

# PROCESS PLANTS & GENERAL CONSTRUCTION

**Scope** Engineering, Procurement and Construction work for refineries and petrochemical plants like hydrocracker unit, sulphur recovery, MTBE, CDU, VDU VBU and oil & gas field development projects

## Client and Consultant

• Abu Dhabi Polymers Co • Bechtel • Bharat Petroleum Corp Ltd • Bharat Oman Refinery Ltd  
• Cairn Energy • Chambal Fertilisers and Chemicals Ltd • Chennai Petroleum Corp Ltd  
• Commander Work Engineers (Projects) • Daelim Industrial Co. Ltd • Dalal Consultants  
• Davy Power Gas • Delhi Development Authority • Engineers India Ltd • Exxon Mobil • Foster Wheeler Asia Pacific Pte Ltd • General Electric • Gujarat Narmada Valley Fertilizer Co. Ltd • Hindustan Aeronautics • Hindustan Fluorocarbons Ltd • Hindustan Petroleum Corp Ltd • Hyundai • IBP Co. Ltd  
• ICICI • IDBI • IFCI • Indian Airlines • Indian Oil Corp Ltd • Indian Petrochemicals Corp Ltd • Kinetic Technology Ltd • NKK • Nuclear Power Corp of India Ltd • Mangalore Refinery Petrochemicals Ltd • Oil and Natural Gas Corp • Oil India Ltd • Petrofac International Ltd • PT. Perusahaan Gas Negara • Reliance • SBI • Siirtec Nigi S.p.A. • Skanska Cementation International Ltd • SNC-Lavalin International • Spie Capag • Takreer • Tamil Nadu Electricity Board • Tata Consultancy Engineers  
• Tengizchevroil • TotalFinaElf E&P Indonesie • Tecnimont • Toyo Engineering • Triune Projects  
• Whessoe LGA • Yemen LNG Co Ltd

1	<b>Delayed Coker Unit for Phase III, Mangalore Refinery</b>	Mangalore Refinery Petrochemicals Ltd	Residual basic engineering, procurement, fabrication, erection, installation, construction, testing and pre-commissioning of four coke drums - 2,000 MT, 10 m dia x 41 m height.	Ongoing Oct 2011
2	<b>Petro Fluidised Catalyst Converter Unit, Phase III, Mangalore Refinery</b>	Engineers India Ltd	Fabrication and erection of piping, erection of equipment including heavy and super heavy lifts, structural work, painting, insulation, precommissioning/commissioning.	Ongoing Sep 2011
3	<b>Offsite for Phase III, Mangalore Refinery</b>	Mangalore Refinery Petrochemicals Ltd	Transportation, shop and field fabrication and erection of piping A/G and U/G including specials, supporting, installation of online instruments, valves including chemical cleaning, flushing, NDT, hydro-testing and Commissioning.	Ongoing Jul 2011

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4 <b>Fuel Systems, Qatar</b>	New Doha International Airport/Bechtel (PMC)	Engineering, procurement and construction of fuel farm, fuel receiving station, jet fuel hydrant system including 24 km piping, ground service equipment fuel system, ground service equipment washing system, portable water station and operation office, parking facility for hydrant dispenser vehicles, triturator facility, special fuel system equipment, special systems in building/facilities (BMS/CCTV).	Ongoing Apr 2011
5 <b>SAR Revamp, Singapore</b>	Exxon Mobil Asia Pacific Pte Ltd/ Foster Wheeler Asia Pacific Pte Ltd	Civil work including piling, excavation, roads, paving and mechanical work including piping fabrication and erection, equipment erection work, structural steel and support, NDT, PWHT, painting and insulation, OFC, switch gear extension and modification, instrumentation control for field instruments, control valves and turnaround activities during shutdown of the refinery.	Ongoing Dec 2010
6 <b>Delayed Coker Unit and LPG Merox Block, Vadodara Refinery</b>	Indian Oil Corporation Ltd	Residual basic and detailed engineering, procurement, construction and commissioning for 3.7 MMTPA delayed coker unit and 150 TMTA LPG Merox unit.	Ongoing Aug 2010
7 <b>Sulphur Block, Bina Refinery</b>	Bharat Oman Refinery Ltd/ Engineers India Ltd	Residual process design, detailed engineering, procurement, construction, fabrication, insulation, pre-commissioning and commissioning of Amine Regeneration Unit, Sour Water Strapper, Tail Gas Treating Unit and Sulphur Recovery Unit of grassroot refinery.	Ongoing Aug 2010
8 <b>Main Mechanical PAC and PESEK, Singapore</b>	Exxon Mobil Asia Pacific Pte Ltd/ Foster Wheeler Asia Pacific Pte Ltd	Piping work, painting, insulation, NDT, 600 tons of structural work, equipment erection, tie-ins and ancillary civil work.	Ongoing Aug 2010
9 <b>MSQ Upgradation, Barauni Refinery</b>	Indian Oil Corporation Ltd/ Toyo Engineering India Ltd	Residual basic and detailed engineering, procurement, construction and commissioning of reformate splitter unit, naphtha hydrotreating unit, isomerization unit and nitrogen generation unit. <ul style="list-style-type: none"> <li>• Reformate Splitter Unit : 274,000 TPA</li> <li>• Naphtha Hydrotreating Unit : 183,000 TPA</li> <li>• C5 - C6 Isomerization Unit : 126,000 TPA</li> <li>• Prime G+ : 322,000 TPA+ : 81,000 TPA</li> <li>• Nitrogen Generation Unit : 850 Nm<sup>3</sup>/hr capacity</li> </ul>	Ongoing Aug 2010
10 <b>Borouge 2 Polyolefins Package II, UAE</b>	Tecnimont, Italy/Abu Dhabi Polymers Co (Borouge)	Mechanical work including erection of steel structure, pipeline fabrication and erection, insulations equipment erection and painting.	Ongoing Aug 2010
11 <b>Borouge 2 Offsites &amp; Utilities, UAE</b>	Tecnicas Reunidas, Spain (TR)/Abu Dhabi Polymers Co (Borouge)	Mechanical work including erection of steel structure, piping fabrication and erection, equipment erection, painting and insulation.	Ongoing Aug 2010
12 <b>Hydrocracker Unit</b>	Indian Oil Corp Ltd/Lurgi India Co Ltd	Residual process design, detailed engineering, procurement, supply, third party inspection, transportation of all equipment/materials to site, materials management, construction, installation, testing, pre-commissioning, commissioning, performance guarantee run on single point responsibility basis. Capacity : 1.7 MMTPA at Haldia Refinery.	Completed Feb 2010



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13 <b>Hydrogen Generation Unit</b>	Indian Oil Corp Ltd/Lurgi India Co Ltd	Residual process design, detailed engineering, procurement, supply, transportation of all equipment/materials to site, materials management, construction including installation, testing, pre-commissioning, commissioning, performance guarantee run on single point responsibility basis. Capacity : 70 TTPA at Haldia Refinery.	Completed Jan 2010
14 <b>Utilities and Offsites for LNG Plant</b>	Yemen LNG Co Ltd/Yemgas (JV of Technip France, JGC Corp and Kellogg Brown & Root)	Construction civil, pressurized underground piping, steel structure erection, hoisting and mechanical erection, above ground piping, electrical, instrumentation, painting, insulation of LNG Plant at Yemen.	Completed Sep 2009
15 <b>Onshore Gas Development Phase III</b>	Eastern Bechtel Co Ltd/Abu Dhabi Gas Industries Ltd (GASCO)	Piping and equipment erection for offsites and utilities at Abu Dhabi.	Completed Aug 2009
16 <b>Asset Preservation and Maintenance of Daewoo Motors India Ltd</b>	ICICI, IDBI, Exim Bank, SBI	Asset maintenance and preservation of press shop, body shop, paint shop, assembly shop, plastic paint and moulding shop and utilities area of Daewoo Motors India Ltd Car factory at Noida.	Completed Jan 2008
17 <b>Central Environment Protection Facility</b>	SNC-Lavalin International/ Abu Dhabi Oil Refining Co (Takreer)	Design, engineering, procurement, construction, commissioning and start-up of process piping and tankage for BeAAT project in Ruwais, UAE.	Completed Oct 2008
18 <b>Second Generation Project Offsites and Utilities</b>	Tengizchevroil/ PFD International LLC (Parsons/ Fluor Daniel JV)	Offsite and utilities mechanical work comprising equipment installation, piping fabrication, erection, insulation, painting, commissioning assistance for the following areas at Tengiz, Kazakhstan : Chemical Storage, Fuel Gas Compressor, Flare, Interconnecting Piperacks, LPG and Crude Storage Tanks, LACT (Lease Automatic Custody Transfer) Metre Water Treatment.	Completed Jun 2006
19 <b>Paraxylene Unit No 2</b>	Indian Oil Corp Ltd	Fabrication and erection of structural work, equipment, piping and painting at Panipat Refinery.	Completed Jun 2006
20 <b>Motor Spirit Quality Upgradation</b>	Indian Oil Corp Ltd/ Lurgi India	Residual process design, detailed engineering, procurement, construction and commissioning on EPC basis at Haldia Refinery. <ul style="list-style-type: none"> <li>• Naphtha Splitter 385,000 MT/YR</li> <li>• Naphtha Hydrotreater 82,000 MT/YR</li> <li>• Reformate Splitter 182,000 MT/YR</li> <li>• Isomerisation – LPG Recovery 122,000 MT/YR</li> <li>• Selective Hydrogenation 200,000 MT/YR</li> <li>• FCC Gasoline Splitter 200,000 MT/YR</li> <li>• Prime G+ Selective Hydrodesulphurisation 160,000MT/YR</li> <li>• Automatic on-line MS Blending Station (with optimisation)</li> </ul>	Completed Dec 2005
21 <b>Hydrocracker Unit</b>	Daelim Industrial Co Ltd/Engineers India Ltd/Indian Oil Corp Ltd	Mechanical construction comprising erection of equipment including reactors, structural steel supply and fabrication, erection work, piping, fire-proofing and painting at Panipat Refinery – 1.7 MTPA.	Completed Sep 2005



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22 <b>Peciko Onshore Development Phase 4, Indonesia</b>	TotalFinaElf E&P Indonesia	Engineering, procurement and supply of materials, construction, pre-commissioning and commissioning assistance for two gas compression trains at onshore plant at Senipah on EPC basis, with a gas capacity of 450 MMSCFD for each train.	Completed May 2005
23 <b>Visbreaker Unit (VBU) and Sulphur Block</b>	Petrofac International Ltd/Chennai Petroleum Corp Ltd	Residual process design, detailed engineering, procurement, construction and commissioning at Manali Refinery. <ul style="list-style-type: none"> <li>• VBU : 3600 mt/sd</li> <li>• SRU : 2 x 90 tpd</li> <li>• ARU : 330 tph</li> <li>• SWS : 58.9 mt/hr</li> </ul>	Completed Aug 2003
24 <b>Sulphur Block and Utilities/ Offsite</b>	Siirtec Nigi S.p.A./ Indian Oil Corp Ltd	Residual process design, detailed engineering, procurement, construction and commissioning on EPC basis at Guwahati Refinery. <ul style="list-style-type: none"> <li>• SRU : 5 tpd</li> <li>• ARU : 6.5 tph</li> <li>• SWS : 6 m<sup>3</sup>/hr</li> <li>• Extensive Utilities and Offsites</li> </ul>	Completed Dec 2001
25 <b>Hydrocracker Unit</b>	Indian Oil Corp Ltd	Erection of equipment, machinery, structural work, fabrication, erection of piping, electrical instrumentation, painting, insulation and fire-proofing for Hydrocracker Unit of Matching Secondary Processing Facilities at Mathura Refinery (1.2 MMTPA).	Completed Jun 2000
26 <b>Sulphur Block</b>	Petrofac International Ltd/ Kochi Refineries Ltd	Civil and structural work, erection of equipment, machinery, fabrication and erection of piping, tanks, electrical, instrumentation, painting, insulation and fire-proofing of the Sulphur Recovery Unit (2 x 72 TPD), Amine Regeneration Unit and Sour Water Stripper, including related supplies at Kochi Refinery.	Completed Mar 2000
27 <b>Additional Chilling Train</b>	Reliance Petroleum Ltd/ Whessoe LGA	Residual engineering, procurement, construction and pre-commissioning of additional LPG/Propylene chilling train for LPG Storage.	Completed Feb 2000
28 <b>Sulphur Block</b>	Petrofac International Ltd/ Indian Oil Corp Ltd	Civil and structural work, erection of equipment, machinery, fabrication and erection of piping, tanks, electrical, instrumentation, painting, insulation and fire-proofing of the Sulphur Recovery Unit (3 x 60 TPD), Amine Regeneration Unit and Sour Water Stripper, including related supplies at Mathura Refinery.	Completed Oct 1999
29 <b>MTBE Plant</b>	Indian Oil Corp Ltd	Detailed and residual basic engineering, procurement, construction and commissioning of MTBE plant at Gujarat Refinery (37,000 TPA) on EPC basis.	Completed Sep 1999
30 <b>CDU III, VDU III, VBU for VREP-II</b>	Hindustan Petroleum Corp Ltd/Engineers India Ltd	Erection of CS, alloy steel and clad piping, mechanical equipment erection work for 3 MMTPA capacity expansion at Vizag.	Completed Sep 1999
31 <b>Sulphur Block</b>	Kinetic Technology Ltd/Hindustan Petroleum Corp Ltd	Civil and structural work, erection of equipment, machinery, fabrication and erection of piping, tanks, electrical, instrumentation, painting, insulation and fire-proofing of the Sulphur Recovery Unit (2 x 65 TPD), Amine Regeneration Unit and Sour Water Stripper, including related supplies at Mahul Refinery.	Completed Aug 1999
32 <b>Sulphur Block</b>	Petrofac International Ltd/Indian Oil Corp Ltd	Civil and structural work, erection of process equipment, machinery, fabrication and erection of piping, tanks, electrical, instrumentation, painting, insulation and fire-proofing of the Sulphur Recovery Unit (2 x 35 TPD), Amine Regeneration Unit and Sour Water Stripper, including related supplies at Koyali Refinery.	Completed Jul 1999



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33 <b>Piping Work</b>	Reliance Petroleum Ltd	Fabrication and erection of piping (1,500,000 inch m) for marine tank farm area, fire water pump house and associated work at Reliance Refinery.	Completed Jul 1999
34 <b>Low Temperature LPG/Propylene Storage</b>	Reliance Industries Ltd/ Bechtel, UK	Residual engineering, procurement, construction for Propylene system package to convert pressurised LPG into cryogenic LPG, storage and re-liquefaction package including one double walled propylene storage system (26,000 m <sup>3</sup> ) and allied mechanical, electrical, instrumentation and civil work at Reliance Jamnagar Refinery.	Completed Jun 1999
35 <b>Gas Field Development</b>	Oil India Ltd/ Triune Projects	Detailed and residual basic engineering, procurement, construction, testing and commissioning of gas gathering stations and gas processing complex, (1.0 MMSCMD) SCADA system and other facilities required for the development of gas fields at Dandewalan and Tanot in western Rajasthan.	Completed Mar 1997
36 <b>Ravva Oil Field Development</b>	Hyundai Heavy Industries Ltd/ Cairn Energy	Construction of onshore processing facility for oil and gas fields in S Yanam, including 6 Nos. oil storage tanks on stone column foundations, electrical and instrumentation work, equipment erection and onshore pipelines from the process plant to the landfall point.	Completed Oct 1996
37 <b>Effluent Treatment Plant</b>	Oil and Natural Gas Corp Ltd	Design, engineering, supply, erection and commissioning of 4,000 m <sup>3</sup> per day effluent treatment plant at North Santhal.	Completed Aug 1996
38 <b>Fire Water System for Desalter Plant</b>	Oil and Natural Gas Corp Ltd	Engineering, supply, erection and commissioning of fire water, storm water and electrical work at Navagam, Gujarat.	Completed Jan 1995
39 <b>Integration System for Desalter Plant</b>	Oil and Natural Gas Corp Ltd/ Engineers India Ltd	Engineering, supply, erection and commissioning of integration systems covering civil, mechanical, piping, electrical and instrumentation work at Navagam.	Completed Jan 1995
40 <b>Natural Gas Compressor Station</b>	Oil and Natural Gas Corp Ltd	Design, engineering, supply, erection and commissioning of 10 Nos. reciprocating compressors, each of 50,000 Nm <sup>3</sup> per day capacity, with all utilities, including an 11 KV substation at Kalol and South Santhal.	Completed Jan 1994
41 <b>Structural Work</b>	Chambal Fertilisers and Chemicals Ltd	Structural steel work for ammonia and urea plant at Gadepan.	Completed Nov 1992
42 <b>Piping Work</b>	Chambal Fertilisers and Chemicals Ltd	Interconnection piping work at Gadepan plant.	Completed Jul 1992
43 <b>Underground Cooling Water Piping</b>	Chambal Fertilisers and Chemicals Ltd	Underground cooling water piping for ammonia and urea plant.	Completed May 1992
44 <b>Underground Cooling Water Pipeline</b>	Chambal Fertilisers and Chemicals Ltd/ Toyo Engineering India Ltd	Underground cooling water piping work, piping for offsite area at Gadepan plant.	Completed Dec 1991
45 <b>Auriya Compressor and Terminal Station</b>	Spie Capag/ NKK/Toyo Consortium	Complete mechanical work, including equipment erection, piping, painting and insulation of compressor station for HBJ Gas Pipeline at Auriya.	Completed Apr 1989



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46 <b>PTFE Plant</b>	Hindustan Fluorocarbons Ltd/Davy Power Gas	Mechanical erection of equipment (static and rotary); erection of CS/SS, Inconel 600 and jacketed piping for PTFE plant at Medak, Andhra Pradesh.	Completed Jan 1987
47 <b>Desalter/ Dehydration Plant</b>	Toyo Engineering India Ltd/Toyo Engineering Corp	Mechanical erection of piping, rotary and skid-mounted equipment for Kuwait Oil Co.	Completed Aug 1985
48 <b>Methanol Plant</b>	Gujarat Narmada Valley Fertilizer Co Ltd/Tata Consultancy Engineers	Mechanical erection of equipment – vessels, rotary equipment, etc. – fabrication and erection of CS/SS piping of Methanol plant at Bharuch.	Completed Apr 1985

