



Modular Manufacturing Yard - Dahej

India, Onshore



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Overview of Modular Manufacturing Yard



LOCATION

Waterfront Yard at
Western Coast of India



TRANSPORTATION

Up to 12.5 m W x 12.5 m H
from existing Jetty



SIZE

150,000 sq meters Covered
Fabrication sheds and
Open Fab/ Assembly Areas

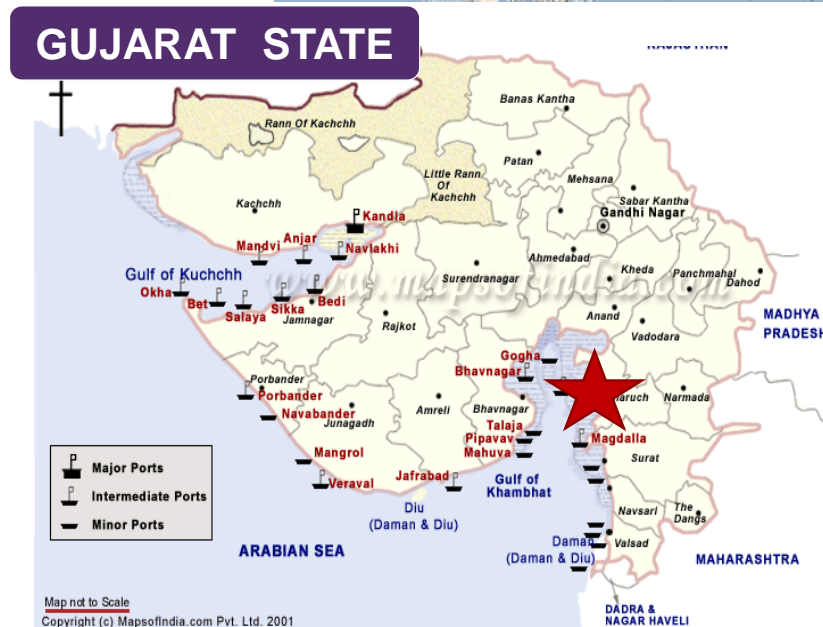
Location – Dahej

Western Coast of India, State of Gujarat

- ▶ Water Front Facility
- ▶ 262 nautical miles to Mumbai Port by sea
- ▶ 400 km by road to Mumbai

950 nautical miles to Middle East

Located in Industrial Hub



Products Portfolio – Type(s)

Installed Capacity: 24,000 MT / Year

- ▶ Modules – Assembled Units: Up to 1000 MT weight
- ▶ Convection Modules: Up to 200 MT
- ▶ Pressure Equipment: Up to 150 MT weight; 100 mm thickness
- ▶ Steel Structure: 1000 MT/ month
- ▶ Burners: 6000 Burners / year
- ▶ Pipe Spools



Product Lines

Features:

- ▶ Technology Based
- ▶ Proprietary Designs



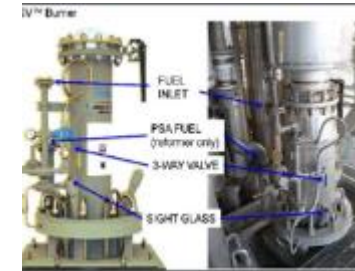
Modular Plants

- ▶ Modular Hydrogen plants
- ▶ TechnipFMC Proprietary Modularized Units
- ▶ Modular Plants with Worldwide Partner Technologies



Fired Heaters, Reformers, Ethylene Furnaces, Components & assemblies

- ▶ Experience of 300 Heaters/Reformers
 - Small to Large (Over 100 MM KCal / kg)
 - India, overseas
- ▶ Combustion Engineering Group
- ▶ E,E-P, EPC Execution models



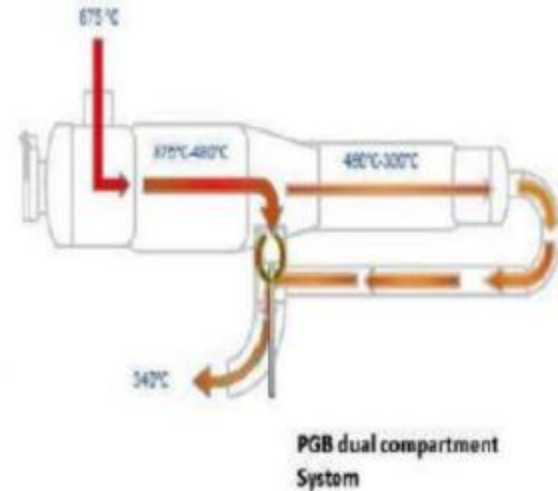
Specialty Burners

- ▶ Large Scale Vortex (LSV) Burners
 - For Ethylene Crackers
 - For Hydrogen Reformers
 - Air Product License
- ▶ Side Wall Burners
 - For Ethylene Crackers

Proprietary Static Equipment



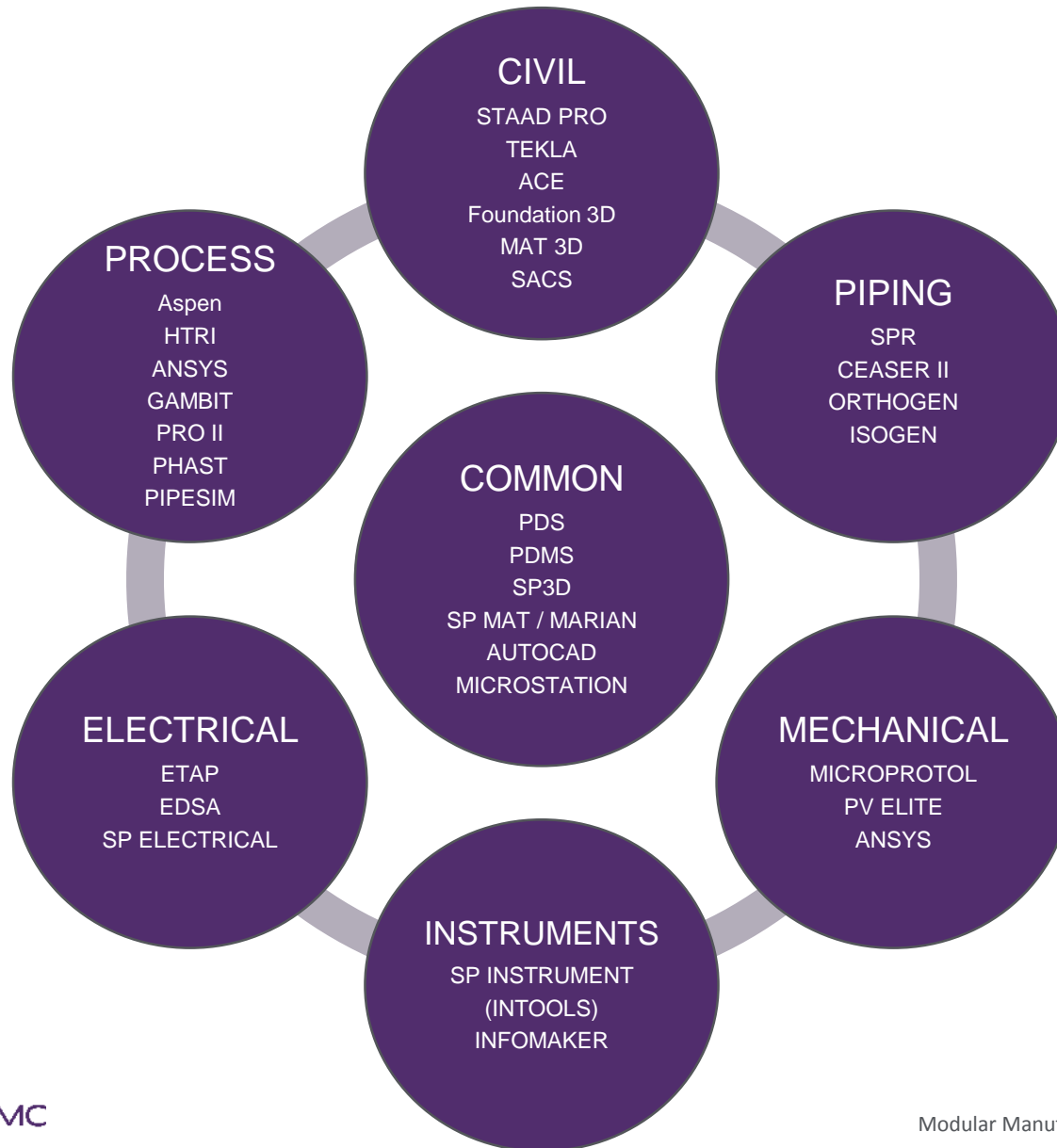
TLE (Transfer Line Exchanger) for Ethylene Cracking – Commissioned at Kazan, Russia



Process Gas boiler for Hydrogen (TechnipFMC Benelux Design)

Engineering Support

Engineering Software



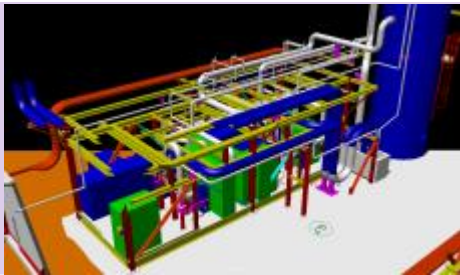
Modularization Strength

Modular H2 Plant
Client: TechnipFMC Benelux / Air Product
Rotterdam

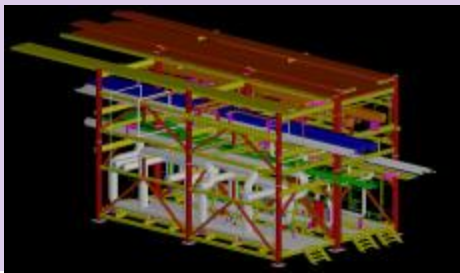
Modular Engineering



Piperack Module



Pumps Module



Modular H2 Plant
Client: TechnipFMC Benelux / Air Product
Cressier



Modularization Strength

Modular H2 Plant
**Client: TechnipFMC USA/
Exxon Mobil**



Modular H2 Plant
**Client: BHP Billiton,
Australia**



Modularization Strength

Reformer Package for JGC
Client: Sohar Refinery, Oman



Reformer Package for JGC
Client: Sohar Refinery, Oman



LPG Merox Skid for UOP
Client: BPCL Mumbai, India



EDC Pyrolysis Furnaces
Client: Sanmar Chemicals, Egypt



Hydrogen PSA Package
Client: IOCL Panipat, India



Manufacturing Experience

Skids and Modules



Pump Skid, IOCL, Paradip



Fuel Gas Skid. NSRP, Vietnam



LPG Merox, BPCL, Mumbai



LPG Merox, BPCL, Mumbai

Burners



LSV BURNER



DAMPERS



SIDE WALL BURNER



LSV LINEUP

Transfer Line Exchangers (TLE) for Kazan, Russia



Waste Heat Recovery Unit (WHRU) ONGC, HRD Platform



Reformer Modules with Catalyst Tubes, Inlet/ Outlet System and Refractory for BHP Billiton, Australia



Shipment and Installation at Kwinana, Western Australia

Pressure Piping Spools / Radiant / Arbor Coils



Pressure Vessels



Incinerator IOCL,
Mathura



Nitrogen Drum BPCL,
Mumbai



Glycol Drain Drum



KOD ONGC Vashista

Transfer Lines for Hydrogen Reformers



Sohar Refinery



GNFC Dahej



HPCL, Vizag

1 ¼ Cr ½ Mo Shell, Refractory Lined and Dried Out

Radiant Helical Coils



Facilities at MMY

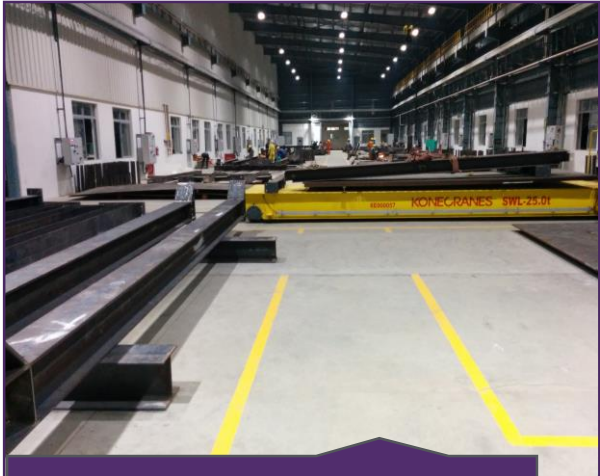
Covered Sheds



Medium Fabrication shop 1
(25 M X150 M)



Medium Fabrication shop 2
(25 M X150 M)



Light Fabrication shop
(20 M X 82 M)

Machinery



Plate Rolling (up to 100 mm thick)



CNC Profile Cutting Machine

Steel Structure Fabrication (CNC Beam Line)



Special Machines



CNC EDM Wirecut Machine



CNC EDM Drill Machine



Tube Bending Machine

Other Infrastructure



Laboratory



Open Fabrication Yard 25 M X
165 M



Material Storage Yard 30 M X
165 M

IMS, Accreditations and QC

Certifications



Integrated Management System
Implemented and Certified



Authorization to apply ASME U, U2
and S Stamps

Integrated Management System: ISO 9001, ISO14001 & OHSAS 18001

DNV·GL

MANAGEMENT SYSTEM CERTIFICATE

Certificate No: 03295-2006-AQ-IND-RvA
Initial certification date: 15, May, 1994
Valid: 10, November, 2014 - 09, November, 2017

This is to certify that the management system of

Technip India Limited

B1 - 701/701 A, Boomerang, Chandivali Farm Road, Andheri (East), Mumbai - 400 072, Maharashtra, India
and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Quality Management System standard:
ISO 9001:2008

This certificate is valid for the following scope:
Project management, design, engineering, procurement, construction and installation of equipment & plants and commissioning for the process industry including refineries, petrochemicals, chemicals, speciality chemicals, fertilizers, food & pharmaceutical industries, oil & gas industries (on-shore/off-shore/sub-sea facilities)
Manufacturing pressure vessels, heat exchangers, transfer line exchangers, waste heat recovery units and components of fired heaters & reformers, burners, steel structure, piping spools and other fabricated products and modular units for process industry including refinery, petrochemical, oil & gas (upstream/downstream) and chemical industries

Place and date:
Chennai, 12, January, 2017


 The Risk is a signatory to the IAF MLA

For the issuing office:
 DNV GL – Business Assurance
 ROMA, No. 10, GST Road, Alandur,
 Chennai - 600 016, India

 Shreedasan Madhyath
 Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV GL Business Assurance S.V., Østlandsveien 1, 2007 LB, SANDVICKEN, NO-1300 AREN, TEL: +31 22922288, assurance.dnvgl.com

DNV·GL

Certificate No: 03295-2006-AQ-IND-RvA
Place and date: Chennai, 12, January, 2017

Appendix to Certificate

Technip India Limited
Locations included in the certification are as follows:

| Site Name | Site Address | Site Scope |
|-----------------------|---|---|
| Technip India Limited | Chennai Office: 19, Velachery Main Road, Guindy, Chennai - 600 032, Tamil Nadu, India | Project management, design, engineering, procurement, construction and installation of equipment & plants and commissioning for the process industry including refineries, petrochemicals, chemicals, speciality chemicals, fertilizers, food & pharmaceutical industries, oil & gas industries (on-shore/off-shore/sub-sea facilities) |
| Technip India Limited | Modular Manufacturing Yard, Dahej: Plot No. D - 2/3/2, G.I.D.C. Estate, Dahej - II, Taluka: Vagra - 392 130, District: Bharuch, Gujarat, India | Manufacturing pressure vessels, heat exchangers, transfer line exchangers, waste heat recovery units and components of fired heaters & reformers, burners, steel structure, piping spools and other fabricated products and modular units for process industry including refinery, petrochemical, oil & gas (upstream/downstream) and chemical industries |
| Technip India Limited | Corporate Office: B1 - 701/701 A, Boomerang, Chandivali Farm Road, Andheri (East), Mumbai - 400 072, Maharashtra, India | Project management, design, engineering, procurement, construction and installation of equipment & plants and commissioning for the process industry including refineries, petrochemicals, chemicals, speciality chemicals, fertilizers, food & pharmaceutical industries, oil & gas industries (on-shore/off-shore/sub-sea facilities) |
| Technip India Limited | Noida Office: A - 4, Sector 1, Noida - 201 301, Uttar Pradesh, India | Project management, design, engineering, procurement, construction and installation of equipment & plants and commissioning for the process industry including refineries, petrochemicals, chemicals, speciality chemicals, fertilizers, food & pharmaceutical industries, oil & gas industries (on-shore/off-shore/sub-sea facilities) |

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Non Destructive Testing Facilities at Yard

- Radiography Testing Enclosure (Capacity- 30 Ci Cobalt)
- Ultrasonic Testing
- Magnetic Particle Testing
- Portable Alloy Analyser



Testing Laboratory at Yard

- Universal testing machine –Tensile, Bend tests
- Charpy – V Notch Impact Test Machine
- Vickers Hardness Tester



Combining Strengths

