



18 MW CLIFTON PIER POWER STATION EXTENSION

BAHAMAS, 2006

NEW DIESEL ALTERNATOR UNIT 13

The Bahamian island of New Providence is experiencing a tremendous growth in infrastructure which encompasses a raising demand for electric power.

In order to increase its generation capacity in a cost-effective and reliable manner, the Bahamas Electricity Corporation (BEC) awarded a contract to BWSC in 2005 for the design, supply and installation of an 18 MW diesel power extension on a full turnkey basis at the Clifton Pier Power Station.

Based on a fuel efficient, low speed diesel engine from Mitsui MAN B&W, the project included: an alternator, auxiliary units for the engine, fuel transfer and treatment facilities, a new ventilation system, electrical metering and a control system, all fitted into the existing power house building, and a power transformer.

Through the combination of an ambitious heavy lift operation to transport and position the 413 ton engine in one piece and the delivery of prefabricated auxiliary units, the new plant was handed over to BEC in just 13.5 months with reliability tests successfully completed, an achievement only made possible through close cooperation with BEC and the staff at Clifton Pier Power Station.



Summary

Contract

Type.....Turnkey
Effective Contract.....September 2, 2005

Technical Data

Diesel Engine

MakeMitui Engineering & Shipbuilding Co. Ltd., Japan
Type.....1 x 12K50MC-S Mk 7, 2-stroke
Speed.....180 rpm

Alternator

MakeMeidensha Corporation, Japan
Voltage/ Frequency11kV/ 60 Hz
Output at 100% load17,853 kW

Borehole Cooling Water Pumps

MakeIron
Type.....Submerged vertical turbine pump
Flow.....670 m³/h

Central Cooler

MakeSondex
Type.....Titanium Plate Heat Exchanger
Cooling Capacity11,375 kW

Fuel Oil Treatment

MakeAlfa Laval
Type.....SU 846

Lubrication Oil Treatment

MakeAlfa Laval
Type.....SU 821

Step-Up Transformer

MakePauwels
Type.....OLS 22.5/70
Cooling.....ONAN
Ratio.....11 kV/ 34,5kV
Rated Power.....22,5 MVA

Annex Building for Service

Size (WxLxH).....17 x 16 x 10 m
Overhead Crane.....1 x 8 t

Civil Works

Subcontractor... Woslee Dominion Construction Ltd., Bahamas

