company's good relationship with NATS was an added bonus. It transpired that the only window available when the wind speed would be down to an acceptable level for the lift to go ahead would be between 4.00 a.m. and 6.00 a.m. on the Sunday morning.



Even with a crane of this size, the generators could not be lifted in one piece, but had to be split into their component parts. Each container was then lifted and positioned separately. The exhaust and silencer stacks were also lifted and assembled separately. The noise pressure level requirement was, for a roof top location, a rather quiet 70dBA at 1m. We used Deep Sea Electronics for the Control system and for synchronising.

Site Acceptance and Witness Test

The client requested a full 'Black Start' test on site in order to ensure the installed system was given a true mains fail test. This, together with full commissioning, took place over a weekend; 3 days in total. The whole system functioned and operated as it had been designed to do.



Handover

Part of our brief was to conduct a 3 Day Training Workshop for the clients' engineering staff to instruct them in day to day maintenance and observation, and this was duly completed.

Load Bank Testing

To minimise disruption, the client requested that 'Built in load banks' be assembled as part of the design. Once a year the generators are tested at full load to ensure they are fully dependable if required when power failure occurs

Summary

YorPower delivered on time, and on budget a 3.6mVA generator system comprising MTU engines with Newage Stamford alternators and DSE Controls. We project managed and despatched the whole consignment in line with the customers' schedule and expectation, which on this occasion was no mean feat. We have serviced and maintained this site since installation and our 24-hour callout service is in place giving the client peace of mind in case of an emergency. For more information or if you would like to discuss a project, large or small, whether in the UK or overseas, we would be very happy to hear from you. Feel free to visit www.yorpower.com or contact +44(0)1977688155.