

STEAG encotec India : An Introduction

STEAG encotec India is a wholly owned subsidiary of **STEAG encotec GmbH**, Germany having the full technical and financial support of its parent company.

STEAG encotec India are in the energy business particularly in the fields of Operation & Maintenance services, Engineering Consultancy and IT related solutions to Power Plants. Our Indian Experience includes:

O&M Services:

- 10 year comprehensive O&M contract for 156 MW Gas based CCPP at Hazira for GSEG.
Owner: GSEG Gujarat State Energy Generation Ltd.
Fuel: Natural Gas
Gas Turbines: 2 x 50 MW GT8C2 – Alstom
Steam Turbine: 1 x 50 MW - Alstom
Control System: Advant

- O&M for the power island for 30 MW CCP at Gandhar for ONGC.
Owner: ONGC (Oil and Natural Gas Corporation Ltd.)
Fuel: Natural Gas
Gas Turbine: 1 x PG 5371 PA – GE Frame 5 (21 MW)
Steam Turbine: BHEL NK/40/56/25-3 (11 MW)
Control System: Mark V

- O&M contract for 116 MW Co-generation Plant at Haldia by L&T.
Owner: HPL Cogeneration Limited (A subsidiary of Larsen & Toubro Limited)
Site: Haldia, Midnapur District, West Bengal, India
Fuel: Naphtha
Responsibility: a) Power Generation Rated capacity 116 MW
b) Process steam export to Haldia Petrochemicals Limited at four pressure levels viz.
SHP at 12 Kg/cm²(a) & 540 degC
HP at 43.5 Kg/cm²(a) & 415 degC
MP at 18.5 Kg/cm²(a) & 310 degC
LP at 6 Kg/cm²(a) & 21 degC
Gas Turbine: GE Frame 6551B Model, 2x34.5 MW
Condensing Steam Turbine: 1x33 MW
Back Pressure Steam Turbine: 1x14 MW with dual extractions
HRSG, 2 Nos: 120 TPH of SHP steam and 22 TPH of MP steam
Service Boiler, 2 Nos.: 120 TPH of SHP steam
O&M Period: Six years starting from September 1, 2006

- O&M Service for the V94.2 Siemens CCP of AFAM, Nigeria jointly with STEAG encotec Germany.
Owner: Shell

- O&M Advisory services contract for Goa Energy Pvt. Ltd. Project at Amona in Goa for 30 MW WHRP using coke oven & blast furnace gas.

Owner: Videocon

Steam Turbine: One cylinder non-reheat turbine with one stage regenerative heater (steam parameters : 64 ata, 480°C)

Two waste heat recovery boilers: 64 t/hr steam

Performance Testing:

- 210 MW Unit # 1 at Ropar of PSEB (under execution)
- 156 MW CCP at Hazira of GSEG
- Supervision of P.G. test for 2x110 MW coal fired units at Bathinda of PSEB.

Online Optimization of Power Plants (PADO):

- PADO for 14x500 MW Units of NTPC at Simhadri, Ramagundam, Rihand, Talcher, Kahalgaon, Sipat & Vindhyachal Power Plants.

Diagnostic Services – Power Plant Simulation:

- Baseline studies under the Indo-German Energy Efficiency Program:
 - UPRVUNL – Panki, Parichha, Harduaganj, Anpara & Obra Thermal Power Stations.
 - RRVUNL – Kota TPS
 - MPGENCO – Satpura TPS
 - NTPC – Badarpur TPS
 - PSEB – Bathinda TPS
- Steam Path Audits using Encotech, USA Software
 - PSEB - Ropar TPS

Consultancy Services – Renovation & Modernisation:

RLA and R&M Studies of

- Units # 3 & 4, GNDTP, Bathinda
- 2x210 MW Units at GGSSTP, Ropar, PSEB
- 4x110 MW Units of Koradi TPS of MSEDCL
- 1x110 MW Unit of Panipat TPS of HPGCL

- 2x105 Tons Boilers of IndoGulf Fertilizers (Aditya Birla Group Company) Jagdishpur
- RLA of Boilers at Essar Power, Hazira

Consultancy Services – Greenfield Projects:

Detailed Project Report, Technical Specifications, Short listing of EPC Contractors

- for the 500 MW Refinery Residue Project for IOCL at Savli, Baroda.
- for the 1000 MW LNG Plant for Chennai Power Generation Corporation.

STEAG encotec India is a 100% owned subsidiary of STEAG encotec GmbH which is the Engineering and Nuclear technology division of STEAG AG. STEAG AG is Germany's largest IPP owning and operating over 11,000 MW in Germany and elsewhere. STEAG AG has over 70 years of experience in the energy business, including Operation & Maintenance of its own plants and of third parties. All power stations of STEAG have been engineered, constructed, commissioned, rehabilitated, modernized and operated by its own engineers. STEAG is proud to call itself as the **Consultant with Operational Experience.**

STEAG's experience cover a variety of power plant sizes and technologies. These include:

- Conventional power plants used high ash coal (>36%) upto unit size of 740 MW.
- Supercritical plants upto 750/800 MW.
- Refinery residue based power plants.
- Associated FGD and DeNox Systems.
- Cumulative Engineering experience of all types of plants of about 100,000 MW.
- Project Development in Germany, USA, Colombia, Turkey, Philippines etc.

We are also at present executing an order for a **Training Simulator** for a Combined Cycle Power Plant.

Our personnel are trained in the use of **Ebsilon** Software (product of SOFBID which is now owned by our sister company STEAG KETEK IT). This is a useful tool for

mapping of power plants and auditing of plant performance. Likewise, we have US-trained Steam Path Auditors for using the Steam Path Audit Software.

With the above capabilities and software tools, STEAG encotec India are in a position to provide international quality of services for power plant technology, with the full technical and financial backing of our parent company STEAG encotec GmbH.