

## **Replacement of HF Control System (FSSS) for Sipat St-I (3 x 660 MW)**

### **BRIEF SCOPE OF WORK**

Design, Engineering, Re-engineering, Manufacturing, Refurbishment/Retrofitting, Fabrication, Assembly, Inspection and Pre-shipment Testing at supplier's works, Packing for transportation, Supply, Port Clearance, Port Handling & Port Charges, if any, forwarding to site, Inland transportation for delivery at site, inland transit insurance, unloading & Storage at site, installation, interconnection with related plant and equipment, calibration, testing, commissioning and putting the Control and Instrumentation System together with all accessories, auxiliaries and associated equipment, Performance & Guarantee test and handing over to the Employer complete Control and Instrumentation System comprising of:

- SG DDCMIS for control monitoring and operation of main plant equipments comprising of SG-C&I (BMS/FSSS, APDS, SBC etc) of Unit.
- COMMON DDCMIS for control, monitoring and operation of common equipments at Compressor House (IAC/PAC and mill reject system Compressors).
- FOPH DDCMIS for control, monitoring and operation of common equipments at Fuel oil pump house.
- HMI (for SG DDCMIS, COMMON DDCMIS and FOPH DDCMIS) and Station LAN.
- Measuring Instruments like Temperature transmitters, Position Feedback transmitters etc.
- LT Power cables, LT Control Cables, Instrumentation cables and optical fibre cables
- Control Panels, furniture etc.
- Special Tools and Tackles
- Mandatory Spares

This scope shall also include dismantling of Employer's assembled equipment/systems at site, AMC for DDCMIS and training for employer's personnel etc. as per the specification and scope defined in the bidding documents.

### **SALIENT TECHNICAL FEATURES:**

The Replacement of HF Control system (FSSS) for Sipat Stage-I(3X660MW) package of Sipat super thermal power station is intended for the procurement of the equipment and systems for the control, protection, operation and monitoring of the Main plant SG including some of the common systems and offsite areas.

The control system, called Distributed Digital Control Monitoring & Information system (DDCMIS) envisaged consist of the following sub-systems:-

1. SG DDCMIS (One set for each generating unit) consisting of following sub systems :-
  - a) SG System (Burner Management System/FSSS including Boiler Protection, APRDS and Soot blower controls (SBC)).
  - b) Mill Reject System

2. COMMON DDCMIS (one set common for all generating units) consisting of controls of IAC/PAC and St-I MRS compressors.
3. FOPH DDCMIS (one set common for all generating units) consisting of control system of Fuel Oil Pump House of St-I.

Its Human Machine Interface & Plant Information System (HMIPIS) is based on Operator Work Stations (OWS). These devices through customized user-friendly displays, soft alarm facia and pop-up displays are used for giving fast pin-pointed faults/ status to the operator. The total system is networked through a Station-Wide LAN for use of real time data of various plant areas by other users like maintenance, planning, efficiency enhancement groups etc with adequate security policies. The alarm annunciation is also implemented as a part of DDCMIS system.

Measuring instruments (such as Temperature transmitters and Position Feedback Transmitter), Special Enclosure for mounting temperature transmitters etc are also included under this package.

Control Cabinets/panels and furniture have also been included in the scope of work.

Power cables, Control Cables and instrumentation cables and erection H/W are envisaged under the scope of work.

The scope of work also includes modification/dismantling/rectification in existing system/ equipment, installation of some of the cable trays, AMC for DDCMIS, mandatory spares, Tools and tackles and training for employer personnel's etc.