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* Inspection Offices at Noida & Baroda also.
SERVICES OFFERED

Services thus cover: starting from conceptualization to commissioning. The Activities and Project Engineering Activities for Projects provides complete range of services covering Pre-Project many Projects in various Industrial Sectors, PDIL Based on the achievements and credentials accumulated in accomplishments in the field of Fertilizer Projects. viz. Natural/Associated Gas, Naphtha, Fuel Oil and Coal executed of capacities ranging from Projects in India. The fact that PDIL has engineered and almost all major Grass Root Nitrogenous Fertilizer Organization in Design, Engineering and Construction of requirements of ISO 9001:2008. PDIL have undertaken / is undertaking HAZOP Assignments (using PHAPRO 6.0) for various industrial installations including Fertilizer, Refinery, Oil & Gas, Pipelines such as: -Integrated HAZOP at Gwalahini Refinery for IOCL -Various Process units like CDU, DHDU, OTHU, HGU, NSU and VBU at Mathura Refinery for IOCL -Atmospheric Vacuum Unit-1&2 and LPG Treating Unit at Barauni Refinery for IOCL -2 pipelines at Nazirah, Assam Asset of ONGC for Mega Engineering & Infrastructure Limited -Pig Launching & Receiving Stations of 2PLP Ankleshwar project of ONGC for Jay Somnath Iron Works -H-CNG Dispensing Station at R&D Centre, Faridabad for IOCL -LPG Bottling Plants at Chakan, Dhanaj & Mannad for IOCL -Circulating Fluidized Bed (CFB) Gasification Plant for Shri Ram EPC

PM C SERVICES (For projects on LSTK/EPC Mode) • Technology Evaluation • Selection of Process Licensor • FEED (Front End Engineering Design) • Selection of LSTK/ EPC Contractor • Review of Basic Design Package • Review of Detailed Engineering • Ensuring Procurement of Equipment and Supplies as per approved specifications • Vendor Drawing Checking • Inspection & Expediting • Scheduling and Monitoring • Quality Assurance at Site Job • Pre-Commissioning & Commissioning Assistance • Witness & Evaluate Guarantee Tests

HIGHLIGHTS

• Successful Diversification

• PDIL have undertaken EIA/RA (using Safeti Micro 6.53) Assignments for a wide variety of Industrial Projects such as: -Fertilizer Plants -Refinery -Pipeline Projects -Oil Terminals/ Oil Depots/ Retail Outlets -LPG Import Terminals -LPG Bottling Plants Airports

CATALYST DIVISION

PDIL’s Catalysts at Sindri manufactures and supplies a wide range of commercially proven catalysts used in Ammonia Plants and also Catalysts for Hydrogen Plants and Sulphuric Acid Plants. A list of catalysts manufactured by PDIL is given below:-

- Primary Gas Reforming (CDR-66A)
- Secondary Reforming (CDR-66B)
- Iron-Chromium High Temperature Shift CO Conversion (CDC-85)
- Copper Promoted High Temperature Shift CO Conversion (CDC-93C)
- Low Temperature Shift Conventional (CD-LT-21A) & High Copper (CD-LT-21 B)
- Methanation (CDM-15) & Super Methanation (CD –SM –15C)
- Vanadium Pentoxide (CDV-53)

PDIL’s Catalysts are in use in almost all the old generation and new generation Ammonia Plants in India in the Government, Co-operative and Private Sector. Apart from the Fertilizer Plants, PDIL’s Catalyst is in use in Refinery also. PDIL have supplied HT Catalyst to HPCL-Vizag, MRPL-Mangalore and CPCL-Chennai Refinery. PDIL’s Vanadium Pentoxide Catalyst has been supplied to many Sulphuric Acid Plants in India as well as abroad.

ENVIRONMENT IMPACT / RISK ANALYSIS

PDIL have undertaken preparation of over 800 TEFR/ DFR/ DPRs for wide range of Projects such as: -Ammonia-Urea Fertilizer Projects -Phosphatic Fertilizers Projects -Oil Terminals Projects -LPG Import Terminal Projects -City Gas Distribution -Pipeline Projects

ABREVIATIONS

AOA - El Sharika El Djaizaria El Omania Ll
BPF - Burrup Fertilisers Pty. Ltd.
BHPV - Bharat Heavy Plates & Vessels Ltd.
BPCL - Bharat Petroleum Corporation Ltd.
BFPL - Burrup Fertilisers Pty Ltd.
KMML - Kerala Metals & Minerals Ltd.
AOA - El Sharika El Djaizaria El Omania Ll
BPCL - Bharat Petroleum Corporation Ltd.
BFPL - Burrup Fertilisers Pty Ltd.
KMML - Kerala Metals & Minerals Ltd.
AOA - El Sharika El Djaizaria El Omania Ll
BPCL - Bharat Petroleum Corporation Ltd.
BFPL - Burrup Fertilisers Pty Ltd.
KMML - Kerala Metals & Minerals Ltd.
PETROCHEMICAL COMPLEX

EPCM Services for GSU/GPU Revamp at Pata for GAIL

MONOUD STORAGE FACILITIES

Over 30 Mounded Storage Systems [150 MT to 2,870 MT] for storage of LPG Propylene for IOCL, HPCL & BPCL

LPG BOTTLING PLANTS

Over 30 of LPG Bottling Plants for IOC of capacity ranging from 5,000 to 88,000 MTPA.

CITY GAS DISTRIBUTION (CGD)

CGD & CNG Project at National Capital Territory, Delhi for IGL

CNG Stations at Panvel & Kovuru and one Spur pipeline at Mathura for GAIL Gas Ltd.

CNG Station at GSRTC at Baroda for GAIL

Domestic Gas Supply Project at Uran, Panvel, Nazira and Lukwa colonies of ONGC

CNG Projects at Mumbai, Gujarat and Delhi for GAIL

GASCATHERING STATION

Engineering Consultancy Services:

Gas Collection Station Project at Kunoban and Agartala Dome for ONGC

Gas Lift Compressor Plant (Phase-II) at Geleki for ONGC

Gas Lift Compressor Plant (Phase-II) at Lukwa for ONGC

Gas Lift Compressor Plant at Rudrasagar for ONGC

Gas Gathering Station at Gandhar for ONGC

Gas Gathering Station at Lukwa and Demulgaon Assam for ONGC

Group Gathering Station at Tripura for ONGC

Gas Gathering Station at Rohia field, Tripura for ONGC

METHANOL PLANTS

EPCM Services:

Methanol Plant Revamp at Gujarat for GSFC

Methanol Plant Revamp at Trombay for RCF

50 TPD Methanol Plant at Nagal for NFL

Methanol Plant at Haldia for HFC

HYDROGEN PLANTS

PM Services:

20,000 TPA HGU at Barauni Refinery for IOCL

21,000 MTPA HGU at Manali Refinery for HPCL

EPCM Services:

1,30,000 nm³ / Hr HGU at Vadinar Refinery for ESSAR Oil

18,000 nm³ / Hr Hydrogen Plant at Nangal for NFL

Hydrogen Plant Revamp at Kalyan for National Peroxide Ltd.

CHEMICAL PLANTS

EPCM Services:

Phosphoric Acid Plants

[At Trombay for RCF]

[At Haldia for HFC]

Nitric Acid Plants

[At Rourkela for Hindustan Steel Ltd]

[At Baroda for Deepak Nitrile Ltd]

[At Haldia for HFC]

[At Hyderabad for VBC Industries]

[At Kirkee & Bhundara for DPDF]

Sulphuric Acid Plants

[At Haldia for HFC]

[At Sindri for FCI]

[At Kolkata for Bengal Chemicals & Pharmaceuticals Ltd.]

[At Bhundara for DPDF]

[At Thal for RCF]

Sodium Nitrite/Nitrate Plants

[At Trombay for RCF]

[At Nangal for NFL]

Ammonium Bi-Carbonate Plants

[At Trombay for FCI]

[At Mangalore for MCFL]

[At Sindri for FCI]

Ammonium Sulphate Plants

[At Namrup for HFC]

[At Rourkela for Rourkela Steel Plant]

[At Dugapur for SEPC, Kolkata]

[At RSP, Rourkela for SEPC, Kolkata]

OFFSITES/UTILITY SYSTEM

Complete Offsite & Utility facilities such as Raw Water Supply System, DM Water/ Fire Water/ Water Softening Plants, Steam Generation Plant, Nitrogen Plant, Instrument Air System, ETP Plant, Inert Gas Generation, Yard Piping, Ammonia Storage & Handling, Urea Bagging & Handling etc. for Ammonia-Urea Fertilizer Plants:

- Expansion Project at Phulpur for IFFCO

- Expansion Project at Vizianagaram for IFFCO

- Fertiliser Project at Shahajahanpur for KRIBHCO Shyam Fertilizers Ltd. (Erstwhile Bindal Agro Chemicals Ltd.)

- Fertiliser Project at Vizianagaram for IFFCO

- Ammonia Expansion Project at Kandla for IFFCO

- Fertiliser Project at Jagdalpur for IFFCO

- Fertiliser Project at Nagal for NFL

- Fertiliser Project at Bharuch for GVC

- Fertiliser Modernisation Project at Namrup for BFCL

DM Plants on LSTK Basis for:

- DM Plants at Gujarat and Panipat Refineries of IOCL

- DM Plants at Power Projects at Anta and Auraiya for NPC

- DM, Pre-Treatment & Water Softening Plants for Paricha Power Plant of UPSEB

- DM Water Plants at Dugapur & Chandrapura for DVC

- DM Plant & Pre-Treatment Plant for Vishakhapatnam Steel Plant

- Pre-Treatment & Water Softening Plant at Kerala for KML

ETP Plants:

- At Lakwa, Nazira, Rudrasagar, Melsana and Geleki for ONGC

- At Dalahari for OIL

- At New Delhi for DSIDC

- At Guwahati Refinery for IOCL

PDIL is a recognized Agency for Inspection & Quality Assurance Services and undertakes the following Services:-

- Project Inspection (Shop & Field Inspection)

- Third Party Inspection (Shop & Field Inspection)

- Work Assessment & Evaluation of Vendors

- Expediting of Supplies

Apart from undertaking these Services for various Fertilizer and other Projects under PDIL’s total Engineering and Consultancy, PDIL also undertakes Third Party Inspection for various Project Supplies for Power, Refinery, Gas Pipeline, LPG Terminals/ Depots, Petroleum Product Depots and other industrial sectors.

Some of the prestigious Clients include:

- BHET

- Bpcl

- Ongc

- Nhpc

- Dpwd

- Pwc

- Mcd

- Kml

- Gail

- I-T-DCo

- Saipem, Italy

- Knpc, Kuwait

NDO SERVICES

PDIL provides NDO services for Plants in various sectors like Oil & Gas, Fertilizer, Chemicals, Refineries, Cross-Country Pipeline etc. Such services are provided for Ammonia Storage Tanks, Mounded Bullets and Horton Spheres for Petroleum products (LPG, Propylene) etc. In addition to the general NDO Services such as MPI, DPT, UT, Hardness Test, we provide specialized services like:-

- Automatic Ultrasonic Scanning (AUS) of Reformer Tubes

- Eddy Current Testing of Heat Exchanger Tubes

- Shot Down NDO Services


In addition to performing AUS of Reformer tubes for Ammonia Plants, PDIL has also been doing AUS for various Clients in Refinery Sector also.

SPECIALIZED SERVICES

- HAZOP Study

- Due Diligence Study

- Energy Audit/ Safety Audit/ Electrical Audit

- Revamp/ Retrofit/ De-bottlenecking Studies

- OISD Norms Study

RESOURCES

Over 4 decades of uncompromising commitment to successful service has enriched PDIL with vast experience, technical expertise, robust financial infrastructure, vast database of valuable project information and a multitude of credentials to its account. PDIL has effectively leveraged these resources for providing Engineering Consultancy Services for various Projects. The resources include:

- Capability to provide complete range of Consultancy Services with Single Point Responsibility.

- Highly competent and experienced technical manpower.

- Comprehensive database of exhaustive information about various process technologies & numerous projects, accumulated over decades of service.

- Association with leading International Process Licensors/ Engineering Contractors viz. Haldo Topsnee, SAIPREM (Snamprogetti), MHI, Lurgi, Toyo Engineering, Udhe, UOP, Kellogg Brown & Root, SNC-Lavalin, etc.

- Latest State-of-the-Art Engg. Softwares such as:

  - Aspen Plus 12.1 - Process Simulation Modeling
  - HTRI 2006 - Thermal Design of Heat Exchangers
  - Synergy 4.1 - Pipe Network Design and Analysis
  - Pipenet 3.3 - Pressure Drop & Network Analysis
  - Pipenet 5.20 - Piping Surge Calculations
  - ASD including OPTI Plant-Piping BOQ Generation
  - STAD Pro 2007 - Structural Analysis
  - STRUCAD - 3D Modelling and Detailing of civil Structures

Causal-35.0 - Flexibility Analysis

- PV Elsi 2009 - Pressure Vessel Design

- ETAP 5.50 - Analysis of Power Network & Electrical Calculations

- INTOOLS 8.0 - Instrument Calculations

- CONVALL 7.0 - Control Valve Sizing

- Prima Vera 5.0 - Project Management Microstotion 18.0 - Plant Design & 3-D Modelling

- Safet Micro 6.5 - Risk Analysis

- PHAPRO 6.0 - HAZOP Study

- PDS 2007 - Plant Design & 3-D Modelling

- AUTOCAD 2009 - Drafting

- Multi-locational presence to facilitate proximity to Project Site/ Client:

  - Engineering Centres at Noida and Vadodara

  - Inspection Offices at Greater Noida (Delhi), Mumbai, Chennai, Kolkata, Hyderabad, and Vadodara.
Grassroot/Expansion/Brownfield Ammonia-Urea Fertilizer Projects

25 AMMONIA PLANTS

1 Ammonia Plant, Australia [2,200 MTPD]
10 Ammonia Plants [3,300 MTPD]
3 Ammonia Plants [900 MTPD]
2 Ammonia Plant (600 MTPD)

14 Gas Based Plants

3 Coal Based Plants

9 Oil Based Plants

3 Ammonia Plants [600/900/900 MTPD]

FERTILIZER SECTOR

Grassroot/Expansion/Brownfield Ammonia-Urea Fertilizer Projects

Capacity Enhancement Project at Gadepan for CFI
[2,000 MTPD Ammonia-I & 1,900 MTPD Ammonia-II and 3,500 MTPD Urea-I & 3,300 MTPD Urea-II Plants]

Capacity Enhancement at Babralik for TCI
[2,000 MTPD Ammonia-Ammonia & 2,175 MTPD Urea Plants]

Debotlenecking at Thal for RCF
[2x1,750 MTPD Ammonia Plant]

Revamp at Kakinada for NCL
[1,325 MTPD Ammonia-I&II & 2,325 MTPD Urea-I&II Plants]

Energy Saving Project at Jaulka, Phulpur & Kalol for IFPC
[1,520 MTPD Ammonia Plants at Aonla-I&II and Phulpur-II]

Energy Saving Project at Vipijayar for IFFCO
[1,520 MTPD Ammonia Plant]

Technology Upgradation Project at Trombay for RCF
[900 MTPD Ammonia-V Plant]

Revamp for Energy Saving at Bharuch for GNFC
[1,800 TPD Urea Plant]

PMC Services of A-U Projects

Pipem services at Arzen, Algeria for Ar-A4
[Gas-Based AlgeriAOMAN FERTILIZER PROJECT]
[2x2,100 MTPD Ammonia, 2x3,675 Urea Plant, Associated Offsites & Utilities]

PMC Services at Malaysia for Petronas Sdn Bhd.
[AMMONIA/UREA METHANOL/FORMALDEHYDE COMPLEX]

Construction Management Services at Malaysia for Asian Bfntima Fertilizers
[In association with Sumatc Corp.]

Revamp of AMMONIA-UREA (CONSTRUCTION PACKAGE)

Backup Engineering Services at Russia for MHI, Japan
[AMMONIA-UREA FERTILIZER PROJECT comprising of Ammonia, Urea, Methanol Plants and associated Offsites & Utilities]

PIPELINE PROJECTS

LPG IMPORT TERMINALS

EPCM Services for: 6,000,000 MTPA Terminal at Kandla for IOCL
[2x15000 MT Storage Tanks, 2 Docklines of 8.5 kms each from Jetty to Terminal and Loading arrangement for Truck Tankers]

Revamp of 1,30,000 TPA HGU at Barauni Refinery for IOCL
[8,000 MTPA Terminal at Barauni Refinery for IOCL]

PMC Services:

º 60 TPD SRU at Mathura Refinery for IOCL
º 20,000 TPD HGU at Barauni Refinery for IOCL
º 21,000 MTPA HGU at Manali Refinery for CFCL
º 1,500 BPD Mini Refinery-I at Tapioka for ONGC
º 1,500 BPD Mini Refinery-II at Tapioka for ONGC
º 2x1,890 MTPD Ammonia & 4x1,662.5 MTPD Urea Plants

Technology Upgradation Project comprising of Ammonia, Urea, Methanol Plants and associated Offsites & Utilities

Construction Management Services at Malaysia for Asian Bftntima Fertilizers
[In association with Sumatc Corp.]

REVAMP OF AMMONIA-UREA (CONSTRUCTION PACKAGE)

Process Design at Australia for ORICA
(Gas Enrichment Plant)

Engineering Study for Syria for Syrian Petroleum Company
[For Gathering System & preparation of Technical Tender Book (RTFQ) for selection of Turnkey Contractor]

Due Diligence Study at Uzbekistan for Indoamena Holding Ltd.
[Ammonia-Urea Complex]

Due Diligence Study at Knilmat, Canada for Star Petro Energy
[Ammonia-Urea Complex]

Consultancy Services for Syria for GECHIPAM
[Technical & Economical Study for setting up of Phosphoric Fertilizer Complex and modernization/ upgradation of associated infrastructure]

Preparation of ITB at Iran for Star Petro Energy LLC, Dubai
[For selection of LSTK Contractor for Ammonia Plant]

TEFR at Syria for NFI
[Granatmer Ammonia-Urea Complex]

TEFR & DPI at Iran for Lavan Chemical Company
[Ammonia-Urea Complex]

Technical Study Report at Egypt for IEFC
[Phosphoric Acid & Sulphuric Acid Plant]

BFR at Nigeria for NFCL
[Ammonia-Urea Complex]

Engineering Services at Oman for OMIFCO
[Ammonia Storage facilities for Fertilizer Project]
FERTILIZER SECTOR

Grassroot/Expansion/Brownfield Ammonia-Urea Fertilizer Projects

- **25 AMMONIA PLANTS**
  - 1 Ammonia Plant, Australia (2,200 MTPD)
  - 10 Ammonia Plants (900 MTPD)
  - 3 Ammonia Plants (600 MTPD)
  - 2 Ammonia Plants (400 MTPD)

Capacity Enhancement at Gadaan for CFCL
- [2,000 MTPD Ammonia-I & 1,900 MTPD Ammonia-II and 3,500 MTPD Urea-I & 3,300 MTPD Urea-II Plants]

Capacity Enhancement at Babrala for TCI
- [2,000 MTPD Ammonia & 2x1,750 MTPD Urea Plants]

Debottlenecking at Thal for RCF
- [2x1,750 MTPD Ammonia Plant]

Revamp at Kakinada for NCCL
- [1,325 MTPD Ammonia-I & II & 2,325 MTPD Urea-I&II Plants]

Energy Saving Project at Jiona, Phulpur & Kalol for IFFCO
- [1,520 MTPD Ammonia Plants at Jiona-I&II and Phulpur-II]

Energy Saving Project at Vijnagar for IFFCO
- [1,520 MTPD Ammonia Plant]

Technology Upgradation Project at Trombay for RCF
- [900 MTPD Ammonia-V Plant]

Revamp for Energy Saving at Bharuch for GNFVC
- [1,800 TPD Urea Plant]

**PMC Services of A-U Projects**

Pipelines Projects
- **Ammonia Storage facilities for Fertilizer Project**

**Oil & Gas Sector**

- **LP GAS TERMINALS/OIL STATIONS**
  - 27 Plants (1,100-1,500 MTPD)
  - 11 Plants (300,000-1,200 MTPD)

**OVERSEAS ASSIGNMENTS**

- Hydrogen and Nitrogen Plant on Build-Own-Operate Basis at Paradeep Refinery for IOCL
- CTU-CDU Integration Project at Visag for HPCL
- Revamp of ADU-III & IV at Gujarat Refinery for IOCL
- Revamp of SWSU-V at Gujarat Refinery for IOCL
- ETP Modernisation at Guwahati Refinery for IOCL
- ENCON Project at Narmada Refinery for NGL
- Energy Audit at Namaligarh Refinery for NGL
- Revamp of SRU & Lube Oil Complex at a Refinery in Gulf
- Integrated HAZOP Study at Guwahati Refinery for IOCL
- HALHOP Study of CDU, DHDU, OTHU, VBU and HGU at Mathura Refinery for IOCL
- 4 x 175 m 3/hr DM Plant on LSTK Basis at Panipat Refinery for IOCL
- 3 x 150 m 3/hr DM Plant on LSTK Basis at Gujarat Refinery for IOCL

**PIPELINE PROJECTS**

- **Black & White Oil Pipeline at Kariobar for BPCL**
  - [2 pipelines from Kariobar Jetty No.3 to BPCL Terminal]
- **LPG Dock Pipelines at Kandla for IOCL**
  - [2 Pipelines (3.5 km each) from Jetty to LPG Import Terminal]
- **LPG Dock Pipelines at Haldia for IOCL**
  - [2 Pipelines (4.5 km each, 4''Dia) from LPG Terminal to Jetty]

- **Natural Gas Pipelines at Madras Refineries Ltd for GAIL**
  - [Pipelines - 0.5 to 8.5 km, 4''-6'' dia]
  - **Pipelines inside Mumbai Airport for BPCL**
  - [18'' ATH Pipeline Inside the Airport]
- **RLNG pipeline at Thal for RCF**
  - [From GAIL Terminal to Ammonia Plant]
- **LPG Pipeline at Haldia for IOCL**
  - [From Haldia Refinery to PPL, Haldia]

- **Due Diligence Study at Uzbekistan for Indorama Holding Ltd.**
- **Preparation of FTB at Iran for Star Petro Energy LLC, Dubai**
- **TEFR at Syria for NAFL**
  - [Grassroot Ammonia-Urea Complex]
- **TEFR & DPR at Iran for Lavan Chemical Company**
  - [Ammonia-Urea Complex]

- **Technical Study Report at Egypt for IEF**
  - [Phosphoric Acid & Sulphuric Acid Plant]
- **BFR at Nigeria for NPLC**
- **Energy Services at Oman for OMIFCO**
  - [Ammonia Storage facilities for Fertilizer Project]
PHOSPHORIC ACID PLANTS
- At Kirkee & Bhandara for DGOF
- At Haldia for HFC
- At Rourkela for Hindustan Steel Ltd
- At Haldia for HFC
- Hydrogen Plant Revamp at Kalyan for National Peroxide Ltd.

HYDROGEN PLANTS
- 18,000 nm/hr Hydrogen Plant at Nangal for NFL
- 21,000 MTPA HGU at Manali Refinery for CPCL
- Methanol Plants
- At Trombay for RCF
- At Kolkata for Bengal Chemicals & Pharmaceuticals Ltd.
- At Bhandara for DGOF

SODIUM NITRITE/NITRATE PLANTS
- At Trombay for RCF
- At Nagpur for NFL
- Ammonium Bi-Carbonate Plants
- At Trombay (HFC)
- At Mangalore for MCFL
- At Siddi for RCF

AMMONIUM SULPHATE PLANTS
- At Namrup for HFC
- At Dungapur for SEPC, Kolkata
- At RSP, Rourkela for SEPC, Kolkata

OFFSITE/UTILITY SYSTEM
- Complete Offsite & Utility facilities such as Raw Water Supply
- DM Plants on LSTK Basis for:
- Ammonium Storage & Handling, Urca Bagging & Handling etc. for Ammonia-Urea Fertilizer Plants

HYDROGEN PLANTS
- DM Plants at LSTK Basis for:
- DM Plants at Power Projects at Anta and Auraiya for NPC
- DM, Pre-Treatment & Water Softening Plants for Paricha Power Plant of UPSEB
- DM Water Plants at Dungapur & Chandrapura for DVC
- DM Plant & Pre-Treatment Plant for Vishakhapatnam Steel Plant
- Pre-Treatment & Water Softening Plant at Kerala for KMML

ETP Plants:
- At Lakwa, Nazira, Rudrasagar, Mehansa and Geleki for ONGC
- At Daluajan for OIL
- At New Delhi for DSIDC
- At Guwahati Refinery for IOC

CNG PROJECTS
- CNG Projects at Mumbai, Gujarat and Delhi for GAIL
- Over 30 Mounded Storage Systems [150 MT to 2,870 MT]

EPCM SERVICES:
- For Gas Collection Station Project at Konaban and Agartala Dome for ONGC
- For Gas Lift Compressor Plant (Phase-II) at Geleki for ONGC
- For Gas Lift Compressor Plant (Phase-II) at Lakwa for ONGC
- For Gas Lift Compressor Plant at Rudrasagar for ONGC
- For Gas Gathering Station at Gauhar for ONGC
- For Gas Gathering Station at Lakwa and Demulgaon Assam for ONGC

EPCM SERVICES:
- For Group Gathering Station at Tripura for ONGC
- For Gas Gathering Station at Rohkia field, Tripura for ONGC
- For DM Water Plants at Durgapur & Chandrapura for DVC

PDIL provides NDT services for Plants in various sectors like Oil & Gas, Fertilizer, Chemicals, Refineries, Cross-Country Pipeline etc. Such services are provided for Ammonia Storage Tanks, Mounded Bullets and Horton Spheres for Petroleum products (LPG, Propylene) etc. In addition to the general NDT Services such as MPI, DPT, UT, Hardness Test, we provide specialized services like:-
- Automatic Ultrasonic Scanning (AUS) of Reformer Tubes
- Eddy Current Testing of Heat Exchanger Tubes
- Shot Down NDT Services

In addition to performing AUS of Reformer tubes for PDIL, with vast experience, technical expertise, robust financial infrastructure, vast database of valuable project information and a multitude of credentials to its account, PDIL has effectively leveraged these resources for providing Engineering Consultancy Services for various Projects. The resources include:
- Capability to provide complete range of Consultancy Services with Single Point Responsibility.
- Highly competent and experienced technical manpower.
- Comprehensive database of exhaustive information about various process technologies & numerous projects, accumulated over decades of service.
- Association with leading International Process Licensor/Engineering Contractors viz. Haldor Topsoe, SAIPEM (Snazprojeti), MHI, Lurgi, Toyo Engineering, Udhe, UOP, Kellogg Brown & Root, SNC-Lavalin, etc.
- Latest State-of-the-Art Engg. Softwares such as:
  - Aspen Plus 12.1 - Process Simulation Modeling
  - HTRI 2006 - Thermal Design of Heat Exchangers
  - Synergy 4.1 - Pipe Network Design and Analysis
  - Pipenet 3.5 - Pressure Drop & Network Analysis
  - Pipenet 5.20 - Piping Surge Calculations
  - AUS of Reformer tubes for

- Capacities:
- Multi-locational presence to facilitate proximity to Project Site/ Client:
  - Engineering Centres at Noida and Vadodara
  - Inspection Offices at Noida (Delhi), Mumbai, Chennai, Kolkata, Hyderabad and Vadodara.
SERVICES OFFERED

Activities and Project Engineering Activities for Projects provides complete range of services covering Pre-Project many Projects in various Industrial Sectors, PDIL Based on the achievements and credentials accumulated in accomplishments in the field of Fertilizer Projects. viz. Natural/Associated Gas, Naphtha, Fuel Oil and Coal 600 MTPD to 2,200 MTPD based on diverse feedstocks Projects in India. The fact that PDIL has engineered and been playing the lead role as an Indian Engineering Design and Engineering of Fertilizer Projects, PDIL has purpose of building an indigenous technological base for requirements of ISO 9001:2008.

The Quality Management System of PDIL for Project Management, Engineering Consultancy, Third Party Inspection, Catalyst Production and allied services has been assessed and approved in accordance with the requirements of ISO 9001:2008.

PDIL’s Catalysts are in use in almost all the old generation and new generation Ammonia Plants in India in the Government, Co-operative and Private Sector. Apart from the Fertilizer Plants, PDIL’s Catalyst is in use in Refinery also. PDIL have supplied HT Catalyst to HPCL-Vizag, MRPL-Mangalore and CPCL-Chennai Refinery. PDIL’s Vanadium Pentoxide Catalyst has been supplied to many Sulphuric Acid Plants in India as well as abroad.

CATALYST DIVISION

PDIL’s Catalyst Division at Sindri manufactures and supplies a wide range of commercially proven catalysts used in Ammonia Plants and also Catalysts for Hydrogen Plants and Sulphuric Acid Plants. A list of catalysts manufactured by PDIL is given below:-

- Primary Gas Reforming (CDR- 66A)
- Secondary Reforming (CDR- 66B)
- Iron-Chromia High Temperature Shift CO Conversion (CDC-85)
- Copper Promoted High Temperature Shift CO Conversion (CDC-93C)
- Low Temperature Shift Conventional (CD-LT-21A) & High Copper (CD-LT-21 B)
- Methanation (CDM-15) & Super Methanation (CD – SM – 15C)
- Vanadium Pentoxide (CDV- 53)

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ENVIRONMENT IMPACT / RISK ANALYSIS

PDIL have undertaken / is undertaking HAZOP Assignments (using PHAPRO 6.0) for various industrial installations including Fertilizer, Refinery, Oil & Gas, Pipelines such as:

- Integrated HAZOP at Gauhati Refinery for IOCL
- Various Process units like CDU, DHBU, OTHU, HGU, NSU and VBU at Mathura Refinery for IOCL
- Atmospheric Vacuum Unit-1&2 and LPG Treating Unit at Barauni Refinery for IOCL
- 2 pipelines at Nazara, Assam Asset of ONGC for Megha Engineering & Infrastructure Limited
- Pig Launching & Receiving Stations of 2 MLP Ankleleshwar project of ONGC for Jay Somnath Iron Works
- H-CNG Dispensing Station at R&D Centre, Faridabad for IOCL
- LPG Bottling Plants at Chakan, Dhananj & Mannad for IOCL
- Circulating Fluidized Bed (CFB) Gasification Plant for Shirazm EPC

PDIL have undertaken preparation of over 800 TEFR/ DPRs for wide range of Projects such as:

- Ammonia-Urea Fertilizer Projects

TEFR/ DPR

PDIL have undertaken preparation of over 800 TEFR/ DPRs for wide range of Projects such as:

- Ammonia-Urea Fertilizer Projects

- Phosphatic Fertilizer Projects

- LPG Import Terminal Projects

- City Gas Distribution

- Pipeline Projects

ABBRIVIATIONS

AOA - El Sharika El DJazairia El Omania Ltd
BOPL - Bharuch Fertilisers Ltd.
DPCL - Dibrugarh Petroleum Corporation Ltd.
GFAC - Gujarat Fertilisers & Chemicals Ltd.
HPC - Hindustan Petroleum Corporation Ltd.
IEC - Indo Egyptian Fertilizer Company
IFFCO - Indian Farmers Fertilisers Cooperatives Ltd.
IOCL - Indian Oil Corporation Ltd.
KMM - Kerala Metals & Minerals Ltd.
KRIBHCO - Krishak Bharti Cooperatives Ltd.
LFCL - Laxmi Fertilisers & Chemicals Ltd.
NFC - Nagarpur Fertilisers & Chemicals Ltd.
NRL - Numaligarh Refineries Ltd.
NTPC - National Thermal Power Corporation
OMIFCO - Oman India Fertilizer Company
ONGC - Oil & Natural Gas Corporation
TCL - Tata Chemicals Ltd.
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