



Dakar 29 June 2020

## TO WHOEVER IT MAY CONCERN

This is to certify that M/s. Promac Engineering Industries Ltd., Bangalore (“**Promac**”) have executed for Compagnie d’ Electricite’ du Senegal S.A. (“**CES**”), an Engineering, Procurement, Construction (EPC) Contract on a turnkey basis for a 125 MW Coal Fired Power Plant in Sendou , Senegal vide Contract Agreement no. Execution 2010-03-02.

M/S. Powertec Engineering Pvt. Ltd, was appointed as OWNER’s Engineer by CES for the development of the Project and for the complete engineering and site supervision of execution for the project.

Promac’s scope of work included the design, engineering, manufacture, procurement, supply, construction, erection & commissioning of complete Balance of Plant (BOP), including Integrated Coal Handling Plant (CHP) with Conveyor System with all associated Mechanical, Electrical, Structural, Instrumentation, Automation Systems & complete erection and commissioning of BTG (Boiler & Turbine Generator), Electrostatic precipitator (ESP) equipment with associated accessories) including the entire Civil and Structural Works for the Thermal Power Plant and Chimney.

The major system/packages under BOP were:

- **Coal Handling Plant** consisting of Stacking and Reclaiming of Coal, Belt conveyors, Ring Granulator Crusher, Roller Screen, Separators, Metal Detectors, Coal sampling unit, Travelling Tripper, Dust Suppression System and Coal Bunkers.
- **Ash Handling System** consisting of Vacuum Pumps, Blowers, piping with accessories for



collection, transportation and disposal of bottom ash and fly ash. A Bulk Loading System with 960 T RCC Silo for disposal of fly ash formed part of the system.

- **Plant Water System** including raw water storage tanks, Condenser sea water Cooling System with CW Pump house, Forebay, Channel and Large diameter GRP Piping for Condenser Cooling from CWPH to condenser and condenser to Cooling Tower and auxiliary cooling, Demineralised (DM) Water Plant, Fire Fighting system, Service & Potable Water System.
- **Other Mechanical BOP** Systems including Fuel Oil System, Compressed Air System, Effluent Treatment Plant, Sewage Treatment Plant, Air conditioning & ventilation, Fire Fighting System, EOT Crane for Turbine, Hoists, Elevators, Lube Oil System, Low Pressure piping system, Laboratory, Work Station, Stores etc.
- **225 KV outdoor switch yard** for receiving and despatch of Plant generated power to Senegal National Electricity Agency (SENELEC) Grid, comprising of two incoming bays with yard equipment, one bus coupler bay with equipment and five outgoing bays with yard equipment and complete instrumentation, control and protection relay systems with interfacing arrangement.
- **Complete Plant Electrical System consisting of :**
- MV and LV electrical power supply , distribution and control system / network for BOP and Sea Water Intake and Outfall Cooling Water System comprising MV Switchgear , Transformers , LV Switch Gear , MCCs , drive motors and controls , PLC systems , cable trays , cables with accessories etc.
- 155 MVA , 11 KV / 225 KV Generator Transformers ( 2 nos. ) and 15 MVA ,11KV/6.6V plant Auxiliary Power Transformer ( 2 nos.) with accessories and 11 KV segregated bus ducting arrangement.



- Plant Lighting and Auxiliary Power Supply system.
- Lightning protection system.
- Plant earthing system.
- Back up emergency power supply DG sets ( Capacity ).
- **Control & Instrumentation System** for the BOP with interfacing facility to the distributed control system (DCS) of the BTG part.
- **Complete Civil / Structural works** for the BOP Equipment / packages, underground tunnel for CHP Conveyor , Civil / Structural works for BTG Equipment & 150m tall RCC chimney with AR brick lining, including foundation , Shell , elevator and aviation lights
- Complete **Erection, Commissioning** and performance trials of the BOP equipment and **erection and commissioning** of BTG equipment.

The quantity details of various activities were as under:

- 1) **Structural Steel : 5156 tons** covering TG Building, Bunker Building, CHP structures, Pipe and Cable Rack and other miscellaneous structures of the Plant
- 2) **Reinforced Cement Concrete (RCC) : 33068 cum** covering all foundations, underground structures, buildings etc
- 3) **Supply of BOP Equipment: 2000 tons**
- 4) **Erection** of complete BTG Plant Equipment and Structural Steel: **19125 Tons**
- 5) **Power , Control and Instrumentation cables** : total length of more than **400 km**



# Compagnie d'Electricité du Sénégal

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M/s. Promac Engineering Industries Limited was awarded the contract in 2010. However the project mobilization started in February, 2016 and was commissioned in November, 2018 on EPC & turnkey basis.

This certificate has been issued at the request of Promac.

**For Compagnie d'Electricite du Senegal S.A.**

