



**ENGINEERS
INDIA LIMITED**

Delivering Excellence through People



INSPECTION SERVICES

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About EIL



VISION

To be a Global Leader offering Total Energy Solutions for a Sustainable Future.

OVERVIEW

- Established in 1965
- One of South Asia's leading Consultancy, Project Management and EPC Company in Hydrocarbons and Petrochemicals.
- Focused diversification into other sectors:
 - Fertilizer and LNG
 - Non-Ferrous Metallurgy
 - Infrastructure - Airports, Data Centres, Intelligent Buildings, R&D Centres, Institutional Campus
 - Strategic Crude Oil Storage
 - Water & Waste Water Management
 - Power
 - Coal Gasification
 - Green Hydrogen / Ammonia
 - CCUS / Decarbonisation
 - Poly Silicon & Monosilane for Solar PV modules



- Providing services from Concept to Commissioning covering Project Implementation Services, Turnkey Contracts & Specialist Services
- In-house and collaborative R&D with 35 live patents
- Overseas presence in Middle East, Africa and South East Asia
- Equity Stake in Ramagundam Fertilizers and Chemicals Limited and Numaligarh Refinery Ltd.
- Zero debt firm with track record of healthy earnings and dividend payout
- Over 2,700 highly experienced professional & technical workforce
- Large multi-disciplinary engineering work force with over 4.5 million manhours available in Project Management & Engineering offices along with 1.5 million manhours of construction management services annually
- Optimized services to attain highest standards of Customer Delight
- An ISO 9001 : 2015, ISO 14001 : 2015 & ISO 45001 : 2018 accredited company



Service Offerings

From Concept to Commissioning

EIL provides the complete range of services required to conceptualise, design, engineer and construct projects to meet the specific needs of its clients on EPCM basis. Its association with clients extend beyond the commissioning of their plants through monitoring operation of each plant and accumulating feedback on performance.

PRE-PROJECT SERVICES

- Feasibility Studies
- Environment Impact Assessment
- Technology & Process Licensor Selection
- Cost Estimation
- Planning & Scheduling

PROJECT IMPLEMENTATION SERVICES

- Project Management
- Basic and Detailed Engineering
- Procurement
- Inspection and Third Party Certification
- Construction Management
- Commissioning and Plant Start-up Assistance
- Independent Engineers Services / Owner's Engineer
- Independent Engineers Services / Owner's Engineer

SPECIALIST SERVICES

- Heat and Mass Transfer Equipment Design
- Environment Engineering
- Specialist Materials and Maintenance
- Plant Operations & Safety including HAZOPS & Risk Analysis
- Corrosion Protection, Plant Integrity and Residual Life Assessment
- Refinery Optimization Studies
- Yield & Energy Optimization Studies
- Information Technology

EPC CONTRACTS

- Open Book Estimate (OBE) contracts
- Engineering Procurement and Construction (EPC) contracts



While strengthening its expertise across the hydrocarbon value chain, EIL has also diversified into high growth areas

EIL has to its credit more than 7000 assignments executed for projects worth over USD 200 Bn including over 500 major projects successfully completed and operating smoothly, in many cases at more than rated capacity, creating an array of satisfied clients. EIL has secured many repeat businesses from clients which is a sign of client's satisfaction, confidence and trust reposed in EIL. The company has earned the reputation of being a veritable treasure of technical knowledge, skills and professional competence. In the course of setting up various projects, Engineers India has worked with a large number of process licensors and engineering/ contracting companies worldwide and is well versed with the engineering codes and practices followed internationally.

Lines of Business

PETROLEUM REFINING	FERTILIZERS
PETROCHEMICALS	INFRASTRUCTURE
PIPELINES	MINING & METALLURGY
OIL & GAS (OFFSHORE & ONSHORE)	WATER & WASTE WATER MANAGEMENT
STORAGES & TERMINALS	BIO-FUELS
COAL GASIFICATION	CLEAN & GREEN TECHNOLOGIES (GREEN HYDROGEN)

EIL has been instrumental in the growth of petroleum refining in India

EIL has carved a niche as one of the leading engineering consultancy service providers for the refinery sector in India. EIL's footprints are there in 20 out of 23 Refineries set up in India including 10 greenfield refineries, with a combined refining capacity of more than 150 MMTPA (3 million BPD). In addition, EIL has executed a large number of revamp/modernization projects for most of the Refining companies in India. Barring the process design of a few licensed units, EIL executes complete petroleum refinery projects on its own. In addition to the main fuel refinery units, EIL also has technologies for lube refinery complexes.



Milestone Projects

Segment	Project	Client
INTERNATIONAL JOBS		
Refineries	PMC Services for Construction of a Crude Oil Refinery in Mongolia	Mongol Refinery State Owned LLC
Refineries	Dangote Refinery and Petrochemical Project at Lekki FTZ, Nigeria	Dangote Oil Refining Company
Refineries	Eastern Refinery Project (Unit-2), Bangladesh	Bangladesh Petroleum Corporation (BPC)
Refineries	Skikda Refinery Rehabilitation and Adaptation Project, Algeria	SONATRACH
Petrochemicals	Liwa Plastics Project in Sohar, Oman	Oman Refineries and Petroleum Industries Company (Orpic)
Refineries, Onshore Oil & Gas, Offshore	General Services Agreements (Engineering & PMC), UAE	ADNOC Group
Onshore Oil & Gas	Qusahwira Field Development Project, UAE	National Petroleum Construction Company (NPCC)
Pipeline	Various Pipeline Projects (9 Nos.), UAE	ADNOC Gas Processing (Formerly GASCO)
NGL	PMC for setting up NGL plant and 300 MW CCGT Power Plant	Government of Republic of Guyana
DOMESTIC JOBS		
Refineries	Consultancy Services for 9 MMTPA Cauvery Basin Refinery (CBR) Project at Nagapattinam, Tamilnadu (Packages: EPCM 1 with MPMC Services and EPCM 3)	Chennai Petroleum Corporation Ltd. (CPCL)
Refineries	9 MMTPA Rajasthan Refinery Project with integrated Petrochemical Complex	HPCL Rajasthan Refinery Ltd. (HRRL)
Refineries	Consultancy Services for Integrated Refinery Expansion Project at Kochi Refinery	Bharat Petroleum Corporation Ltd. (BPCL)
Refineries	Consultancy Services for Execution of Euro-VI (BS-VI) Fuel Quality Upgradation Projects for 10 Refineries Units in India	5 Indian Refiners (IOCL, CPCL, BPCL, MRPL, HMEL)
Refineries	Vizag Refinery Modernization Project (VRMP)	Hindustan Petroleum Corporation Ltd. (HPCL)
Refineries	Consultancy Services for 15MMTPA to 25MMTPA Capacity Expansion of Panipat Refinery (P-25 Project)	Indian Oil Corporation Limited (IOCL)
Refineries	Licensing and EPCM Consultancy Services for Delayed Coker Unit (DCU) Revamp of Numaligarh Refinery Expansion Project	Numaligarh Refinery Limited (NRL)
Refineries / Petrochemicals	Consultancy Services for Petro Resid FCC Unit along with SRU at Mumbai Refinery and PP Unit at Rasayani	Bharat Petroleum Corporation Limited (BPCL)
Petrochemicals	Petrochemical Complex-II at Vijaipur & Pata	GAIL (India) Ltd.
Petrochemicals	Dual feed Petrochemical Complex at Dahej	ONGC Petro-additions Ltd.
Petrochemicals	Propylene Derivative Petrochemical Project (PDPP) at Kochi Refinery	Bharat Petroleum Corporation Ltd. (BPCL)
Petrochemicals	Guru Gobind Singh Polymer Addition Project	HPCL - Mittal Energy Limited (HMEL)
Petrochemicals	Consultancy Services for 500 KTA PDH-PP Project at Usar	GAIL India Limited
Petrochemicals	EPCM Consultancy Services for 60 KTA Poly Propylene Unit at Pata	GAIL India Limited
Onshore O&G - LNG	PMC Services for Chhara LNG Terminal at Village Chhara, District Gir Somnath of Gujarat	HPCL Shapoorji Energy Private Limited (HSEPL)
Pipelines	Consultancy Services for Dabhol - Bangalore Gas Pipeline Project	GAIL (India) Ltd.
Pipelines	Consultancy Services for Crude Oil Terminal (COT) at Paradip, Paradip Numaligarh Crude Oil Pipeline (PNCPL) and NRL Siliguri Product Pipeline (NSPPL)	Numaligarh Refinery Limited (NRL)
Pipelines	Consultancy Services for Upgradation of Facilities of Numaligarh-Siliguri Product Pipeline (NSPL) for transportation of additional products	Oil India Limited (OIL)
Oil & Gas Processing	DeenDayal Field Development Project & Onshore Gas Terminal at Kakinada	Gujarat State Petroleum Corporation Ltd. (GSPC)
Strategic Storages	Strategic Crude Oil Storage in underground rock caverns at Vizag, Mangalore and Padur	Indian Strategic Petroleum Reserves Ltd.(ISPRL)
Storage and Terminals	PMC Services for LPG Cavern at Mangalore	Hindustan Petroleum Corporation Limited (HPCL)
Storage and Terminals	PMC Services for De-Bottlenecking and Augmentation of Cryogenic Facilities of BPCL LPG Import Terminal at Uran	Bharat Petroleum Corporation Limited (BPCL)
Infrastructure	Entry Level Activities for Namami Gange Project	National Mission for Clean Ganga (NMCG)
Infrastructure	Green Data Center Complexes at Manesar & Bengaluru	Unique Identification Authority of India (UIDAI)
Infrastructure	Data Centre Complex at Hyderabad	State Bank of India (SBI)
Infrastructure	Bhamashah State Data Centre (BSDC) at Jaipur	Department of Information Technology & Communications, Government of Rajasthan
Infrastructure	New Domestic Terminal Building and associated works at Leh Airport	Airport Authority of India (AAI)
Infrastructure	Greenfield International Airport at Mopa, Goa	Directorate of Civil Aviation, Government of Goa
Infrastructure	Green, IT enabled R & D Centre (Phase-I & Phase-II) at Bengaluru	Hindustan Petroleum Corporation Ltd. (HPCL)

Inspection Services

One stop solution for all inspection needs from shop fabrication till erection at site with a diverse pool of Engineers specialised in various Engineering disciplines.

EIL Inspection, an in-house department provides specialized Inspection, Expediting, Monitoring & Vendor Enlistment Services through its Pan India Regional Procurement Offices (RPOs) and Foreign Procurement Offices (FPOs) located at London, Milan and Shanghai. EIL inspection also renders Third Party Inspection services.

Mission

To deliver the world class projects for our clients across the globe with zero quality defects.

Who are we

EIL Inspection Team is a group of finest minds from Indian Technological Institutes, churned in practical exposure of manufacturing processes & quality control procedures at shop floors / Project sites of reputed & largest suppliers across the globe.

At present, we have strong & experienced team of Graduate & Post Graduate Engineers in Mechanical, Metallurgy, Electrical & Instrumentation streams. We have many Level II & III in advance Non Destructive Testing (NDT) Technology and added advantage of having blend of young and experienced professionals.

Our team, spread all over India covering strategic manufacturing hubs across its length & breadth and having footprints in China (Shanghai) & Europe (London & Milan) have expertise in inspection of all major & minor items which are put together in any project, viz. Oil & Gas Establishments, Refineries and Petrochemical Plants including Cross Country Pipelines, Petrochemical and Fertilizer, Offshore platforms, Non-Ferrous Metallurgy, Renewable Energy, Bio-fuels, Water and Waste Management & Infrastructure etc.



Focus Areas:

“Not just Inspection services, Services for entire life cycle of any project - where Quality and Project Schedule matters”

Industries / Sectors : We provide inspection services for Oil & Gas Establishments, Refineries and Petrochemical Plants including Cross Country Pipelines, Petrochemical and Fertilizer, Offshore platforms, Non-Ferrous Metallurgy, Renewable Energy, Bio-fuels, Water and Waste Management & Infrastructure etc.

State-of-the-Art Technology: Latest Non Destructive Technology (NDT) Time of Flight Defraction (TOFD) & Phased Array Ultrasonic Testing (PAUT) Digital Borescope / Radiography etc.

Key Services: Inspection & Certification, Monitoring & Expediting, Vendor Development, Site Fabrication Inspection, resolving site issues.

Clients / Business Partner:

International - ADNOC-UAE, SONATRACH-ALGERIA, DANGOTE-NIGERIA, BAPCO-BAHRAIN, ORPIC-OMAN.

National - IOCL, ONGC, OIL, GSPC, BPCL, HPCL, CPCL, NRL, HMEL, GAIL, BORL, MRPL, CAIRN ENERGY.

Make-In-India / Import Substitution: Development of Indigenous vendors for Steam Turbine, Compressors, Thermal sleeve (Mixing injection device-H2 service) Inert Gas Holder, 400 KV GIS & Transformer, Ultrasonic Flow Meter, Nucleonic Gas Detectors & Analyzers etc.

Industries/
Sectors:



State-of-the-Art
Technology



Key Services



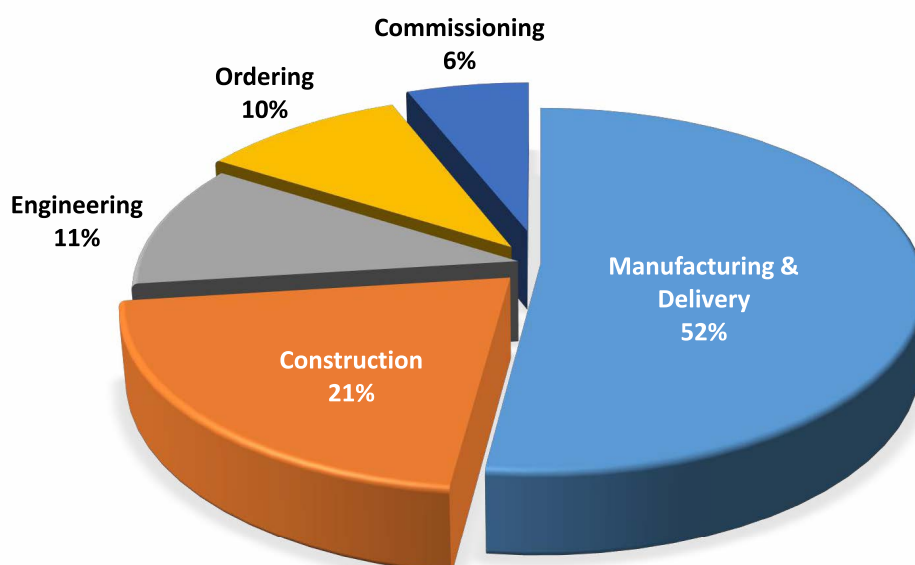
Clients /
Business Partner



Make-In-India
Import Substitution



The Success of any Project largely depends on Inspection & Expediting as 52% weightage is on Manufacturing & Delivery.

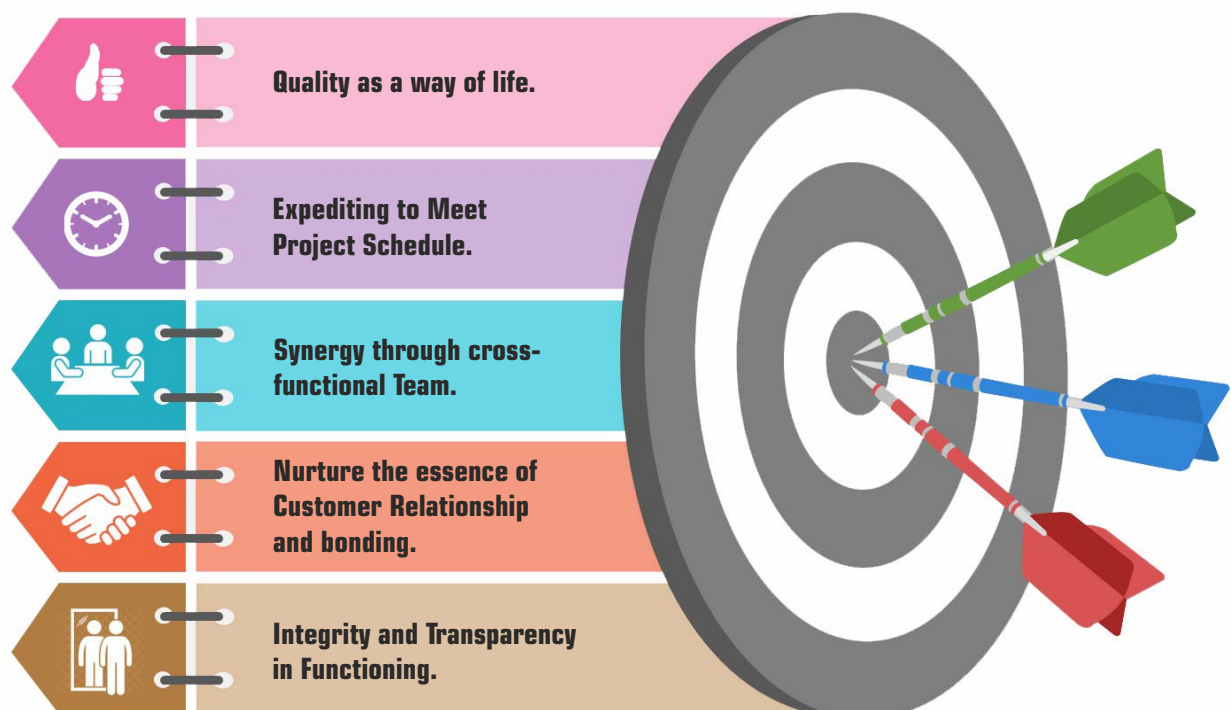


Contribution of EIL- Inspection towards Development of Industry & Economy

An Industry Standard – Vast database of 2300+ suppliers in 800+ categories.



Core Value of EIL Inspection



Unique Value Proposition of EIL Inspection

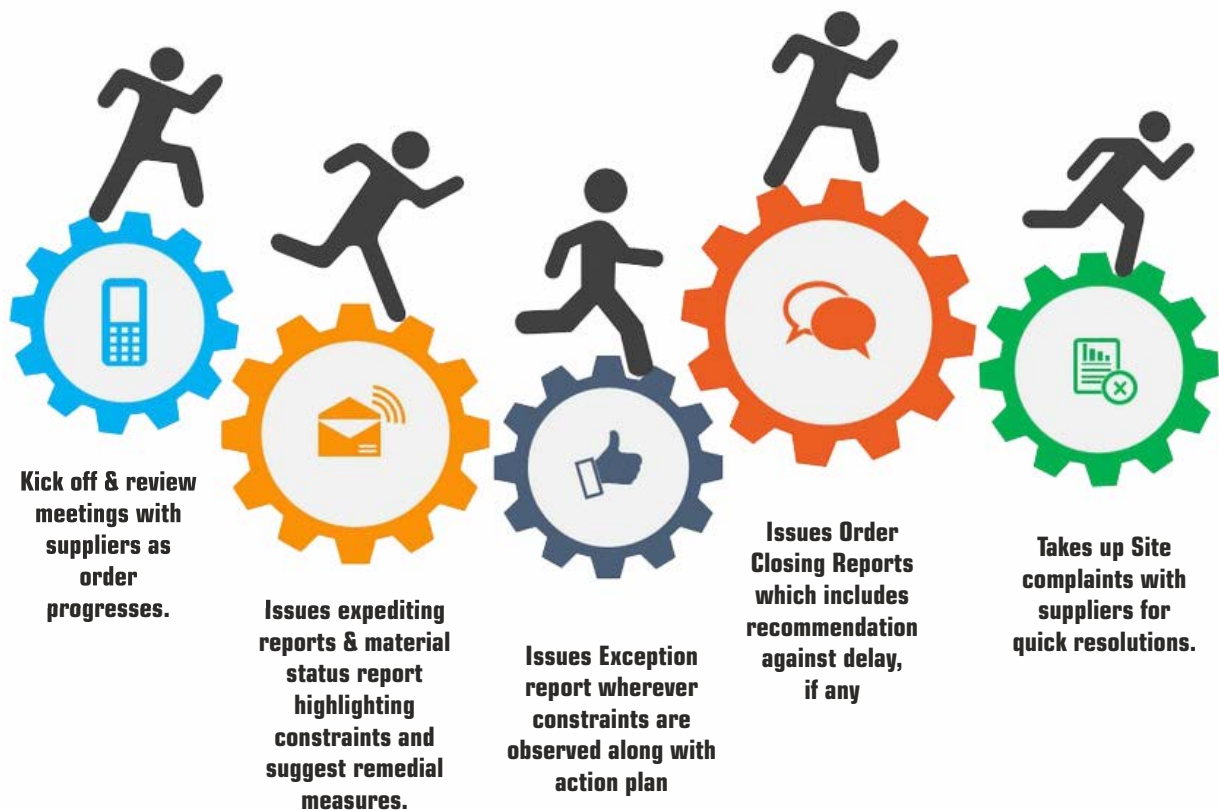
“Project Management rests on four pillars - Schedule, Cost, Quality and Safety”. We at EIL-Inspection strengthen all the pillars of Project Management.

EIL INSPECTION	Prebid / Bid Stage	<ul style="list-style-type: none"> ➤ Sets quality objectives. ➤ Provides Inspection & Test Plans (ITPs) in Bid documents. ➤ Participation in prebid meeting with potential bidders. ➤ Responds to bidder's inspection related queries. ➤ Intervention for bidder response.
	Development of Inspection & Test Plans (ITPs)	<ul style="list-style-type: none"> ➤ EIL Inspection department develops the Quality doc and ITPs ranging for almost all the items based on relevant IS / IEC / ASME code and latest Industry Practices.
	Expediting	<ul style="list-style-type: none"> ➤ Prime responsibility to ensure that orders are completed within Contractual Delivery Date (CDD). ➤ Techno - commercial facilitation to suppliers to ensure order completion. ➤ Generates expediting reports, to raise alarm in case of any anticipated delay. ➤ Generates recommendation for order closure / Price Reduction Schedule (PRS) in the form of Order Closing Report (OCR). ➤ Process concession & deviation permits.
	Procurement Development Department (PDD) Activities	<ul style="list-style-type: none"> ➤ Enlist new supplier / Enhance enlisted supplier. ➤ Process of Supplier Enlistment provides added advantage in knowing supplier's merits & demerits, manufacturing process / cycles of various equipment / items, their capacity & ranges. The expertise in knowing supplier's strength & weakness provides an upper hand in Project Management, Inspection expediting and resolving site issues. ➤ Develop Supplier for items which has limited competition ➤ Job Survey carried out on specific domain ➤ Supplier Monitoring. ➤ Capturing site failures, feedback, lesson learnt reports for enhancing quality measures of vendors among various Regions / Engg / Projects.
	Accountability	<ul style="list-style-type: none"> ➤ Unlike TPIA, EIL Inspection liabilities are not limited to inspection only. ➤ Inspection services with a sense of ownership of Project and optimization of all resources & deliverables. ➤ Undertake Shop floor Inspection.
	Inspection	<ul style="list-style-type: none"> ➤ Being In-house, EIL Inspection ensures that inspection is carried out with authentic & relevant approved documents only. Whereas TPIA rely on supplier for document authenticity. ➤ Our practical exposure and information about project requirement help in assessing criticality of item / parameters thereby we can decide / suggest waiver of non critical aspects and control schedule.
	Resolution of Site Issues	<ul style="list-style-type: none"> ➤ For Over Dimensional Cargo / Items undertake site fabrication inspection. ➤ Effective Interaction for Resolution of site issues with supplier / contractors. ➤ Follow-up for Over Short Reject Damage (OSRD). ➤ Enforce supplier HSE compliance.
	HSE	<ul style="list-style-type: none"> ➤ EIL Inspection Engineer is an integral part of Project and perform multiple task during complete project processes from concept to commissioning, not just doing shop floor inspection.
	Economy of Scale	

Expediting Services: An added advantage....

"Time is the scarcest resource and unless it is managed nothing else can be managed."

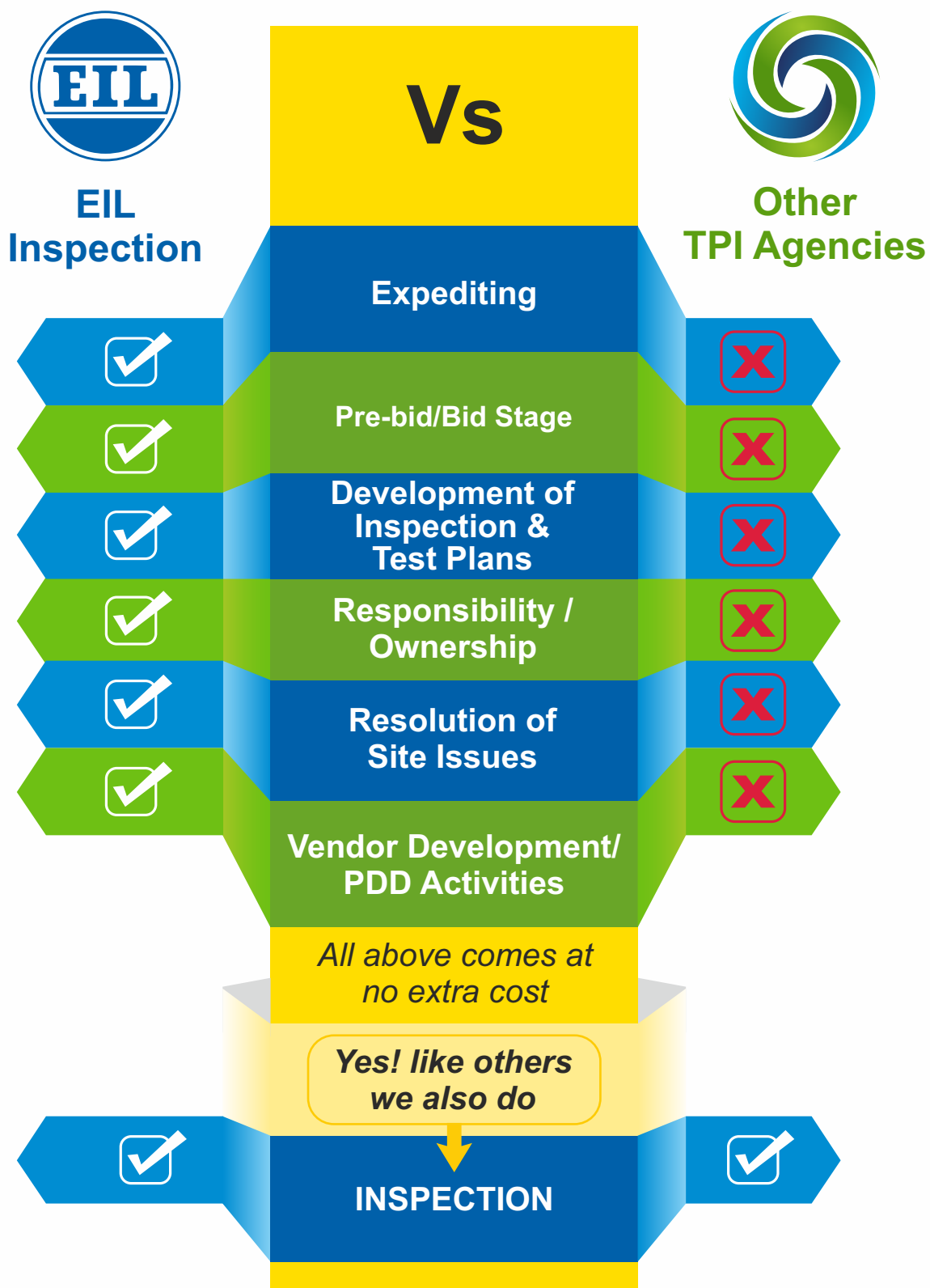
Our Inspection team also renders expediting services for our Project orders. We provide continuous monitoring of orders and expediting which includes:



**"Project Oriented Approach,
actions with a sense of Project
Ownership"**

Inspection with a sense of responsibility & ownership of Project, optimizes all resources including man-hours.

A Multidisciplinary Department



TPIA Services



Third Party inspection & expediting service is provided by Engineers India Limited almost for all types of equipment / PO items / System and packages but not limited to:

Fabricated Equipment like Long Fractionation column, Critical reactor, High pressure & Cryogenic vessel, Reformer, Reactor Regenerator, Heat exchangers, Air cooled heat exchanger, Electrical & Instrumentation (E & I) Items / Equipment etc :

- ❖ Better evaluation of all technical documents during inspection.
- ❖ Better control over suppliers, owing to long associations and Surveillance systems.
- ❖ Better query resolution and addressing issues faced during Inspection at Shop / Site due to multi-disciplinary knowledge and field experience.
- ❖ Quick resolution and end-to-end monitoring of site queries through an in-house web based software. Electronic document management systems in place - facilitating anytime, anywhere retrieval & archiving.
- ❖ Vast experience in the field of Inspection and extensive continuous on the job training given to the engineers at various levels.
- ❖ A Multidisciplinary team of engineers bring in experience, professional judgement & compliance to Codes / Specification / Good Engineering Practices.
- ❖ Project / Job specific vendor shop qualification through rigorous evaluation.
- ❖ In-depth knowledge of Casting, Forming, Forging operations and Fabrication process, Metallurgy, Corrosion / Surface treatment, Welding operations, Heat Treatment, NDT, Switch gears schematics, Field Instrumentation and other Latest technological advancements.
- ❖ Electrical and Instrumentation Engineers have varied exposure & in-depth knowledge of Hazardous Area classification, familiarization with various National / International standards & undertaking inspection of even highly specialized plant control systems & extra high voltage upto 400 KV equipment / items.
- ❖ Engineers are provided uninterrupted access to all order related documentation including Purchase orders, Purchase Requisitions, Specifications, Commented & Final approved drawings.
- ❖ Proactive feedback / Exception report to clients on various Inspection & Expediting activities.
- ❖ Complete online generation of Inspection visit reports, Failure reports, Release notes, Expediting reports, Delivery data updation, Order closing reports and also Vendor performance reports through internally developed softwares.
- ❖ EIL Inspection softwares are integrally connected to all Inspection offices, Departments of Projects, Design & Engineering, Warehouses at various sites providing real time analysis of order progress, assisting in efficient planning thereby timely achievement of Project progress.
- ❖ Yearly preparation and monitoring of Quality Objective Plans based on feedback, internal technical audits, management review and technical advancements.

Unmatched Experience

Glory from the past



TALLEST COLUMN: PROPYLENE FRACTIONATOR : Length - 102.86 metres x Dia 8.7 metres, Erection weight : 2017 MT.



**Breach Lock exchangers
Size: 1.6 metre OD,
MOC: 2.25Cr, 1.0Mo, SS347 weld overlay.**



3-Phase, 400/66 KV, 250 MVA Power Transformer.



Pipeline 52" , API 5L Pipe



Heat exchangers- Ethylene Fractionator 380 MT, 5000 mm shell diameter and with 15000 no of tubes, 6500mm length.



Centrifugal Compressor Train

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EIL QMS, EMS and OHSMS are certified to
ISO 9001, ISO 14001 and ISO 45001:2018 respectively



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