SALIENT TECHNICAL FEATURES

A. Brief Scope of Work:

The scope of Flue Gas Desulphurisation (FGD) System Package for Rourkela PP-II Expansion Power Project (1X250MW) shall cover design, engineering, manufacture, shop fabrication, preassembly, shop testing/type testing at manufacturer's works, packing, transportation, unloading, handling and conservation of equipment at site, complete services of construction including erection, supervision, pre-commissioning, commissioning and performance testing of equipment under bidder's scope of work of FGD System; Lime stone handling, storage, crushing and Gypsum handling & storage and its associated auxiliaries including all associated Electrical, Control & Instrumentation, Civil, Structural and Architecture works. Flue Gas Desulphurisation System shall include but not limited to the following:

- Complete Absorber with structure, foundation, and associated equipment - Spray headers & nozzles, mist eliminators & washing, oxidation grid, agitators, quenching spray system etc.
- Slurry re-circulation/Gas Cooling pumps, Oxidation blower, Gypsum bleed pumps, Limestone grinding system, Limestone Slurry pumps, Vacuum belt filter system, Auxiliary absorbent slurry pumps with drive motor, piping, valves, accessories
- Auxiliary absorbent tanks & limestone storage tank complete with structure & foundation, agitators etc.
- Limestone silos complete with structure & foundation
- Process water storage and pumping system
- Booster fans (if applicable), ducting, dampers along with supports
- Thermal Insulation, Lagging, Cladding, Painting
- Complete process water and slurry piping along with associated valves etc.
- One (1) number of elevator for absorber higher than 15 m, One (1) numbers of elevator for Limestone Grinding System building , One (1) numbers of elevator for Dewatering building and Passenger Elevator for MCC cum control room building
- Limestone handling, storage, crushing and Gypsum handling & storage system
- All Motors along with couplings and coupling guards for all rotating auxiliaries covered under this package, Transformer, HT & LT Switchgears, DC system, Electric actuators with integral starters along with associated accessories, HT & LT power & control cables, cabling, lighting, earthing and lightning protection, DG set (if applicable) etc.
- Complete C&I systems including DDCMIS based control system, field instrumentation with associated PCP, power supply system, instrumentation cables and accessories etc.
- Sheds for Slurry -circulation pumps/ Oxidation blowers and buildings for Limestone Grinding System, Gypsum dewatering system, Compressors & FGD control Room
- Associated Civil, Structural and Architectural works including foundation
- First fill and one year topping requirement of consumables/oils/lubricants, supply of special maintenance tools and tackles, commissioning spares, mandatory spares etc.

Detailed scope of work has been specified in the bidding documents.

B. Other Technical Features:

1.00.00 Flue Gas Desulphurisation (FGD) System

1.01.00 System Description:

The FGD system shall be based on Wet Limestone Forced Oxidation process. Gas from suitable point on ID fan discharge duct shall be taken to the Absorber. Clean gas from the Absorber shall be taken through mist eliminators. Treated flue gas from the Absorber shall be discharged to chimney. Gypsum from Absorber shall be pumped by dedicated gypsum bleed pumps to a Gypsum Dewatering system. Washed and dewatered gypsum from the dewatering system shall be fed to a belt conveyor and transferred to Gypsum storage building.

1.02.00 Service Conditions:

The Steam Generators are designed to burn pulverised coal. HFO/HPS/LSHS and LDO shall be used during startup and at low loads for warm up and flame stabilization of Steam Generator. The FGD system shall be designed to remove SO_2 (to meet the stipulated SO_2 efficiency levels) from the flue gas generated in the Steam Generator with pulverized coal firing.