

Refinery Units - Project References

Year of Order	Customer	Plant Location	Plant / Product	Capacity Licensor (TPA)	Services Rendered
2019	Bharat Petroleum Corporation	Mumbai (Mahul Refinery)	Kerosene Hydrotreater	1.5 MMTPA Haldor Topsoe	DFR, EPCM
2018	Bharat Petroleum Corporation (GR Engineering)	Kochi	CCR Cyclemax Regeneration package for BS VI MS Block Project	0.8 MMTPA UOP	E (Detailed)
2017	Indian Oil Corpn.	Odisha (Paradip Refinery)	BS VI Quality Upgradation Project		EPCM
			Hydrogen Generation Unit	60 KTA Linde	
			Kero Hydro Desulphurisation Unit	300 KTA IOCL, EIL (R&D)	
			DHDT Revamp	5.2 MMTPA to Shell 6.24 MMTPA	
			Vacuum Gas Oil Hydrotreating (VGO HDT)	Quality Revamp thru' Catalyst change	Axens
2016	Indian Oil Corpn.	Assam (Bongaigaon Refinery)	Indmax FCC Unit	0.740 MMTPA ABB Lummus	FEED, PMC
			Gasoline Desulphurisation Unit (Prime G+)	Splitter: Axens 0.246 MMTPA HDS Section: 0.155 MMTPA	
			Offsites & Utilities	-	
2015	Chennai Petroleum Corpn.	Chennai (Manali Refinery)	Diesel Hydro Desulphurisation Unit Revamp	1.8 to 2.34 MMTPA Axens	DFR, EPCM
2015	Indian Oil Corpn.	Baroda (Gujarat Refinery)	BS IV Quality Upgradation Project		
			DHDS Revamp	1.77 to 2.3 MMTPA EIL	DFR, EPCM
			DHDT Revamp	2.2 to 2.86 MMTPA EIL	
			VGO-HDT	2.1 to 2.76 MMTPA UOP	
2015	IBN-Zahr (Saudi European Petrochemical Co)	Saudi Arabia	Air Pre-heater (replacement)	-	Process Design Package, FEED
2014	BioNext (IKIS AG)	France	Biomass to Liquid (Gasification)	5,000 Nm ³ /hr IKIS AG (Syngas)	E (Detail Engg)
	Sasol Synfuels (Pty) (IKIS SA)	South Africa	Secunda Clean Fuels 2 Project	- Various	E (Basic Engg)
2011	Indian Oil Corpn.	Baroda (Gujarat Refinery)	Conversion of Hydrogen Generation Unit 1 from Naphtha to Natural Gas	38000 Nm ³ /hr Linde	EPCM
2010	SABIC	Saudi Arabia	Benzene Mitigation Project	- By Client	FEED
2009	Praxair India (for Indian Oil Corpn.)	Orissa (Paradip Refinery)	Hydrogen plant	100,000 Nm ³ /hr Uhde	EPC-LSTK
2009	Bharat Petroleum Corporation	Mumbai (Mahul Refinery)	Naphtha Hydrotreater,	1.2 MMTPA Axens	EPCM
			Continuous Catalytic Regeneration Reformer	0.9 MMTPA	
2009	Indian Oil Corpn.	Orissa (Paradip Refinery)	VGO-HDT Unit	5.4 MMTPA Axens	EPCM
			DHDT Unit	5.2 MMTPA Shell Global	
			Hydrogen Compression Distribution System	- Foster Wheeler	
2008	Mangalore Refinery and Petrochemicals	Mangalore	Crude Distillation Unit, Vacuum Distillation Unit	CDU/VDU: Engineers India 3.69 MMTPA to 4.8 MMTPA	PMC
			Gas Oil Hydro Desulphurisation unit	GOHDS: 4,000 to Axens 5,200 tpd	EPCM
2008	Bongaigaon Refinery & Petrochemicals (Indian Oil Corpn.)	Assam (Dhaligaon)	Fractionation Unit	224,000 Engineers India	EPCM
			Isomerisation	167,280	
			Reformer De-heptaniser, Parex Unit - for Motor Spirit Quality Upgradation	160,000	
2008	Indian Oil Corpn.	Assam (Guwahati Refinery)	Indmax Gasoline Splitter	55,000 Axens	EPCM
			Light Naphtha Splitter	75,000 Lurgi	
			Isomerisation Unit - for Motor Spirit Quality Upgradation	45,000 Axens	
2008	Indian Oil Corpn.	Assam (Digboi Refinery)	Naphtha Splitter	130,000 Axens	EPCM
			Reformate Splitter	82,000	
			Isomerisation Unit - for Motor Spirit Quality Upgradation	47,000	
2008	Indian Oil Corpn.	Baroda (Gujarat Refinery)	VGO-HDT	2.1 MMTPA UOP	EPCM
			ATF	200 TMTPA	
			FCC LPG Merox & associated facilities for residue upgradation & Motor Spirit / HSD quality improvement	225 TMTPA	
2007	Reliance Petroleum	Jamnagar	Refinery Offsites Packages	-	E (Detail Engg)
2005	China National Offshore Oil Company (Uhde GmbH)	China	Hydrogen plant	2 x 100,000 Nm ³ /hr Uhde	E (Basic Engg)
2005	Essar Oil / ICICI Bank	Vadinar	Refinery - Lenders Engineering	- ABB Lummus	E (Detail Engg)
2004	Neste Oil Oyj (Uhde GmbH)	Finland	Hydrogen plant Reformer	153500 Nm ³ /hr Uhde	E (Detail Engg)
2004	Mangalore Refinery and Petrochemicals	Mangalore	Offsites & Utilities for Main Refinery Expansion Project	-	EPCM

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2003	Kuwait National Petroleum Corpn., MAA Refinery (ISCO, Kuwait)	Kuwait	Implementation of Hazop Studies of Refinery Units		- -	E (Detail Engg)
2003	UD-Koch-Giltsch Project (Uhde GmbH)	Belarus	Hydrogen plant Reformer	39,000 Nm ³ /hr	Uhde	E (Detail Engg)
2003	Indian Oil Corpn., Gujarat Refinery	Baroda	Motor Spirit Quality Upgradation		- -	FEED, PMC
2003	Kuwait National Petroleum Corpn. (ISCO, Kuwait)	Kuwait	Enhancement of Local Marketing Distribution facilities		- -	E (Detail Engg)
2002	Reliance Petroleum	Jamnagar	Offsites & Utilities		- Open Art	E (Detail Engg)
1998	BASF AG. (Uhde GmbH)	Belgium	Benzene / Toluene (Extractive Distillation of Pyrolysis Gasoline)	0.68 MMTPA	Uhde / BASF	E (Detail Engg)
1998	Saras Refinery (Parsons, U.K.)	Italy	Mild Hydrocracker	55,000 blpd	ABB Lummus / Shell	E (Detail Engg)
1998	Indian Oil Corpn., Gujarat Refinery (Petrofac, Sharjah)	Baroda	Sulfur Recovery	2 x 35 tpd	Stork / UOP	E (Detail Engg)
1997	Indian Oil Corpn., Panipat Refinery (Larsen & Toubro, India)	Panipat	Diesel Hydro Desulphurisation	0.7 MMTPA	IFP	E (Detail Engg)
1997	Titan Petrochemicals (Uhde GmbH)	Malaysia	Aromatics plant (Extractive Distillation of Reformate)	232,000	Uhde	E (Detail Engg)
1995	Mangalore Refinery and Petrochemicals	Mangalore	Visbreaker (Duplication)	2,300	ABB Lummus	EPCM
1993	Mangalore Refinery and Petrochemicals	Mangalore	Visbreaker	2,300	ABB Lummus	EPCM

Abbreviations (Services Rendered)

E (Basic Engg), E (Detail Engg), P = Procurement, EPCM = Engineering, Procurement, Construction Management, PS = Proprietary Supplies, CS = Construction Supervision, COS = Commissioning Supervision, EPC-LSTK = Engineering Procurement Construction - Lumpsum Turnkey, FEED - Front End Engineering Design, PMC = Project Management Consultancy, DFR = Detailed Feasibility Report