



## Directors' Report

To

**The Shareholders  
Engineers India Limited**

Dear Members,

Directors of your Company have great pleasure in presenting the 53<sup>rd</sup> Annual Report for the Financial Year ended March 31, 2018 along with Audited Statement of Accounts, the Auditors' Report and Review of the Accounts by the Comptroller and Auditor General of India.

### 2017-18 in Retrospect

Your Company sustained its good performance during FY2017-18. Key highlights of the financial performance of the Company for the year, as stated in the audited financial statement, along with corresponding performance for immediate previous year are as under:

### Financial Performance

(Figures in ₹ Lakhs)

Sl. No.	Description	Actual 2017-18	Actual 2016-17
<b>A.</b>	<b>INCOME</b>		
i)	Consultancy & Engineering Contracts	137929	116507
ii)	Turnkey Contracts	40829	28357
iii)	Other Income	17947	22366
	<b>TOTAL INCOME</b>	<b>196705</b>	<b>167230</b>
<b>B.</b>	<b>EXPENDITURE</b>		
i)	Cost of rendering services	137512	114961
ii)	Depreciation & Amortization	2383	2251
	<b>Total</b>	<b>139895</b>	<b>117212</b>
<b>C.</b>	<b>PROFIT BEFORE TAX (A-B)</b>	<b>56810</b>	<b>50018</b>
D.	Provision for Current tax	21669	21480
E.	Provision for Deferred Tax	(3179)	(3958)
F.	Earlier Year Tax Adjustments, Short/(Excess)	533	(8)
<b>G.</b>	<b>PROFIT FOR THE YEAR (C-D-E-F)</b>	<b>37787</b>	<b>32504</b>
<b>H.</b>	<b>OTHER COMPREHENSIVE INCOME</b>	<b>460</b>	<b>(2323)</b>
<b>I.</b>	<b>TOTAL COMPREHENSIVE INCOME</b>	<b>38247</b>	<b>30181</b>

### Segment wise Performance

(Figures in ₹ Lakhs)

Consultancy & Engineering Projects	Year ended 31.03.2018	Year ended 31.03.2017
<b>Segment Revenue</b>		
Consultancy & Engineering Projects	137929	116507
Turnkey Projects	40829	28357
<b>Total</b>	<b>178758</b>	<b>144864</b>

Consultancy & Engineering Projects	Year ended 31.03.2018	Year ended 31.03.2017
<b>Segment Profit From Operations</b>		
Consultancy & Engineering Projects	43027	35920
Turnkey Projects	7537	10355
<b>Total (A)</b>	<b>50564</b>	<b>46275</b>
Interest	57	317
Other un-allocable expenditure*	11644	18306
<b>Total (B)</b>	<b>11701</b>	<b>18623</b>
<b>Other Income (C)</b>	<b>17947</b>	<b>22366</b>
<b>Profit Before Tax (A-B+C)</b>	<b>56810</b>	<b>50018</b>
<b>Income Tax Expense</b>	<b>19023</b>	<b>17514</b>
<b>Profit for the year</b>	<b>37787</b>	<b>32504</b>
<b>Capital Employed **</b>	<b>226787</b>	<b>277596</b>

### NOTES:

\* Financial Year 2017-18 includes expenditure on oil and gas exploration blocks including dry well written off amounting to ₹ 2,643.14 Lakhs (previous year: ₹ 449.47 Lakhs)

Financial Year 2016-17 included ₹ 9062.88 Lakhs on account of provisions for increase in gratuity ceiling from ₹ 10 Lakhs to ₹ 20 Lakhs with effect from January 1, 2017.

\*\* Property Plant and Equipment and other assets used in the Company's business or segment liabilities contracted have not been identified to any of the reportable segments, as these assets and support services are used interchangeably between segments. Accordingly, no disclosure relating to total segment assets and liabilities has been made and capital employed has been presented.

### Dividend

The Board of Directors of the Company has recommended a final dividend of ₹ 1.50/- per share (of face value of ₹ 5/- per share) for the Financial Year 2017-18, in addition to ₹ 2.50/- per share interim dividend already paid during the year. With this, the total dividend for the Financial Year 2017-18 works out to ₹ 4.00/- per share amounting to ₹ 25276.62 Lakhs excluding dividend distribution tax. The payment of final dividend is, however, subject to approval of the shareholders in the ensuing Annual General Meeting of the Company which shall be paid to the Members whose names appear in the Register of Members as well as beneficial ownership position provided by NSDL/ CDSL as on 12<sup>th</sup> September, 2018.

### Changes in Share Capital and disinvestment by the Government of India

During the year, the Company has completed Buyback of 4,19,61,780 equity shares of the Company. Consequently, the paid up share Capital of the Company stands reduced from ₹ 33693.67 lakhs to ₹ 31595.58 lakhs (63,19,11,420 equity shares ₹ 5 each).

The President of India acting through the Ministry of Petroleum &



Natural Gas has dis-invested 4,19,46,454 equity shares under the Buyback of shares by the Company. Further, the Government of India has also dis-invested 1,35,88,409 equity shares to Bharat 22 ETF through a New Fund Offer in terms of scheme framed in this regard. Consequently, the Government of India (Promoter) share holding as on 31.03.2018 stands reduced to 52.02% (32,86,89,731 equity shares).

### Investor Relations

Company is committed to continually improving its Corporate Governance Practices for effectively managing its businesses and for protecting the interests of all stakeholders.

Your Company's Management is responsive for ensuring that the performance of your Company is accurately reported to its Shareholders, Investment Community, concerned Regulators and public on a regular basis.

To achieve the above objective, an Investor Relations (IR) Cell acts as a nodal intermediary with Investment Community for disseminating vital information pertaining to the Company in timely, accurate and consistent manner. IR Cell is responsible for effectively utilizing channels of communication like press releases, websites, participation in conferences, analyst meets, besides having one-to-one meetings with Analysts/ Brokers/ Domestic and Foreign Institutional Investors for sharing crucial information of the Company such as financial results, dividend policy, shareholding pattern, investor presentations and material news updates. Senior Management is actively engaged in annual meets and conferences for facilitating the Financial Community to comprehend Company's business model and to share with them new business areas, strategic outlook, and direction coupled with growth plans. Earning calls are generally held after the declaration of Quarterly/ Annual Results so that stakeholders are updated about significant developments of the preceding quarter. Major events, milestones and plans are shared within stipulated timelines with Stock Exchanges to keep them informed on the Company's performance and future outlook.

EIL remains committed to creation of an open and transparent environment for reaching out to existing and potential Investors and other stakeholders, thereby instilling trust and confidence leading to harmonious relationship with Investors.

### Management Discussion & Analysis

Separate report on Management Discussion and Analysis is annexed to this Report.

### Business Responsibility Report

The Business Responsibility Report covering initiatives taken with environmental, social and governance perspective has been prepared in accordance with the directives of SEBI and forms part of the Annual Report.

### Consultancy Assignments (Domestic)

#### Offshore Oil and Gas

During the year, your Company continued to make considerable progress in Offshore Oil & Gas and LNG sectors.

The following consultancy assignments were successfully completed during the year:

- Technical Bid Evaluation of EPC packages of Chhara LNG Project of HPCL Shapoorji Energy Pvt. Limited (HSEPL), a Joint Venture

between Hindustan Petroleum Corporation Limited (HPCL) and Shapoorji Pallonji Ports Private Limited.

Additionally, the following projects are currently under execution:

- PMC services for LPG Import Facility at Haldia, West Bengal, for Bharat Petroleum Corporation Limited (BPCL).
- PMC services for Dahej Expansion Phase-IIIB1 Project at Dahej LNG Terminal, Gujarat for Re-gas facilities for Petronet LNG Limited.
- Construction of Fifth Oil Berth at Jawahar Dweep Island of Mumbai Port Trust, Maharashtra.
- Life Extension of Well Platform Project of Oil and Natural Gas Corporation (ONGC), Western Offshore.
- Underwater structural repair of HC Platform in Heera Field of ONGC.

During the year, EIL secured the following orders against stiff competition and works are under implementation:

- Vetting of Cost Estimation Methodology for ONGC Offshore Projects.
- Consultancy Services for LNG Terminal at Dhamra, Odisha, of GAIL (India) Limited.

### Pipelines

EIL has developed an enviable track record in design, engineering and execution of cross-country pipelines for transportation of crude oil, refined petroleum products, natural gas and LPG across diverse geographies and demanding terrains. EIL ensures smooth and seamless execution of pipeline projects and has established itself with oil & gas conglomerates as a preferred consultant for execution of pipeline projects.

The following assignments were successfully completed during the year:

- Detailed Feasibility Report (DFR) of 327 km Multi product Bina-Panki Pipeline of BPCL.
- PFR of 1864 km long Middle East to India deepwater pipeline of South Asia Gas Enterprise Private Limited. The maximum depth at which pipeline shall be laid is 3,512 m below sea level which will be a World Record.
- EPCM Services for Upgradation of Pumping Stations for Naharkatia-Barauni Crude Oil Pipeline of Oil India Limited (OIL).

The following pipeline projects are in progress:

- PMC services for 18" x 45 km Re-routing of Mumbai-Manmad Pipeline for BPCL.
- PMC services for 24"/18"/8"/4" x 243 km Replacement of KG Basin Pipeline for GAIL.
- PMC services for 12"/ 8" x 450 km Kochi-Salem LPG Pipeline for KSPPL.
- PMC services for capacity augmentation of Jamnagar-Loni LPG Pipeline for GAIL.
- Modification/ Revamp of Vijaipur and Vaghodia HBJ/ DVPL system for GAIL for rich gas/ lean gas interconnection.
- PMC services for 30"/ 24"/ 18"/ 12" x 827 km Dobhi-Durgapur-Haldia Natural gas pipeline of GAIL.
- PMC services for 36" x 357 km Vijaipur-Auraiya Natural Gas Pipeline of GAIL.



- EPCM services for Palanpur-Vadodara Pipeline and Mundra-Delhi Pipeline capacity expansion Project of HPCL.
- Engineering and Consultancy services for 18" x 362 km Khunchanpalli-Ramagundam Pipeline project of GITL in Andhra Pradesh.
- Engineering and Procurement Services for Mundra-Bhatinda Pipeline Capacity Expansion of HPCL-Mittal Pipeline Limited.

The following major projects were secured by the Company in the Pipeline sector during the year and are in various stages of execution:

- Upgradation project for enhancement of pumping capacity of Barauni-Bongaigaon-Guwahati Sector of Naharkatia-Barauni Crude Oil Pipeline for OIL.
- PMC services for new selected C<sub>2</sub>-C<sub>3</sub> product injection scheme in HVJ pipeline at GAIL, Vijapur.
- Engineering, Procurement, Inspection & Expediting, Construction Supervision, Pre-commissioning & Commissioning assistance services for laying of 16" x 4.2 km pipeline from H<sub>2</sub>SO<sub>4</sub> Tank of IOCL Haldia Refinery to existing IOCL jetty.

#### Petroleum Refining

EIL has carved a niche as one of the leading engineering consultancy service providers to the refinery sector in India, having its footprints in 20 operating refineries including 10 grass root refineries in the country, Diesel Hydro-desulphurisation projects, Fuel Specification Upgradation Projects and revamp/modernization projects for most of the oil & gas majors.

The following Refinery Projects were successfully completed during the year:

- Implementation of Low Cost Expansion Project of HPCL Mittal Energy Limited (HMEL) at Guru Gobind Singh Refinery (GGSR), Bhatinda.
- Construction of new utility buildings for the refinery to relocate existing facilities as part of revised pre-project activities of Vizag Refinery Modernization Project (VRMP), HPCL.
- Tail Gas Treatment Unit (TGTU) at BPCL Mumbai Refinery for additional recovery (more than 99.9%) of Sulphur from acid gases emanating from SRU.

During the year, the Company achieved significant progress in the following projects:

- Distillate Yield Improvement Project at IOCL, Haldia Refinery. For the project, Engineering & Ordering have been completed and equipment deliveries are in an advance stage of completion. CDSP and 132 kV Switch yard are mechanically completed, Civil & Structural work have been completed and Mechanical, Electrical & Instrumentation works are in advance stage of completion.
- PMC services (Phase-II) for Revamp and Capacity Enhancement Project of BORL Refinery which aims to increase the refining capacity from 6.0 MMTPA to 7.8 MMTPA. For the project, ordering activities have been completed and receipt at site is nearing completion. New Penex Unit and Nitrogen plant have been commissioned. Civil & Structural works are nearing completion while site activities are progressing in full swing.
- EPCM services for 0.7 MMTPA DHDT and Supporting Facilities project at Numaligarh Refinery of NRL. For the project, engineering

and procurement have been completed. DHDT unit was successfully commissioned and on-spec product has been produced. Construction activities pertaining to the SRU are in full swing.

- Construction works are in advance stage for HGU Revamp, SRU/O<sub>2</sub> Enrichment, SWS Revamp and CDU-III Revamp of BPCL Mumbai Refinery.
- EPCM Services for LPG Import facility at Haldia for BPCL for which engineering and procurement are in progress while construction activities are in full swing.
- MR-II Tankages project at Mumbai, HPCL for which engineering and procurement are in advance stage and construction is also in progress.
- Significant progress has been achieved in Vizag Refinery Modernization Project with award of all major process packages viz., CDU, FCHCU, RFU, Naphtha ISOM, HGU, SRU, Revamp of NHT/CCR, DHDT and Prime-G to LSTK contractors. Utility packages of CPP, N<sub>2</sub> & compressed air, Sea & Bearing Cooling Water Tower have also been awarded. Detail Engineering and ordering of equipment is in progress. Site activities with respect to civil jobs have also been commenced by various LSTK contractors.
- EPCM services for BS-VI up-gradation project for six refineries of IOCL at Vadodara, Panipat, Mathura, Haldia, Bongaigaon and Digboi with the following units / revamps have progressed to a major extent:
 

a. Panipat Refinery	: 2.2 MMTPA DHDT, HGU (LEPC mode), SRU, TAME, ARU, SWS PRIME Revamp, Utilities and Tanks
b. Vadodara Refinery	: 2.0 MMTPA DHDT, HGU, FCCGHDS, ARU, Revamp of CCR & ISOM, Utilities and Tanks
c. Haldia Refinery	: 1.2 MMTPA DHDT, H <sub>2</sub> SO <sub>4</sub> , ARU, SWS, Revamp of Prime G, Utilities and Tanks
d. Mathura Refinery	: Revamp of DHDS, Prime G and Tanks
e. Bongaigaon Refinery	: 0.5 MMTPA NHT, SRU, ARU, Revamp of DHDT and HGU
f. Digboi Refinery	: Revamp of DHDT
- EPCM Services for BS-VI Fuel Quality Project of HMEL consisting of a New DHDT (1.9 MMTPA), HGU & Offsite. For the project, engineering, procurement and construction activities are in progress.
- EPCM services for BS-VI Project and Associated Facilities at MRPL Refinery, Mangalore to upgrade their products to BS-VI standards. Basic Design Engineering Package (BDEP) finalized for the BS-VI project facilities. Detailed engineering and ordering activities are nearing completion for long-lead items and civil construction works are in full swing.
- Mumbai Refinery Expansion Project (MREP) at HPCL, Mumbai Refinery is being executed on EPCM/ PMC basis. MREP's objective is to produce upgraded BS-VI fuels along with Plant capacity expansion of 2.5 MMTPA.
- PMC and EPCM services for Gasoline Hydrotreating Unit Project at BPCL, Mumbai Refinery to produce BS-VI quality Gasoline.



- EPCM services for BS-VI Project at BPCL Kochi Refinery, Kochi.
- EPCM services for Heat Traced Pipeline projects with associated facilities at Mumbai & Kochi refineries of BPCL.
- PFR of West Coast Refinery of RRPCL (Ratnagiri Refinery & Petrochemicals Corporation Limited): A consortium comprising IOCL, HPCL and BPCL intends to jointly set up a mega refinery-cum-petrochemical complex on the West Coast, primarily to cater to the growing fuel and petrochemical requirements of the country, besides addressing the additional objective of selective export of the produce. Market Study and selection of consultant for the configuration study were awarded to EIL.

The following projects were secured by the Company in the Petroleum Refining sector during the year and good progress has been achieved in these projects:

- PMC services for installation of new Kero Hydro Desulphurization unit at Bina Refinery of Bharat Oman Refineries Limited (BORL). The new Unit will be installed and hooked up with existing refinery aiming to meet BS-V/VI specifications for MS and HSD, maximization of Diesel production, minimize Kero production and Sulphur reduction in ATF. Engineering activities have commenced for long-lead items and critical equipment.
- License, BDEP and other related services for new 0.235 MMTPA NHT Unit and revamp of existing DHDT Unit at Bongaigaon Refinery, IOCL.
- BDEP and other services for installation of INDJET Unit (ATF Hydro Treating Process) at Barauni Refinery, IOCL.
- Pre-project activities for Rajasthan Refinery Project, HPCL.
- Preparation of DFR and Licensor Selection for process units of Cauvery Basin Refinery project, Chennai Petroleum Corporation Limited (CPCL) at Nagapattinam, Tamil Nadu.
- EPCM services for NHT Modification at ONGC Mangalore Petrochemicals Limited (OMPL), Mangalore for processing of Naphtha with higher Olefins. Detailed engineering and procurement is underway.

#### **Petrochemicals**

EIL has been involved in the establishment of a large number of mega petrochemical complexes in India. The Company has provided Engineering Consultancy services for various processes including Gas based/ Naphtha based cracker complexes and Aromatic plants comprising Naphtha splitters, pre-treaters/ reformers, Benzene-Toluene extraction units, pyrolysis gasoline hydrogenation units, Xylene fractionation and isomerization units including overall integration and optimization of such complexes.

The following Petrochemical Projects were successfully completed during the year:

- PPU Expansion Project of HMEL at GGSRL Complex at Bhatinda, Punjab.
- Licensor Selection and preparation of DFR for HMEL Petrochemical Complex at Bhatinda, Punjab.
- Additional jobs to increase operation flexibility of C<sub>2</sub>-C<sub>3</sub> recovery plant at GAIL, Vijaipur, Madhya Pradesh.

Significant progress has been made on the following petrochemical projects:

- Propylene Derivative Petrochemical Plant (PDPP) of BPCL, Kochi Refinery comprising Acrylic Acid Unit, Oxo-Alcohol Unit and Acrylates Unit. For this project, engineering and ordering activities are nearing completion and delivery of equipment and materials is in progress. Construction activities are progressing in full swing.
- EPCM services for 500 TPD Methanol Project and Associated Facilities for Assam Petrochemicals Limited, Namrup. Detailed engineering and procurement activities are in advance stage while Piling and Civil construction works are gaining momentum.

The following projects were secured by the Company in Petrochemical sector during the year and are in progress:

- GGSR Polymer Addition Project of HMEL at Bhatinda, Punjab comprising EPCM services for DFCU, LLDPE, HDPE (Swing) Butene-1, HDPE & PP Units (Powder Section) and Utilities & Offsite and PMC services for HDPE & PP Units (excluding Powder section). Environment clearance (EC) for the Project has been obtained. Licensor selection for all the Petrochemical Units was carried out by EIL on fast track basis and recommendation for award has been sent to HMEL. Detailed Engineering and Ordering / Tendering have been carried out and all civil and structural contractors have mobilized at site.
- Expediting Services for procurement and construction supervision of two process units namely Bitumen Blowing Unit (BBU) and Polypropylene Unit (PPU) for HMEL Petrochemical Complex at Bhatinda, Punjab.
- Licensor Selection and Pre-project activity for Andhra Pradesh Petrochemical complex at Kakinada for GAIL/ HPCL. Licensor selection and Pre-Project activities are in progress. Terms of Reference (TOR) for the project have been approved by MoEF&CC.
- Consultancy Services for DFR, EIA/RRR and Licensor Selection for Propane Dehydrogenation (PDH)/ Polypropylene (PP) Unit at GAIL, Usar in Maharashtra. The Project has a dedicated Propane Storage, Unloading Facility and Pipeline connectivity upto plant.
- Detailed Engineering for Flare Recovery Unit, Lower Explosive Limit (LEL) detector Adequacy check, Improvement of Utility System at GAIL, Vijaipur, Madhya Pradesh.

#### **Strategic Storages**

The Strategic Crude Oil Storage Programme is the flagship energy security initiative of the Govt. of India which aims at creating a buffer stock of crude oil in underground caverns to meet requirements in case of any disruption of supplies from abroad.

Under Phase-I of the Strategic Storage programme, EIL provided PMC services to Indian Strategic Petroleum Reserves Limited (ISPRL) for construction of underground unlined rock cavern storages in Vishakhapatnam, Mangalore and Padur having a total capacity of 5.33 MMT. During the year, Mangalore-Padur Pipeline and 110 kV HT line have been mechanically completed.

#### **Metallurgy**

The following key Metallurgy assignments were completed during the year:

- Consultancy services for Feasibility Study and preparation of scheme for complete revamping of Rectifier Station-1 at Hirakud, Odisha for Hindalco.
- Consultancy services for Swing Unit Feasibility Study and Rectifier



System study of 220 kV Switchyard System at Smelter-1, Jharsuguda, Odisha for Vedanta Limited.

- Consultancy services for implementation of Fume Treatment Plant in the existing Baking Furnace at Smelter Plant, Angul, Odisha for National Aluminium Company Limited (NALCO).
- Scoping study for Structural Integrity of Aluminium Plant at Renukoot, Uttar Pradesh for Hindalco.

The Company achieved significant progress in the following assignments:

- Consultancy services for implementation of revised plant operation philosophy (Electrical) for NALCO's Alumina Refinery at Damanjodi, Odisha.
- 4<sup>th</sup> Stream upgradation project for Mines [6.3 Million Tons per Year (TPY) to 6.8 Million (TPY)] and Alumina Refinery (5.25 Lakh TPY to 7.00 Lakh TPY) at NALCO, Damanjodi, Odisha.
- Consultancy services for procurement and installation of Reclaimer and Associated Facilities in NALCO's Alumina Refinery at Damanjodi, Odisha.
- Consultancy services for 2<sup>nd</sup> raw water intake pump house and pipeline at NALCO, Damanjodi, Odisha.
- Detailed Feasibility Report for mechanised production and evacuation for Kurmitar Iron Ore Mines of Odisha Mining Corporation Limited.
- DFR for Kodingamali Bauxite Mines of Odisha Mining Corporation Limited.

The following assignments were secured by the Company in Metallurgy sector during the year and are in progress:

- Consultancy services for Retrofitting of HRD (High Rate Decanter) and DCW (Deep Cone Washer) in Stream-1, Stream-2 & Stream-3 of NALCO's Alumina Refinery at Damanjodi, Odisha.
- Consultancy Services for Comprehensive Geostatistical Resource Evaluation and Resource Classification of Polymetallic Nodules in the Central Indian Ocean Basin awarded by National Institute of Oceanography.

### Infrastructure

EIL has developed a strong track record in Infrastructure sector by providing a wide spectrum of services such as Project Management, Project Management on Depository Basis, Third Party Inspection (TPI), Quality Assurance, Independent Engineer and Lender's Engineer services, Project Appraisal and Project Execution Services to key players in the sector.

During the year, following major assignments were completed:

- Consultancy services for preparation of Master Plan and Detailed Project Report (DPR) for development of Rajkot Airport, Gujarat to international standards.
- Civil Engineering services for Greenfield Airport at Rajkot, Gujarat.
- Engineering Consultancy services for development of Deoghar Airport, Jharkhand.
- Review of Master Plan for development of Greenfield International Airport at Mopa, Goa.
- PMC services for execution of balance works of Konark Sun Temple

for Indian Oil Foundation in Odisha.

EIL achieved substantial progress in following projects:

- PMC Services for
  - Establishing Cold Storage Facility at Guntur, Andhra Pradesh.
  - Data Centre at Hyderabad for SBI.
  - Housing Project of Gujarat Housing Board.
  - Rejuvenation of nine cities of Odisha under AMRUT Scheme.
  - Development of IIT Patna Campus, Bihar.
  - Establishment of Main Campus of Central University of Punjab at Bhatinda.
  - Bhamashah State Data Centre (BSDC), Jaipur for Department of Information Technology & Communication (DoIT&C), Government of Rajasthan.
  - Headquarter Building of UIDAI in Delhi.
  - Construction of new Domestic Terminal Building and associated works at Leh Airport, Jammu & Kashmir.
- Extension of TPI services for Infrastructure Projects of Pune Municipal Corporation, Maharashtra.

The Company's footprints in Infrastructure sector received an impetus with securing of following infrastructure assignments during the year:

- Third Party Assessment Services for establishment of Bhamashah State Data Centre, Jaipur for DoIT&C, Government of Rajasthan.
- Engineering & PMC for Development of Tourist Infrastructure facilities in and around Khajuraho group of Temples, Madhya Pradesh.

### Fertilizers

EIL is leveraging its capabilities and global network to tap significant business opportunities presented by fertilizer sector in India and Overseas. As part of strategic investment in Fertilizer sector, EIL has taken 26% equity stakes in a JV Company M/s Ramagundam Fertilizers & Chemicals Ltd. (RFCL) along with NFL and FCIL. RFCL has been formed to pilot the Revival of Ramagundam Fertilizer Project. EIL is executing this project on EPCM Mode.

Engineering activities for the project are nearing completion while ordering of all equipment has been completed and equipment are being received progressively at site. All work contracts have been awarded. Site activities are in full swing with civil works nearing completion and mechanical works in progress.

### Water and Waste Management

EIL has the expertise to undertake a multitude of Water Treatment projects such as Raw Water Intake and Treatment Systems, Desalination plants, Cooling Water plants, Water Injection plants, Demineralization Plants, Condensate Polishing plants etc. The Company has also evolved standard basic engineering modules for municipal sewage treatment plants as well as standalone recycle plants.

The following Water and Waste Management assignment was completed during the year:

- Preparation of DPRs for Water Supply Projects of AMRUT scheme in 9 cities of Odisha.

During the year the Company achieved significant progress in

following projects:

- Execution of Entry Level Activities including development of Ghats and Crematoriums within Uttar Pradesh and implementation of Sewerage Infrastructure works at Mathura under the Namami Gange Programme.
- Technical and Financial Audit of infrastructure works in various Urban Local Bodies (ULB) for Punjab Municipal Infrastructure Development Company (PMIDC).
- PMC Services for sewerage system in Ponda colony – Zones IA & IB of Goa for Sewerage and Infrastructure Development Corporation of Goa Limited (SIDCGL).
- PMC Services for the Interceptor Sewer Project of Delhi Jal Board (DJB) for abatement of pollution in river Yamuna. Package-1 has been already handed over to DJB and the packages 2 to 6 are in progress.
- EPCM Services for Effluent Treatment Plant (ETP) at Tengakhat, Assam for OIL.
- PMC services for ETP revamp at BPCL, Mumbai Refinery.

The following assignments were secured by the Company in Water and Waste Management sector during the year and are in progress:

- Consultancy Services for Techno-commercial and Environmental Feasibility Study for construction of De-salination Plant at Mori, Kesanapalli and Malleswaram fields of ONGC Rajahmundry Asset in Andhra Pradesh.

#### Alternate Fuel

In the alternate fuel area, EIL secured following assignments during the year:

- DFR for setting-up 2G Ethanol Bio-Refineries at Bina, Madhya Pradesh, Bargarh, Odisha and Maharashtra including technology evaluation of 2G Ethanol Bio-refinery in Maharashtra for BPCL.
- DFR for setting up 2G Ethanol Project at Mangalore for MRPL.
- DFR for drop-in bio fuel project at U.P. was also completed during the year.

#### Nuclear Power

EIL is making promising inroads in Nuclear power sector as well. Detailed Engineering Consultancy and Construction Supervision for setting-up Greenfield Nuclear Fuel Complex at Rawatbhata, Kota, Rajasthan is in progress.

#### Overseas Assignments

EIL has leveraged its strong track record in the Indian hydrocarbon sector to successfully expand its international operations. Over the years, the Company has emerged as a global player with the execution of a number of prestigious assignments for international energy majors in Middle East, Africa and South East Asia.

During the year, the following overseas assignments were completed:

- Detailed Feasibility Study (DFS) for construction of an Oil Refinery Plant with a Crude Oil Supply Pipeline Project in Mongolia from Ministry of Industry, Government of Mongolia (MMHI).
- DFS for LNG Regasification Terminal at Kutubida Island, Bangladesh.

- FEED to divert excess MP fuel gas to MP gas header – Habshan complex of ADNOC Gas Processing (formerly GASCO), UAE.
- Consultancy study for waste water management at Ruwais Refinery (East) and Abu Dhabi Refinery Division of ADNOC Refining, UAE.
- Technical Consultancy services for CNG station equipment packages, Phase-III of ADNOC Distribution, UAE.
- Engineering services for relocation of Suction Valves in Hot Oil Pumps and resultant piping modifications at Condensate Units 211 and 411 in Ruwais Refinery (East) of ADNOC Refining, UAE.
- Pre-FEED and FEED for enhancement of sales gas export from ASAB for ADNOC Gas Processing, UAE.
- FEED for provision of cross over among condensate stabilizers U27 and U200 of ADNOC Gas Processing, UAE.
- Installation of Chemical Injection Skids and Solar Power systems in US and ZK Wellhead Towers (WHTs) of ADMA-OPCO, UAE.

EIL achieved substantial progress in the following projects:

- PMC services for execution of 1900 TPD Ammonia Plant of PT. Panca Amara Utama in Central Sulawesi, Indonesia. The plant has been mechanically completed and is in advanced stage of commissioning.
- EPCM services for the prestigious Dangote Refinery and Petrochemical Project, Nigeria comprising a 460,000 BPSD grassroot Petroleum Refinery and 830 KTPA Petrochemical Complex at Lekki Free Trade Zone, Nigeria for Dangote Oil Refining Company (DORC). The major process units in Refinery include Crude Distillation Unit (CDU), a Residue Fluid Catalytic Cracking unit, MS Block, a Mild Hydrocracker unit, Alkylation and Sulphuric Acid Regeneration Unit, Hydrogen Plant, Polypropylene Unit, Sulphur block and associated Utilities generation and Offsite facilities. The Project facilities include crude oil receipt and storage including two SPMs with associated offshore/ onshore pipelines. The product dispatch facilities include product disposal through road as well as ships. Dispatch of products comprises pumping facility, onshore and offshore pipeline as well as three SPMs.
- Revamp/ Expansion of Dangote Refinery, Nigeria from 460,000 BPSD to 650,000 BPSD. With this revamp in CDU, SWS, ARU, SRU, RFCC Gasoline, Offsite & Utilities, this will become the largest single train refinery in the world.
- PMC Services for AL DABBIYAH ASR Gas Development Project of ADNOC Onshore, UAE.
- PMC services for 3 MMTPA grassroot refinery of Eastern Refinery Limited in Bangladesh having 17 units like CDU, VDU, SAT GAS, LPG Treating Unit, NHT, ISOM, CCR, KTU, DHDT, HCU, VBU, SWS, ARU, SRU and H<sub>2</sub>.
- PMC services for Rehabilitation and Adaptation of Algiers Refinery of SONATRACH having new units of MS Block, RFCCU, SRU, and revamp of existing units. Substantial progress has been achieved on construction front.
- PMC services for Rehabilitation of Ethylene Unit at Skikda Petrochemical Complex of SONATRACH, Algeria. The Phase-I project activities have been successfully completed and report submitted.



- Design, Consultancy and PMC Services for Miscellaneous Tank Farm, Piping, Instrumentation and Control System, Inspection, Repair, Maintenance & Upgrade works at various depots of ADNOC Distribution, UAE.
- FEED for Upgradation of Ethane Flow meter Skid in Train I, II & III (Ruweis) of ADNOC Gas Processing, UAE.
- FEED/ Detailed Engineering for provision to route high C<sub>3</sub> content sales Gas from H2 to THAMMAMA-F Injection wells of ADNOC Gas Processing, UAE.
- Technical Support services for Structural Integrity/ Adequacy check of existing Pipe racks at Habshan Plant - Phase 4 of ADNOC Gas Processing, UAE.
- Feasibility Study for Crude Receiving facilities at Ruweis of ADNOC Refining, UAE.
- Project Management Assistance (PMA) services for improvement of Fire fighting Facilities at Abu Dhabi Refinery for TAKREER, UAE.
- Conduct Study on Upgradation of DEO Flow Meter Skids in Train-1, 2 and 3 in GASCO Ruweis, UAE.
- DFR of 306 km White Petroleum Oil (Multiproduct) Pipeline from Chittagong to Dhaka for Padma Oil Company Limited, Bangladesh.

The following assignments were secured by the Company during the year and are in progress:

- DFR for Petroleum Products Terminal and Jetty at Port Albion, Mauritius for State Trading Corporation (STC).
- Additional PMC/ EPCM Services for new units, namely, DHDT, SWS and ARU in Dangote Refinery, Nigeria.
- Structural Integrity/ Adequacy Check of existing pipe racks at Habshan Plant – Phase 4 of ADNOC Gas Processing, UAE.
- Feasibility study of crude receiving facilities at Ruweis of ADNOC Refining, UAE.
- Various Engineering Services Assignments were awarded under Technical Support Services Agreement (TSSA) by ADNOC Gas Processing, UAE.
- Design and Detailed Engineering services for EPC for enhancement of Steam Condensate System at ASAB-2 and Implementation of PCR PE1695 Segregation of Hydrocarbon Flare Headers at Unit 13 Habshan-1 for DESCON Engineering Limited, UAE.
- Detailed Engineering Services for recommended Synergy Tie-ins and MP Steam Lines at Ruweis Fertilizer Complex (FERTIL) for ALSA Engineering & Construction, UAE.
- Development of Engineering Standards for Gas Distribution Network; various training programs on Heat Exchangers and Heaters and Technical Assistance by providing several engineering design services for BAPCO, Bahrain.

#### Turnkey Projects

EIL's turnkey project portfolio consists of projects executed on LSTK mode or on the 'Open Book Estimate (OBE)' basis.

The following LSTK Project was commissioned during the year:

- Coker Block of Resid Upgradation Project of CPCL, Chennai comprising DCU of 2.2 MMTPA and LPG CFC Treating Unit of 8.8 TPH.

The following LSTK/ OBE jobs witnessed considerable progress during the year:

- Modification work at Hazira Plant under Daman Development Project of ONGC on OBE basis.
- Installation of Lean Gas Compressor at Hazira Plant of ONGC.
- Site grading, Offsite & Utility facilities with integration to existing refinery under Vizag Refinery Modernization Project.
- BS-VI Project at Manali Refinery of CPCL.

During the year, EIL was successful in securing the following projects on OBE basis, which are now in progress:

- Revamp of Slug Catcher at Uran Plant of ONGC in Maharashtra.
- Revamp of SRU at Hazira Plant of ONGC in Gujarat.

#### Performance of Divisions

##### Process Design & Development

The Process Design & Development Division is primarily engaged in providing design services for grass root as well as revamp projects in the field of Refineries, Petrochemicals, Oil & Gas & cross country Pipelines. The Division is also responsible for design of heat & mass transfer equipment namely columns, heat exchangers, fired heaters etc. & selection of material of construction for various applications, failure analysis as well as residual life assessment services. The activities undertaken by the Division include Configuration Studies using LP modelling techniques, Feasibility Studies including cost estimation & financial analysis, Technology Evaluation Studies for licensed technologies, Basic design of open art units, EIL licensed units as well as utilities & offsite facilities, Residual process design of licensed units, Detail engineering follow up, Pre-commissioning/ Commissioning, Plant start up assistance & Trouble shooting.

The Division is also actively involved in supporting Marketing Division towards securing new business for the Company from existing as well as new clients, both in India and overseas.

Prominent assignments undertaken by the Division during the year include the following:

- Preparation of DFR for setting up a grassroot refinery in Mongolia based on local crude. This is the first assignment won by EIL from Mongolia.
- Preparation of DFR for setting up grassroot Marketing Terminal facility for petroleum products at Mauritius. The assignment was awarded to EIL based on the Pre Feasibility studies (PFR) prepared by the Company.
- Preparation of PFR & providing back up consultancy services for setting up of long distance inter-continental gas pipelines between Russia & India, TAPI pipeline between Turkmenistan & India & deep water gas pipeline from Middle East to India.
- Preparation of DFR as well as FEED (Front End Engineering Design) for Chittagong-Dhaka multiproduct pipeline.
- DFR for PDH/ PP facility at GAIL, Usar. The proposed PDH (Propane Dehydrogenation) facility of GAIL shall be the first PDH facility in India.
- DFR for a new Bina-Panki multi-product pipeline for BPCL.
- DFR for land based LNG terminal for Bangladesh.



- DFR for Butene-I & HPG Unit at Brahmaputra Cracker & Polymer Ltd., Lepetkata, Assam.
- PFR for Pet Coke Gasification for MRPL, Mangalore.
- PFR for Ethylene Cracker and Associated Facilities at Rasayani for BPCL Mumbai Refinery.
- DFR updation based on modified feed/ product profile for grassroot Petrochemical Complex at Kakinada for GAIL.
- PFR for capacity expansion of IOCL's Panipat refinery to 25 MMTPA.
- Feasibility Study for expansion of Bina Refinery, BORL to 15 MMTPA with Integrated Petrochemical Complex.
- Revised DFR for MREP (Phase-I) and hydrogen based Residue Upgradation Project (MREP Phase-II) for HPCL Mumbai Refinery.
- DFR for CPCL's 9 MMTPA Cauvery Basis Refinery Project.
- Configuration Study for expansion of Mangalore Refinery, MRPL to 25 MMTPA.
- Pre-Feasibility Study for a mega Refinery-cum-Petrochemical Complex on West Coast of India.
- Configuration Study for PMC services for revamp of Captive Power Plant (CPP) at Vizag Refinery Modernisation project of HPCL.
- Configuration Study for capacity expansion of IOCL's Gujarat Refinery from 13.7 MMTPA to 18 MMTPA.
- Feasibility Report for a Naphtha-based grassroot Petrochemical Complex in Bangladesh for Super Petro Chemical Limited. This complex may become the first petrochemical complex in Bangladesh.
- Configuration Study, technology evaluation & basic design activities for grassroot Petrochemical Complex of HMEL at Bhatinda. The proposed complex includes a Steam Cracker of 1.5 MMTPA which is the largest capacity cracker being set up for the first time in the country. The project is being executed by EIL under EPCM mode.
- Design of Sulphuric Acid pipeline from IOCL Haldia Refinery to loading jetty. Long distance pipeline for Sulphuric Acid transportation has been designed for the first time by EIL.
- New DHDT unit is being set up at IOCL Haldia Refinery to produce Diesel fuel conforming to BS-VI quality specifications. The basic design of the unit has been done by Process Division & the Hydrotreating technology is jointly developed by EIL & IOCL. The unit is under implementation on EPC route with EIL as the PMC.
- New NHT (Naphtha Hydrotreating Unit) is being developed at IOCL, Bongaigaon for feed preparation for downstream Isomerization unit to produce Gasoline fuel conforming to BS-VI quality specifications. This is the first NHT unit for which the Hydrotreating Technology has been jointly developed by EIL & IOCL and EIL has developed the conceptual and basic design package. The unit, being executed under EPCM mode, is at detailed design stage.
- Completion of Commissioning activities for all grassroot and revamp units, utilities and offsites for Integrated Refinery Expansion Project at BPCL's Kochi Refinery for enhancing the refinery crude processing capacity from 9.5 to 15.5 MMTPA.
- Basic design & detail engineering of grassroot LPG Import Terminal facilities of BPCL at Haldia. The facility involves import & storage of cryogenic LPG in double wall cryogenic tanks.
- Technology selection, residual process design & detail engineering follow up for grass root Sulphuric Acid plant based on sour gases for IOCL-Haldia. This facility is being set up for the first time in India.
- Technology evaluation for selection of licensor for grassroot PDH and PP units of GAIL at Usar.
- Licensor evaluation activity (NIT preparation) for Petrochemical Complex at Kakinada for GAIL.
- Execution of BS-VI projects at six refineries of IOCL which involves implementation of process units, both grass-root & revamp, as well as matching utilities & offsite facilities for production of BS-VI quality MS & HSD products. Activities undertaken by Process Division for BS-VI project implementation include preparation of DFR for each refinery, technology selection, owner's engineer for licensor package review, detail engineering follow up, preparation of FEED for units to be implemented on EPC mode & EPC bid evaluation.
- PMC activities for FEED preparation at refinery of Eastern Refinery Limited, Bangladesh.
- BS-VI implementation for HMEL which includes grassroot DHDT unit, revamp of existing Hydrogen Generation Unit (HGU) to enhance its capacity & revamp of associated utility & offsite facilities.
- Capacity upgradation of select Process Units, Utility and Offsites facilities for Dangote Oil Refinery Company from 460,000 BPSD to 650,000 BPSD.
- Basic design & implementation of grassroot Naphtha Fractionation Unit (NFU) project at ONGC Hazira Plant as part of Daman Development Project. The project, implemented under OBE mode, has been successfully commissioned.
- Consultancy services including failure analysis & rectification measures for existing LPG Cryogenic Tanks of BPCL at Uran.
- Flare System modification of Hidd Metering Station at Bahrain.
- Replacement of existing SRU trains with new facility as part of SRU Revamping Project of ONGC at Hazira under OBE Mode.
- Detailed engineering activities for CPP of HPCL at Mumbai & Visakh Refinery.
- Licensor selection for Residue Upgradation facilities of HPCL's Vizag Refinery Modernization Project.
- License, Engineering, Procurement and Construction Management (LEPCM) Services for 500 TPD Methanol Plant of APL.
- License & BDEP preparation for New SRU with TGTU at MRPL, Mangalore.
- Pre-project activities including licensor selection, preparation of BDEP for CDU/ VDU, etc., for Rajasthan Refinery Project of HPCL Rajasthan Refinery Limited.
- Licensing & BDEP preparation for Revamp of Coker-B & LPG Recovery Unit of IOCL, Barauni Refinery.
- Commissioning of DCU of CPCL, Chennai.
- Commissioning and Performance Guarantee Test Run of Feed Preparation Unit for IOCL, Haldia Refinery.
- Pre-commissioning & Commissioning of NRL DHT Project.





- Commissioning of grassroot Diesel Hydrotreater Unit and other associated facilities, i.e., CDU-3 (RMP), SWS, ARU, HGU, Utilities and Offsites for BPCL's Mumbai Refinery.

### Engineering

During the year, the Engineering Divisions of EIL continued their efforts towards providing optimized and value added services for all ongoing projects consistent with the client requirements and objectives of the Company. The various divisions maintained focus on key areas like System Improvement and quality of deliverables, enhanced productivity by adopting knowledge from past data, repeatability of design, enhanced software application and implementation of Electronic Data Management System (eDMS) along with improved information exchange and communication systems resulting in lesser manual interfaces. Major emphasis was laid on Automation and Standardization of systems, implementation of Internal Audit and Monitoring and updation of specifications standards and guides. Some of the major activities undertaken are as under:

### Equipment Division

Equipment Division is providing engineering services for procurement of critical equipment. Some of the critical jobs undertaken by the division are as under:

- Engineering for procurement of 1.2 MW rotary screw compressor for flash gas, 2 nos. 2.5 MWe and 1 no. 1.2 MWe Diesel engine based generating sets and 6 nos. 0.25 MW vertical in-tank centrifugal pumps for double wall tanks for LPG Import Terminal of BPCL.
- Engineering for procurement of VFD fed electric motor driven mainline horizontal multistage centrifugal pumps (1.5 ~ 2.6 MW) and vertical centrifugal booster pumps for Palanpur-Vadodara Pipeline & Mundra-Delhi Spur pipeline of HPCL.
- Engineering for procurement of VFD fed electric motor driven multistage centrifugal compressor (2.25 MW) for new lean gas compressor project of ONGC.
- Engineering for procurement of 6 nos. 1.5 MWe, 1 no. 1.0 MWe and 1 no. 0.75 MWe Crude Oil Engine based Generating sets for OIL for Upgradation Project for enhancement of pumping capacity of Barauni-Bongaigaon-Guwahati Sector of Naharkatia-Barauni Crude Oil Pipeline Project.
- Engineering for procurement of BOG reciprocating compressor (~1.0 MW) for LNG Terminal at Jaigarh for H-Energy.
- 77 MW ISO Rating Gas Turbine Generator (GTG) with Naphtha Fuel in Captive Power Plant of HPCL VRMP Project, Vizag.
- Engineering for procurement of around 15 Reactors, 45 Columns, 250 Exchangers, 300 Vessels, 21 Tanks, 40 Compressors, 300 Pumps & 15 Other Packages for IOCL BS-VI Projects at six refineries.
- Engineering for procurement of around 13 Reactors, 33 Columns, 100 Exchangers, 150 Vessels, 18 Tanks, 2 Spheres, 4 Mounded Bullets, 15 Compressors, 300 Pumps & 30 Other Packages for Cracker, LLDPE Swing, Butene-1 & Utilities and Offsite of HMEL Petrochemical Complex, Bhatinda.
- Engineering for procurement of Sync Gas Compressor (~6.6 MW Centrifugal Gas Compressor driven by Steam Turbine) for Methanol Plant at APL, Assam.
- Design and Engineering of double wall storage tank (both metallic) of 15000 MT capacity for LPG Import Terminal of BPCL.
- Design and Engineering of Ethylene and Propylene Double wall storage tank (Inner-9% Ni and Outer- Pre-stressed Concrete) for HMEL Petrochemical Complex, Bhatinda.
- Engineering for procurement of 5 nos. of High Rate Decanters (HRD) of diameter 15m and 4 nos. of Deep Cone Washers (DCW) of diameter 24 m along with rake mechanisms, based on proprietary technology of Licensor RTA, for NALCO.
- Engineering for procurement of FCHCU Reactor of 250 mm thk Cr-Mo-V metallurgy of 1650 MT for HPCL VRMP Project, Vizag.
- Engineering activities for RUF Reactor having 258 mm thk Cr-Mo-V metallurgy of 2000 MT for HPCL VRMP Project, Vizag.
- Design of largest furnace (hot oil heater) in India for BPCL Kochi with a heat duty of ~90 MMKCal/ hour having the largest single radiant combustion chamber plan size of ~22 m x 18 m.
- Augmenting the capacity of a huge CCR heater for Bina Refinery, BORL by integrating a new helper heater at its rear end.
- Conceptualization & Design of the revamp work in multiple furnaces for Bina Refinery, BORL and HPCL Mumbai Refinery to achieve capacity enhancement.
- Engineered package for Reformer Transfer Line for HTER installation wherein all residual design left by Licensor was carried out by EIL for HGU Revamp of HMEL.
- Engineering and procurement for CPP of Ramagundam Fertilizer Project of RFCL.
- Design, engineering & procurement of MCC package in SRU for projects of BORL & NRL.
- Pre-Commissioning and Commissioning of IREP Utility Boilers, Heat Recovery Steam Generators & FG Cooler. For the first time in a refinery, steam from CPP was available for commissioning of CDU.
- Engineering for procurement of 20" Marine Loading Arm for Mumbai Port Trust for Crude Unloading. The 20" Arm is one of the largest sizes to be installed in India.
- Cryogenic H<sub>2</sub> Recovery system for RFCL, for the first time by EIL.
- Detailed Feasibility Reports for new technology areas such as 2G ethanol & Dropping Fuels from waste bio-mass (Bagasse), first time by EIL.
- Engineering for procurement of robot operated drum filling system for niche petrochemical final product filling (High filling rate, accurate positioning etc. specified in this system) for BPCL, Kochi.
- Engineering for procurement of Tripper wagon loader of capacity 1000 TPH in Aishwarya Project, Haldia Refinery.
- Engineering for procurement of unique type Coalescer, separating oil from bulk face (water).
- Design, engineering & procurement of 4 nos. of unique Column Condenser systems having two stages of Integral Top mounted Condensers with entire MOC of the system as Austenitic Stainless steel in Acrylic Acid Unit of PDPP Project, BPCL, Kochi. These are being installed for the first time in India.
- Design of Shell and Tube Exchanger for CPCL BS-VI with Alloy 6Mo (UNS S31254) which is a super austenitic stainless steel



with a high level of molybdenum and nitrogen, providing high resistance to pitting and crevice corrosion as well as high strength compared with conventional austenitic stainless steels such as 316L.

- Conceptualized and executed first heater package on complete Repeat Engineering basis, thus contributing to significant schedule advantage to client HMEL.
- Conducted first International training program on Fired Heaters for BAPCO.
- Site erection activity for NRL DHDT heater was completed in seven days due to conceptualization of job on modular basis.

#### Electrical Division

Major works performed by Electrical Division during the year include:

- Implementation of 400 kV Gas Insulated Indoor Switchboard Panels for one of the projects being executed in EPCM mode. Till recently, EIL had been going in for maximum 132 kV & 66 kV as primary distribution voltage for mega projects like IOCL Haldia & OPaL (PMC mode) and DORC under execution in conventional mode respectively. For HMEL Petrochemical Project, 400 kV indoor GIS is being procured in view of space constraint in area earmarked near their existing 220 kV Switchyard.
- Development and implementation of new specifications for XLPE insulated Fire Retardant Low Smoke Extra High Voltage Cables, suitable working voltage being enhanced from 66 kV to 220 kV. This has been implemented in view of mega projects like DORC and VRMP wherein 66 kV voltage cables have been used. In BPCL-Kochi BS-VI Project, 220 kV EHV cables are being procured and used.
- Use of energy efficient electrical equipment/ systems has been initiated in all projects. As a responsible corporate having concern for global warming and reduction of carbon foot print, use of energy efficient motors of min. 1E2 type and 100% LED fixtures for lighting of process/ offsite and utilities have been initiated. This has been made as a standard practice for all projects being handled. For one of the projects, energy efficient motors of category 1E3 are being deployed. Besides this, all distribution transformers having rating upto 2500 kVA, 33 kV (Primary Voltage) complying to star 1 (Efficiency class) rating as per latest Govt. of India Gazette Notification order No.S.O.4062(E),S.O.513(E) are being procured and used in all current projects under execution. The standard specification for distribution transformers have been revisited and revised accordingly.
- Revamping the Corrosion Protection system for LPG mounded storage tanks at HPCL Mangalore Refinery.
- Cathodic Protection Revamp for entire KG Basin pipeline network and redesigning and installation of CP system.
- CP System of under execution 500 km subsea pipeline of DORC project.
- Design and implementation of Mumbai-Manmad rerouting pipeline having very high AC/ DC Interference zone area including HDD portion along the ROU.
- CP design, survey and installation of new pipeline along with five existing pipelines from Jawahar Dweep to Pirpau, Mumbai Port Trust.
- CP design, survey and installation of new pipeline along with existing pipelines for Dhobi-Durgapur & Durgapur-Haldia Pipeline

Project of GAIL & NBPS Phase-II Project of OIL.

- Initiated use of Zinc Anodes in place of Magnesium Anodes for Cathodic Protection of Heat Exchangers due to reduced consumption.

#### Instrumentation Division

Instrumentation Division is always in the fore-front of latest digital technology. Total digital control systems & instrumentation is being used for plant controls. Instrumentation has also taken strides towards implementing IIoT (Industrial Internet of Things) in on-going refinery and petrochemical projects. In the on-going HMEL Petrochemical Project, Cloud based detailed engineering until FAT, simulation of plant graphics and logics through IIoT, Plant Development Model through OTS (Operator Training Simulator), Virtualisation Server & PC and usage of Universal I/O is being implemented.

In the recently commissioned IREP Project, advance diagnostic analysis system has been implemented for critical rotating equipment. Additionally, all the non-critical pumps are centrally monitored through wireless instruments & gateways in the DCS System which is a first for this scale of refinery. This same technology is being implemented in all subsequent on-going major projects like VRM Project of HPCL, DHT & GTU Projects of BPCL Mumbai Refinery and PDPP & MS Block Project of BPCL Kochi Refinery. Contribution of Instrumentation towards digitalisation & end to end work flow integration includes integration of data from Smart Plant P&IDs (SP-P&ID), Smart Plant Instrumentation Module (SPI) and Smart Plant 3D Model (SP3D) enabling smooth work flow & data flow from each of these modules. Conversion of in-house sizing software of instruments into web-based software to upgrade to latest technology & integration is presently underway. Control valve & safety valve have already been converted. For the BOM program, incorporation of all job standards and integration of work flow of Instrumentation with IPMCS of Piping and SORPS software has been carried out.

Three more Instrument engineers achieved certification from TUV as Functional Safety Engineers in accordance with IEC 61508/ 61511, bringing the total number of certified engineers to six in the department. This is a very prestigious accreditation which is required as pre-qualification in overseas projects especially in Middle-East.

#### Project Services

##### Costing

Cost Engineering Department provides cost related services for various projects in all fields of operations from inception to commissioning and beyond, for domestic as well as overseas jobs. Cost Engineering provides services such as preparation of capital cost estimates and financial/ economic analysis for diverse activities ranging from technology selection to preparation of feasibility reports and option study estimates for investment decisions pertaining to projects handled by EIL in various areas like Refineries, Petrochemicals, Fertilizer, Cross country pipelines, Power projects, Metallurgy, Mines, Strategic Storage, Offshore Oil & Gas, Infrastructure (such as Namami Gange and AMRUT) etc. It provides cost estimates for procurement and tendering, assistance during price negotiation, cost monitoring and control during execution of projects under conventional and LSTK mode of execution. It also prepares cost estimates for bidding in EPC contracts. Cost Engg. is also providing independent services like Project cost estimation, feasibility studies and review of the cost estimate prepared by others.



Cost Engineering has been maintaining historical data related to procurement and tendering of individual items ranging from nuts/ bolts/ gaskets to packages worth Thousands of Crores of Rupees since past two decades, which is unparalleled worldwide. This data bank is constantly updated based on the projects handled by EIL. The data bank has captured the historical data for all the projects handled by EIL, at item, unit and project levels. Cost Engineering prepares thousands of cost estimates annually, worth Crores of Rupees for various projects/ items with a wide range of value. This vast database provides capabilities for valuable support in decision making regarding investments, bid evaluation and award of contracts as well as effective cost control services.

### Planning

The Planning Division continued to provide planning, scheduling, monitoring, project risk management and material control services to various projects. Using state-of-the-art tools and its database, the Division caters to diverse project execution roles of the Company, viz. EPCM, PMC, LSTK/ OBE modes. The Division also continued to provide project monitoring services to the Ministry of Petroleum and Natural Gas, as in the preceding years.

### Supply Chain Management

The Supply Chain Management (SCM) Division, through its knowledge pool of experienced manpower, provides complete Supply Chain Management & Contracting Services to various domestic and global Clients besides serving EIL's in-house requirements. These services include Supplier/ Contractor Registration, Contracting and Purchasing of Goods/ Services/ Works, Expediting, Inspection, Logistics, Supplier/ Contractor Performance Review etc. The Division contributes to successful execution of Projects being set-up through procurement of works, materials and services pertaining to specified quality within designated time at the most competitive price in a fair, just and transparent manner.

In the current year, orders for ₹2,430 Crores of direct purchase and contracts were placed on suppliers/ contractors globally for various OBE/ LSTK/ Depository Projects. Also, for in-house requirements of EIL, orders for ₹180 Crores of direct purchase and contracts were placed. In addition, orders for ₹22,230 Crores were placed for other projects of various clients where EIL was the Consultant.

EIL, through its commitment and dedication has been instrumental in implementation of Government of India's Public Procurement Policy 2012 for Micro and Small Enterprises (MSEs), and ensuring increased participation of MSEs in the Company's procurement. EIL has procured goods and services of ₹195 Crores from MSEs, which is around 23.63% of the total value of direct purchase orders for goods and service contracts, placed by EIL during the year 2017-18.

EIL is also focused for the growth of MSE sector and specifically for MSEs owned by SC/ ST entrepreneurs. The Company, in collaboration with SC/ ST bodies like DICCI, has organized various supplier event and product development initiatives. EIL, with its robust supplier enlistment management systems, has been able to develop transparent and accountable system and processes, for development of indigenous manufacturing capacity via proto-type route and other various development activities.

The Division carried out in-process and pre-dispatch inspection of critical equipment at suppliers' works as well as at project sites through its regional Procurement Offices, located all over the country and

overseas offices located at London, Shanghai and Milan.

Major items inspected include:-

- Urea Reactor (Special chemistry) having overall dimension of 2.74 m outer diameter x 20 m length (with 160 MT weight of three individual section each) for Ramagundam Fertilizers and Chemicals Ltd.
- Coke Drum with dimension of 9.15 m outer diameter x 40 m length (with 530 MT weight in single section each) for IOCL Aishwarya Project, Haldia.
- Two Chrome Moly Reactor with dimension of 3.1 m outer diameter x 38 m length (weight 456 MT single section each) and 3.1 m outer diameter x 48 m length (weight 541 MT single section) for IOCL Aishwarya Haldia Project.
- Two Ammonia Converter (Special chemistry) having overall dimension of 3.6 m outer diameter x 33 m length (weight 608 MT single section) and 3.4 m outer diameter x 27 m length (weight 380 MT single section) for Ramagundam Fertilizers and Chemicals Ltd.
- DHT Reactor having overall dimensions of 5.2 m outer diameter x 36.9 m length (weight 400 MT single section) for HMEL BS-VI Project.

SCM division has been playing a major role in development of Indian Industry. Under the Government of India's "Make In India" drive, several steps have been taken to increase local industry participation and provide encouragement to overseas industry towards setting up plants in India. The suppliers developed this year under "Make In India" were primarily in the Rotating Machinery segment, which has significant import content. The initiatives under "Make In India" will facilitate import substitution in this segment.

### Construction

The Division offers complete range of services for Construction Management including Contract Administration, Construction Quality surveillance, Feedback Analysis, HSE and Warehouse Management for various projects of EIL, withstanding diverse challenges and local impediments associated with climatic conditions, difficult terrain and space constraints etc. which are unique to the nature of the project.

During the year 2017-18, Construction Division continued to provide Construction Management Services for various clients at more than sixty diverse domestic project locations and four overseas locations.

Concurrent prestigious commitments for the Division include Vizag Refinery Modernization Project of HPCL, Aishwarya Project of IOCL Haldia Refinery, Revival of Ramagundam Fertilizer Complex, BS-VI projects of IOCL at Panipat, Vadodara, Haldia, Mathura, Bongaigaon and Digboi, MR-II project of HPCL at Mumbai, BS-VI project of HMEL at Bhatinda, BS-VI Project of MRPL at Mangalore, BOREL-Bina, DHDT-NRL, BS-VI project of CPCL at Chennai, PDPP of BPCL at Kochi, AMRUT Project, Odisha, Rehabilitation Project in Algeria and Dangote Refinery in Nigeria.

Construction activities commenced for the following new domestic projects during the year:

- HMEL Petrochemicals, Bhatinda
- Rajasthan Refinery of HPCL
- H-Energy, Ratnagiri
- GTU of BPCL, Mumbai



- DDHPL of GAIL, Jharkhand
- Vijapur-Auraiya Pipeline of GAIL
- Jamnagar-Loni Pipeline of GAIL
- Mumbai-Manmad Pipeline of BPCL, Mumbai
- Palanpur-Vadodara Pipeline of HPCL
- NBPS-II of OIL
- MSBP of BPCL, Kochi
- BSDC, Jaipur
- IT Facilities for Deptt. of Information Technology & Communication, Govt. of Rajasthan

The Construction Division leverages its highly skilled and motivated team for establishing and monitoring adherence of Construction Quality Management system. The system advocates quality plans, inspection test plans and implementation of special processes for concreting, welding involving latest NDT techniques, digital radiography, ultrasonic test, software for piping management system etc. during all phases of construction to ensure trouble free commissioning/ operation of critical units.

The Construction activities for the following Projects/ Units were completed during the year:

- DCU, CPCL, Chennai
- IREP, BPCL, Kochi
- Banggai Ammonia plant, PAU, Indonesia
- GASCO, Abu Dhabi
- DHDT, NRL
- NBPS-I, OIL
- TGTU, BPCL, Mumbai
- SSNL, Gujarat

The Construction Division deployed a host of innovative construction techniques and improvised equipment/ machineries to minimize construction schedule across project sites, as mentioned below:

- Modular construction of Tech Structure and Pipe rack
- Pre-fabricated structures
- Auto Blasting and auto beveling machines
- Monsoon shelter/ hanging platform
- Extensive use of Auto UT/ TOFD techniques as an alternative to hazardous conventional NDT method like radiography.

The Company's commitment towards adherence of world-class Health, Safety and Environment standards in the execution of projects was epitomized by the multitude of accolades received from clients, during the year:

- 15 Million LTA free man-hours at Banggai Ammonia plant, Indonesia
- 18.1 Million LTA free man-hours at Aishwarya project of IOCL, Haldia
- 10 Million LTA free man-hours for RFCL, Ramagundam site
- 8 Million LTA free man-hours for PDPP, Kochi
- 5 Million LTA free man-hours at DHDT project, NRL
- 3 Million LTA free man-hours for DDP Hazira site

## Environmental Engineering

EIL is committed to ensuring compliance to all health, safety and environment requirements during delivery of products/ services to customers. Minimizing environmental impact by conserving resources, reducing waste generation and preventing pollution in all our activities have always been an integral part of our policy. The Company has also been providing solutions for water resources management while protecting or restoring our major water ecosystems. EIL helps enable the adoption of innovative & integrated water and wastewater management for industries & municipalities, while working to increase environmental, social and economic benefits.

EIL's commitment to sustainable environment is underscored by the fact that the Company has a dedicated environment & water group, which has completed several hundred projects in diversified fields of environmental engineering, including water & waste water treatment; effluent recycle and zero discharge projects; Environmental Impact Assessment studies; environmental audits; air quality assessment, modeling & control; ground water monitoring studies; solid & hazardous waste management; oily sludge management; volatile organic carbon (VOC) & fugitive emissions control; site assessment and remediation; environmental health & risk management; environmental management plans; etc.

Some of the major projects undertaken by the Company during the year include the following:

- PMC services for HPCL Visakhapatnam Refinery Modernization Project for construction of RO based sea water desalination plant and integrated effluent treatment & recycle facilities to minimize fresh water consumption by refinery.
- Consultancy services to ONGC for techno-commercial & environmental feasibility study for construction of desalination plants at Mori, Kesanapalli and Malleshwaram fields of Rajahmundry Asset.
- PMC services for HMEL Bhatinda Polymer Addition Project for construction of entire water & wastewater treatment facilities including effluent recycle and reuse.
- PMC services for AMRUT Project (Atal Mission for Rejuvenation and Urban Transformation) in Odisha for construction/ rehabilitation of Raw Water Treatment Plants.
- Completed feasibility study for ADNOC Refining Company, Abu Dhabi for Wastewater Management at Ruwais Refinery East and Abu Dhabi Refinery Divisions.
- EIA studies for Ratnagiri Refinery & Petrochemical Complex; GAIL's Petrochemical Project at Usar; HPCL's Rajasthan Refinery Project & Township; BPCL's 2G lingo-cellulosic based Ethanol Plants at Bargarh, Odisha & Bina, Madhya Pradesh were successfully carried out by EIL for its clients.
- EIL has been accredited by Quality Council of India (QCI) for carrying out EIA studies in India and the accreditation is valid till 2019. EIL has now been accredited in fourteen sectors including a new sector 'Distilleries'.

## Research & Development

EIL has continually endeavoured to deliver optimum services to the clients by providing value addition and leveraging technological advances. It is with this objective of fostering the spirit of innovation and creativity in the organization that the Research and Development



Division was established. R&D has contributed significantly in the consolidation of existing capabilities, development of new technologies and hardware besides enhancement of the portfolio for special technology related services. The Division is pursuing developmental activities, both in-house and in collaboration with academic institutes like IIT Delhi and other R&D organizations like IOCL(R&D), CSIR-IIP, BPCL(R&D), HPCL(R&D) etc. Apart from these established R&D organizations, EIL (R&D) has also been collaborating and cooperating with small companies to promote the creative ideas generated by them.

During the year, R&D Division undertook following initiatives for development of new capabilities and up-gradation of existing capabilities:

#### Technology development projects initiated:

- Development of Amine Purification Process with efficient resin
- Modification of gasifier pilot plant for sustainable operation
- Study of cross flow reactor hydrodynamics through Computational Fluid Dynamics (CFD) modeling
- Radio tracer studies with porous spherical alumina type of catalyst to characterize hydrodynamics of improved 3 phase reactor configuration for hydroprocessing applications
- Minimum fluidization velocity studies in 2 Dimensional cold flow set up
- Development of databank for potential coal gasification
- Production of Di Methyl Ether (DME) from Methanol
- Development of De-Foaming Cyclonic Device for liquid-gas separation
- Development of high level Oxygen Enrichment Technology for capacity enhancement of SRU (> 35%)

#### Technology commercialization efforts:

Sustained efforts towards commercialization of developed knowhow and technologies have yielded following results during the year:

- Grass root design of Tail Gas Treating Unit (TGTU) with EIL technology completed for MRPL.
- Commissioning of TGTU of HPCL Mumbai Refinery licensed by EIL.
- Commissioning of two Sulfur Recovery Units (SRU) of BPCL Kochi Refinery, each with 340 TPD capacity, successfully completed.
- Commissioning of two TGTUs of BPCL Kochi Refinery with EIL technology, completed successfully.
- Commissioning of CDU/ VDU (Vacuum Column) with EIL patented PARLPAK at IREP-BPCL-Kochi.

#### Following major jobs were received by R&D during the year:

- Implementation of IndDSK unit at Paradip and Gujarat Refinery of IOCL.
- Implementation of IndeSelect unit for IOCL Guwahati Refinery.
- Indjet unit for IOCL Barauni Refinery.
- Feasibility Report prepared for 2G Ethanol Plant for MRPL.
- Licensor selection and DFR preparation for 2G Ethanol plant to be set up at Khamgaon, Maharashtra for BPCL.
- Licensor selection and DFR preparation for 2G Ethanol plant for MRPL.
- Energy Efficiency Improvement Study of 15 PSU Refineries being coordinated by Centre for High Technology (CHT).

- As part of PAT cycle-4, activities have been initiated for collaboration with Bureau of Energy Efficiency (BEE) for carrying out energy efficiency studies in petrochemical area.
- Understanding has been reached with NRL for setting up technology demonstration unit for Above Ground Sulfur Seal technology developed in-house.

#### Initiatives taken for strengthening technology tie ups:

To take advantage of research being done at various international research consortia, EIL has renewed the existing membership of the following International Research consortia:

- Process Science Technology Center (PSTC), an industry-academia collaborative research program initiated by University of Texas, USA
- Fractionation Research Incorporated (FRI), a non-profit cooperative research organization based at Oklahoma, USA
- Process Integration Research Consortium (PIRC), University of Manchester, UK

#### Patents/ Trademarks filed/ granted:

EIL has been awarded 26 technology patents and 24 other patent applications are under evaluation. To safeguard EIL's knowhow and technologies, the following patents have been filed during the year:

- Novel gas-liquid inlet diffuser for Cocurrent downflow trickle bed Reactor.
- Ion exchange resin process for removal of Heat Stable Salts (HSS) from alkanolamine solution.
- Apparatus for deoxygenation of water and process for the same.
- A device for recovering and separating a low pressure fluid.
- Low pressure system and process for recovering anhydrous ammonia from sour gas.
- Method for optimizing energy in a process carried out using a system.

The following patents filed earlier have been granted during the year:

- Patent No. 283193 granted on 09.05.2017: A Novel Method for Recovery of Ethane/Propane and Liquefied petroleum gas from LNG.
- Patent No. 291143 granted on 28.12.2017: Improved process for removal of Disulphide Oil from Caustic.
- Patent No. 291293 granted on 02.01.2018: Recovery of Sulphur by using oxygen enriched air.
- Patent No. 293679 granted on 01.03.2018: A process and system for re-utilizing waste nitrogen gas coming from nitrogen plant.
- Patent No. 294749 granted on 22.03.2018: Recovery of Sulphur Slurry by using hybrid membrane-filter system.

#### Trademarks applied and granted:

- Two Applications for registration of Trademark pertaining to in-house technologies have been made during the year to enhance the brand image of the company.
- Two nos. Trademarks have been granted in the year.

#### Information Technology Services

Information Technology Services (ITS) Division continued to make advances, providing high-tech IT enabled services to EIL's mainstream



activities by developing/ implementing IT solutions to deliver better quality services with emphasis on increased efficiency and improved productivity. Various initiatives were taken during the year as enumerated below:

- Conceptualisation and Design of complete IT infrastructure including Data centre, LAN network and IT security for Nuclear Fuel Complex, Kota with over 60+ buildings.
- In-house developed web based application for Supply Chain Management launched. This application will bring automatic work flow for end to end procurement activities.
- State-of-the-art application developed for contract management to enhance the project progress on real time basis.
- Automatic work flow based application developed for marketing pre-award activities to facilitate marketing strategies and implementation.
- Successful implementation of in-house developed IT enabled GST system in financial accounting applications, for all financial transactions as per GOI directive.

#### **Sustainable Development**

EIL's sustainability mandate has evolved from compliance to environmental regulations and norms in a way that make it a responsible organization, transparent to all its stakeholders. The Company's project designs support sustainability right from conceptualization to plant commissioning and subsequently, the commercial operation. Energy efficiency, resource optimization and safety of plant personnel and society at large are the cornerstones of our business operation. They also ensure business continuity.

EIL has refocused its engineering philosophy and business models to achieve long term sustainable growth. It has also initiated evaluation and reporting of performance on the triple bottom lines pertaining to economic, social and environmental aspects. The sustainability initiatives at EIL shall definitely propel the organization on an upward growth trajectory.

Separate Report on Sustainable Development is annexed to this Report.

#### **Corporate Strategy & Business Development**

Corporate strategy and plans for diversification are imperative for any organization with a vision and long term perspective. Corporate Strategy and Business Development (CS&BD) division performs the role of evaluating market opportunities, pursuing business development initiatives, venturing into new geographies, initiating tie-ups with licensors/ vendors/ collaborators and augmenting the portfolio of EIL by diversifying into sunrise sectors.

The division has been mapping the evolving market scenarios and developing strategies required for envisioned growth of the organization. In the current market scenario, it is essential that EIL, while harnessing its core strengths, should also explore projects in sunrise sectors and new geographies. Thus, the CS&BD Division while focusing on core hydrocarbon sector requirements; also are seeding ideas and exploring business possibilities with new and potential clients.

As part of enhanced value creation, CS&BD has been in continuous dialogue with various licensors/ technology providers, with the objective of collaboration and provision of a bouquet of niche services to the owners.

The CS&BD Division has initiated sustained business development activities in sectors like Bio Fuels, Water and Waste Water Treatment, Urban Infrastructure like Smart Cities, LNG Terminals, Fertilizers, Airports, Ports and Harbours, Defence, etc as a part of possible diversification initiatives. Sustained BD efforts are also under progress with prospective clients, ULBs, Municipal Corporations and respective state governments in this direction. EIL has also initiated active suo motu studies and opportunity mapping in Port & Terminals, LNG value chain and Defence sector in alignment with Government of India initiatives.

Through a self sustaining seeding exercise and extensive outreach approach, Corporate Strategy & BD division is focused towards enhancing the footprint of EIL and augmenting the current business portfolio.

#### **HSE Management System**

During the year, your Company continued to accord highest priority to Health, Safety & Environment (HSE) across its operations. The Company maintained its OHSAS 18001 (Occupational Health and Safety Assessment Series) and ISO 14001 (Environmental Management system) certification. During the year, the Company's HSE Management System was upgraded against the requirements of the latest version of ISO 14001, i.e. ISO 14001:2015. The certification agency has assessed and declared that the HSE Management System of the Company conforms to the requirements of ISO 14001:2015 standard and continues to conform to the requirements of OHSAS 18001:2007 standard. The Certificate of approval is valid up to 14.12.2020. Apart from ensuring effectiveness of the HSE Management system, these certifications enhance chances of securing business, especially overseas.

On the operational front, Emergency Preparedness and Response Plans (EPRP) are in place across all office locations of EIL to secure safety of its employees and assets. Regular mock drills are being conducted to test and improve the preparedness towards emergencies. Awareness about HSE is maintained through HSE Newsletter as well as classroom sessions.

On the engineering front, HSE aspects that are to be addressed in the design engineering phases are built into the procedures of various engineering departments. Exhaustive HSE checklists are in place to ensure that these aspects are complied during design and engineering phases. Being a renowned engineering consultant in the hydrocarbon sector, your Company uses proven risk assessment methodologies like HAZOP, RRA, QRA and SIL to ensure the process safety of the plants being designed.

On the construction front, the specification for HSE Management at construction sites, which specifies the HSE requirements to be complied by construction agencies, has been revised during this year in line with the current trends and to improve the HSE performance. Quantitative scoring system for measuring contractors' HSE compliance, upfront analysis of HSE aspects of the construction sites through constructability study are a couple of other examples of improvements implemented during this year. On achieving 1 Million LTA free Man hours, your Company is issuing Recognition Certificate to Contractors.

#### **Quality Management System**

Quality is inbuilt into the processes, workplace, deliverables and services of your Company. During the year, Quality Management System of your Company was reassessed, vide external Surveillance



Audit for continual conformance to ISO 9001:2015 by third party certification agency. The Quality Management System of your Company continues to conform to the international standard ISO 9001.

Important ingredients of our quality initiatives are effective & comprehensive Internal Quality Audit process, planned customer perception surveys, analysis of feedbacks from stakeholders and regular reviews & directions from the Management Review Committee (MRC) and Executive Council (EC). The MRC is chaired by the C&MD with all functional Directors being members. The Executive Council is chaired by senior Executive Director, and senior officials from all areas of operation & functions are members of the committee. Regular monitoring is done to analyze the data & feedback for recommending improvements in processes, deliverables and QMS to reduce costs, shorten cycle time, address cross functional issues, improve visibility and credibility. QMS implementation and its effectiveness have been further increased by using in-house developed software.

The Quality Management System of your Company's Abu Dhabi office was also separately audited and reassessed during surveillance audit and declared conforming to ISO 9001: 2015 standard.

In addition, the Company participated as a prominent and active member in various committees for formulating quality system standards under the aegis of Bureau of Indian Standards. Quality Management System of your Company provides the competitive edge in securing and executing projects with focus on full customer satisfaction.

### **Risk Management**

The objective of Risk Management in the Company is to act as an enabler in maintaining business continuity, its competitiveness and ensuring execution of projects within budgeted cost, time and quality, resulting in improved turnover & profitability apart from ensuring business resilience.

Your Company has in place a robust Risk Management framework which facilitates identification, assessment and mitigation of Risks. Your Company's Risk Management framework is based on ISO 31000:2009 (Risk Management Principles and Guidelines) and meets regulatory requirements. The Risk Management framework of your Company is overseen by the Risk Management Committee of the Board. During the year, your Company's Risk Management process has been further fine tuned to meet the changes in the regulatory requirements and has also been integrated with the Quality Management System of the Company, as required by ISO 9001:2015. The integration of the Risk Management system with the Quality Management system has provided an added advantage by further ingraining Risk Management into the day to day working.

Your Company has identified 25 Key risks across various business processes namely Procurement, Construction, Project Management, Marketing, Human Resources, Legal, Accounts & Recovery. Mitigation plans are in place for these risks and are being deployed across the organization. An independent group (Corporate Risk Assurance) audits the implementation of these mitigation plans regularly and the results are presented to the Risk Management Committee of the Board. Your company uses its in-house software package 'Enterprise Risk Management System (ERMS)' to conduct these audits as it enables seamless audits across multiple locations, departments of your Company.

Being a Project Management organization, Project Risk Management framework has been put in place so that project specific risks are identified, assessed and mitigated. Regular Risk Management meetings are conducted and reports are issued to the stakeholders. Numerical Risk scoring mechanism is in place to identify the important risks (Critical, Major). To add teeth to the Project Risk Management activities, your Company has certified Project Risk Management Professionals in place. Apart from enabling in-house project management, the Project Risk Management process is also seen as value addition to the clients. During the year, your Company has developed a Project Risk Management database which acts as a reference database of all Risks that have been encountered in past projects. This database is facilitating the new projects to quickly identify possible Risks.

The status of Enterprise Risk Management (ERM) & Project Risk Management (PRM) Systems is presented to the Risk Management Committee of the Board. The reporting structure meets regulatory requirements.

To spread awareness amongst the employees, a digital newsletter 'Risk Screen' is being issued to all employees. The newsletter covers case studies, survey reports and best practices on Risk Management apart from apprising the employees on the Risk Management updates within the company.

Being a strong believer of continuous improvement, EIL is continuously strengthening its risk management capabilities in order to protect the interests and enhance shareholder value.

### **Vigilance**

CTE type examination of EIL's jobs on LSTK/ OBE basis, random inspection of in-house contracts/purchases, scrutiny of Immovable Property Returns, investigation of complaints etc. were carried out during the year by the Vigilance Division, with the focused objective of ensuring conformity to the Company procedures and Government guidelines.

For systemizing the work, various rules, regulations and procedures were reviewed during the year. The observations reported by CTE/CVC were examined and necessary actions were taken. System improvements were suggested to the Management & necessary measures were undertaken for improvement by way of issuance of around 30 system improvement advisories.

As part of observing Vigilance Awareness Week 2017, a series of programs were held in line with this year's theme "My Vision – Corruption free India." During the period, three seminars were organized on the topics "Frauds in e-procurement and solutions", "Key features of arbitration in India & Vigilance issues" and the third was organized with the active support of SCM Department on the subject "Enhancing SC/ ST entrepreneurs participation in Public procurement" with an intention to create awareness about Public Procurement, its imperatives, precautions to be taken, opportunities for SC/ ST Entrepreneurs in EIL and the benefits provided under various schemes. Besides all the above, awareness programs/ competitions were organized involving local community, at Colleges/ Schools in the areas around various sites.

During this period, Vigilance released its annual journal named 'ABHIJATASYA'. A 'Vigilance Logo' and 'Vigilance Statement' for the Company were also released during this period. The 'Visitor Management System' was made online and linked with administration of 'Integrity Pledge' by the visitors.



As per directions issued by the Central Vigilance Commission and the Department of Public Enterprises, details of vigilance activities were also presented to the Board for the period ending June 2017 and December 2017.

Vigilance continued to monitor the progress of the following program(s)/ policy (ies):

- **Leveraging Technology**

Reverse auctioning, e-tendering, e-payment, e-receipt, etc are already implemented in the Company and being monitored regularly against the set targets. Clearance of vendors' bills on 'First in, First Out' (FIFO) under Bill Tracking system (BTS) is ensured. BTS has provision for details about pendency of vendors' bills.

- **Complaint Handling Policy (CHP)**

As per CVC Guidelines, EIL has formulated 'Complaint Handling Policy (CHS)' to resolve complaints/ grievances from public, contractors, vendors, suppliers etc. A web portal for online complaint handling is available on the Company's website which is regularly monitored by Vigilance with respect to the status of complaints.

- **Job Rotation**

Job rotation of sensitive posts is being done & reporting of the same is being done on monthly basis.

- **Integrity Pact**

EIL is committed to higher ethical standards in contracts and procurement as well as transparency in all of its business dealings. In EIL, Integrity Pact Program was adopted in November, 2011 for all Contracts & Purchases on EIL's account for enquiries having threshold value over ₹5 Crore. The threshold value has now been lowered from ₹5 Crore to ₹1 Crore.

- **Online Vigilance Clearance (OVC) & Scrutiny of IPRs**

On line Vigilance Clearance and Immovable Property Returns of employees is being carried out through Vigilance website - "Avalokan" on OVC portal.

### Finance

The Company continued its strong cash generation driven by business performance. The efficient financial and cost management system continued to facilitate cash generation as well as creation of wealth. EIL optimized the returns on cash reserves by deploying cash surplus in safe and liquid instruments as per the approved investment policy of the Company which is in-line with DPE guidelines.

### Internal Audit

The Company has an Internal Audit Department having competent professionals. During the year, several internal audit assignments with focus on checks and controls on system and procedures, monitoring compliances and continuous upgrade of controls have been carried out and the reports are regularly submitted to the Management and the major findings are presented to the Audit Committee of the Board.

### Corporate Management Information System

To help improve Resource Engagements, Automation of Employee Centric Systems and Real-Time Management Information on both Projects, Manpower and Future Workload aspects, Company has created a Corporate Management Information System Department

having multi-disciplinary professionals. During the year, several automated software modules have been launched by the Department resulting in improved resource engagement and optimization along with various automated reports for the Company Management.

### Human Resource & Industrial Relations

People are at the heart of Company's business as the quality of services that the employees deliver directly impacts the results of the organization. HR thus endeavours towards developing a motivated workforce which is committed and aligned with the organization's strategic goal and objectives. Employee-centric policies and development initiatives drive the human resource to deliver their best. The policies are regularly re-visited and updated to keep them relevant.

HR has enhanced its strategic role with the business and got directly associated with different project verticals providing services in delivery of projects.

As on March 31, 2018, EIL had 2827 employees, including 2339 professionally qualified employees. Approximately 2.47% of our employees are located outside India, functioning in international work environments.

- **Talent Acquisition**

Our talent acquisition strategy aims at identifying and developing a well equipped talent pool. Diverse recruitment models are employed to meet dynamic business needs with intake of fresh talent, domain specialists, short term hiring through outsourcing and onboard consultants/ advisors. Planned job rotation has been implemented for optimum utilization of available human resources.

- **Performance Management System**

In the area of Talent Assessment and Appraisal, EIL has in place a robust and transparent Performance Management System that gives weightage to both performance and potential. The Performance Management System is an online process. The outcome of Performance Management System is used for career progression, performance related pay, training & development and succession planning.

- **Employee Welfare**

During the year, efforts were made for aligning welfare measures towards enhancement of the quality of work life for employees. Various employee welfare initiatives were taken ranging from organising talk-cum-interactive sessions on Health & Lifestyle Enrichment, extension in medical benefits, coping with stress etc. besides sports and other family get-togethers for enhancing the quality of life.

- **Thrust on Sports**

Providing a supportive role in health & fitness, EIL promotes a culture of sports by organizing weekend sessions and inter-departmental tournaments for participation in PSPB Tournaments. EIL organises indoor sports like Table Tennis, Carrom and Chess after office hours and weekend sessions of Badminton and Tennis. Employees are also encouraged to participate in Marathons, various trekking expeditions, sports tournaments at regional and national levels. EIL employees participated in seven PSPB Tournaments during the year.





## • Annual Awards

Recognizing the contribution of team(s) and individuals, employees were felicitated in following categories of Annual Awards

- Best Employee of the Year in Staff Category
- Young Executive of the Year
- Innovation Awards–Individual Innovation & Team Innovation
- Technical Paper Writing

Annual Awards for year 2016-17 were presented on the occasion of 71<sup>st</sup> Independence Day on August 15, 2017. A total of 33 nos. employees were awarded in different categories.

## • Training & Development

In alignment with organizational objectives and business strategy, the Training Department extended support towards individual and organizational development.

Structured training programs were organized on specialized subjects for clients, both in India and abroad, as open and customized training modules which generated revenue for the Company and also showcased EIL's outstanding technical knowhow. Programme on "Materials Corrosion Engineering" and "Refractory Design Engineering & Application" were conducted for BAPCO, Bahrain and "Training for Instrumentation Engineers" at HPCL, Visakh Site.

Customized training program on Offshore Engineering for engineers of ONGC consisting forty modules was successfully completed in July, 2017. The program was highly appreciated by the participants and is a source of revenue stream for the Company.

As part of Government of India's "Skill India Mission" on providing thrust to "Skill Development", 226 nos., apprentices were engaged during FY 2017-18 and apprenticeship training in various disciplines was provided at Head Office, Branch/ Regional Offices and Construction Sites. During the year, 55 nos. of apprentices successfully completed their one year Apprenticeship Training and were issued Training Completion Certificate.

Leadership Development Program (Aarohan) with focus on delivering core leadership skills in line with EIL 'Competency Model', 'Group Development Outcome', 'Individual Learning & Development Plan' was imparted through a mix of case studies, simulation-based exercises, interactive games, role plays, videos and concept based movies to a group of 28 participants in GM/ DGM Level.

As part of joint initiative with Oil PSUs under the MoP&NG, a two-day Seminar on "Coaching for Organization Culture and Leadership Development" for executives of Oil Industry by Mr. Marshall Goldsmith, world renowned business educator & leadership coach was jointly organized during February 18-19, 2018 at ONGC, Mumbai in which 24 senior officers of the Company participated. The participants had an opportunity to listen to Mr. Marshall, interact with him, and address their concerns about various challenges they face as leaders.

As part of 'Swachhta Hi Sewa' (SHS) Campaign, 'Public Sector Day

Celebration' and 'National Productivity Week', various Workshops and in-house Essay Writing Competitions, Slogan Writing Competitions and Painting Competitions were organized.

In an endeavour for professional and domain enhancement of personnel, 242 participants were also nominated to 58 various external training programs organized by reputed organizations and institutions in India and abroad.

## • Mentorship Development

With an objective to foster professional relationships and provide a forum for offering constructive advice to support the career development of the mentee, EIL supports a Mentorship Development Programme allocating trained mentors in the ratio of 1:3 (Mentor: Mentee) for all new entrants to the organization. Structured interactions are encouraged for building positive relationships between the mentor & mentees for long time benefits, both to the mentee and the organisation.

## • Leveraging IT in HR

IT assisted HR processes are regularly updated to comply with existing rules and policies with emphasis on ease of use and user friendly GUIs (Graphic User Interface). More than 700 news items/reports were uploaded on web based EIL Connect which recorded more than 17 Lakh hits during the financial year, thus continuing its efficacy in maintaining an interactive environment with employees located in India and abroad.

## • Implementation of Government Directives on Scheduled Caste/ Scheduled Tribes

With a view to accelerate the pace of socio-economic development of the nation, EIL has been endeavouring towards safeguarding the interests of SC/ST employees.

The Company has appointed a Liaison Officer to work as a facilitator in ensuring that due attention is paid to the issues of SC/ST employees. Management also encourages communication with the office bearers of the SC/ST Employee's Welfare Association by holding period meetings with the Association.

Scholarships were awarded by EIL to 44 nos. SC and ST (SC-32 and ST-12) undergraduate engineering students.

The percentage of employees belonging to Scheduled Castes and Scheduled Tribes was 18.8% and 4.6% respectively, out of the total employee strength of the Company (as on March 31, 2018). Regular meetings were held with representatives of SC/ST Welfare Association and Liaison Officers for redressal of their grievances/concerns.

## • Initiatives for the benefit of Persons with Disabilities

EIL is implementing the provisions of the Persons with Disabilities Act, 1995 by way of providing reservation for Persons with Disabilities. Special Recruitment Drive for Persons with Disabilities (PwDs) was carried out in FY 2017-18. As on March 31, 2018, there were 42 nos. (i.e., 1.48%) PwD employees on the rolls of the Company.

## • Women Development

Women constitute approximately 12.2% of EIL's human resource, wherein 86.67 % are in the officer cadre. EIL has in place, a Women Forum comprising of senior officials as Patron, Chairperson and



Co-Chairperson, to cater to the development needs of women employees.

Adequate opportunities are made available to women employees for participation in National as well as International Conferences and Symposiums so that they benefit from the knowledge of Industry and Domain Best Practices.

**Corporate Social Responsibility**

EIL's CSR policy aims at creating a sustainable environment through its activities for community and environment.

As per Companies Act 2013, a budgetary allocation of 2% of the net profit made during three immediately preceding financial years has been made in the Financial Year 2017-18 for CSR activities.

**Education:** Major initiatives undertaken by EIL in the domain of education include support towards providing computer literacy to children from backward segment of society in Delhi/ NCR and holistic educational programme for development of underprivileged children in Kolkata, West Bengal. In order to facilitate quality education for children of remote areas, EIL supported the setting up of smart classes in Kamdhenu Public School in Phoolpur, Uttar Pradesh and is supporting the construction of Government School Building in Kabennur, Karnataka. With an objective of creating inclusive education opportunities for children with Intellectual Development Disorder, EIL is conducting 10 nos. workshops for training of teachers so as to address the teaching needs of such students.

**Health Care:** In order to extend advanced health care services to poor and needy people residing in remote villages of Odisha, EIL provided Mobile Medical Care Unit equipped with Dental Unit, Eye Unit, Laboratory and OPD Unit.

**Drinking Water/ Sanitation:** EIL supported the restoration and development of Anjani Kund site at Palwal. The Company is also supporting the construction and installation of three water purification plants (ROs) in villages of Sheohar district, Bihar.

**Rural Electrification:** EIL supported installation and commissioning of 100 nos. solar photovoltaic based LED street lighting systems in various villages of Poornia District, Bihar.

**Environment Protection/ Sustainability:** To reduce the burden of plastic waste in the holy city of Mathura, EIL is providing support towards setting up a 5 TPD plant for conversion of waste to fuel. Plastic waste shall be collected from segregated Municipal Solid Waste and processed to convert it into value added saleable products viz., fuel. The CSR initiative will contribute towards Swachh Bharat Abhiyan mission of Govt. of India.

**Women Empowerment:** EIL conducted livelihood training in cottage industry and basic IT (Information Technology) skills for 5,000 nos. women belonging to backward sections of the society at various locations of Delhi.

Functional literacy programme in Mushroom Cultivation and Bee-Keeping is being conducted for 120 nos. tribal women at Bolangir District in Odisha.

**Upliftment of underprivileged:** EIL supported distribution of adult diapers among bedridden and elderly patients across 30 nos. slum areas of Delhi. The Company also conducted eight camps for distribution of assistive aids and appliances to poor & needy Persons with Disabilities, one each at Udaipur, Kota, Delhi, Haldia, Kochi, Udupi, Ratnagiri and Dharamshala.

For well being of old underprivileged people, EIL supported the distribution of 'Multi-Facility Health Package' in 12 nos. Old Age Homes at Odisha, Tamil Nadu, Gujarat and Maharashtra.

**Community Development:** Construction of RCC retaining wall/ road side drains/ Compound wall at Yanam.

**Vocational Training/Skill Centres:** To promote the Skill India mission, EIL has joined hands with Oil PSUs to set up Skill Development Institutes (SDIs) at Ahmedabad, Bhubaneswar, Guwahati, Raebareli, Vishakhapatnam and Kochi which would provide vocational training to youth.

For welfare of Persons with Disabilities (PwDs), EIL is also conducting Skill Development Training for 1200 nos. PwDs in various trades across its area of operation.

**Make In India**

"Make In India" is a flagship initiative launched by the Hon'ble Prime Minister with an objective to revive and revitalize the manufacturing sector in the country. As part of the "Make In India" campaign, your Company has been pursuing several initiatives:

- Contribution to Government's Policy formulations to encourage indigenization
- Vendor interaction to upgrade indigenous manufacturing technologies
- Indigenization of equipment manufacturing to increase domestic content
- Vendor enlistment/ enhancement through continuous interaction, assessment and evaluation
- Relaxation of PTR criteria for 51% owned subsidiaries

EIL is piloting the midstream sectors for Make In India initiative under MoP&NG and is a member of the Steering Committee set up for the purpose. To this effect, regular supplier meets are being organized for interaction with the specific domain based industries and empanelment of suppliers through an online web based process.

EIL has been actively engaged with MoP&NG and other Oil & Gas sector organizations for this initiative through participation in several stakeholder meets and contributing to various draft policy formulations such as Purchase Preference for Local Content Policy which has now been mandated under the ambit of Make In India.

**Official Language**

With an objective to promote the usage of Official Language in communication, various initiatives like organizing workshops and conferences, participation in TOLIC activities, competition for the Undertakings under the aegis of TOLIC, Gurugram, facilitating Unicode tools in all computers etc. were undertaken. During Hindi Fortnight celebrations from September 1-14, 2017, various competitions were organized to encourage the progressive use of Hindi. On this occasion, HODs/ Head of office and respective Hindi Coordinators who undertook maximum work in Hindi during the year were felicitated. The Company was bestowed with the Consolation Prize of Petroleum Rajbhasha Shield by the Ministry of Petroleum & Natural Gas for the excellent work done for propagation of Hindi during FY 2016-17, Best Rajbhasha award for progressive Official Language Implementation for year 2017, Award for conducting Hindi competition for member organizations of TOLIC Gurugram by Ministry of Home Affairs, Department of Official Language under the aegis of Town Official Language Implementation Committee, Gurugram.



### Awards and Accolades

EIL was the proud recipient of the following awards and accolades during the year:

- Best Indigenous Innovator Award at 21<sup>st</sup> Refinery Technology Meet being organized by Centre for High Technology (CHT), MoP&NG at Visakhapatnam during April 20-22, 2017.
- FIPI 'Project Management –Company of the Year' Award for the year 2016 jointly with BPCL.
- 5<sup>th</sup> Governance Now PSU Award for "Consistent Growth" in Navratna Category.
- 10<sup>th</sup> CIDC Vishwakarma Award for Best Construction Projects to DHT Project at BPCL Mumbai Refinery.
- 10<sup>th</sup> CIDC Vishwakarma Award for Construction Health, Safety and Environment to Daman Development Project at Hazira.
- Institute of Public Enterprises' Women of Excellence Awards-2017 to four women executives of EIL.

### Joint Venture

#### **Ramagundam Fertilizers and Chemicals Limited (RFCL)**

RFCL has been incorporated as a joint venture company of Engineers India Limited (EIL), National Fertilizer Limited (NFL) and Fertilizer Corporation of India (FCIL), for setting up a new Urea and Ammonia plant at Ramagundam in Karimnagar district of Telengana. The JV will be responsible for setting up a fertilizer complex consisting of ammonia & urea plant of 2200 TPD and 3850 TPD capacity respectively. Engineering activities for the project are almost complete. Ordering of all equipment has been completed and equipment are being received progressively at site. All work contracts have been awarded. Site activities are in full swing with civil works nearing completion and mechanical works in progress.

### Subsidiary Company

#### **Certification Engineers International Limited (CEIL)**

CEIL, a wholly owned subsidiary of EIL, continued to provide Certification as well as Third Party Inspection (TPI) services to various clients. During the year, CEIL secured a number of assignments from VMC, SMC, RMC, RINL, GSPL, GITL, KRCL, GAIL, OPaL, TEDA, MMRDA and various State Governments, notable among these being:

- ONGC : Extension of contracts for Daman Development, Sagar Samrat Conversion and Sagar Pragati conversion Project.
- Konkan Railway Corporation Ltd: Quality assurance services for 16 Bridges on Katra-Dharam
- Special Production Group (SPG) : TPI services for Residential and Training Complex.
- Cantonment Boards : Third party Inspection services for various cantonment Boards across India.
- Deepak Phenolic Limited : Third Party Quality Audit for Phenolic and Cumene Plant.
- VMC, SMC, RMC : TPI for various infrastructure Projects undertaken by Municipal Corporations.
- GAIL(I) Ltd: Inspection of Critical activities of Pipe and plates at overseas vendor's place.
- GSPL/ GITL : TPI for various Pipeline Projects in Gujarat and Andhra Pradesh.

- TEDA : Third Party Inspection Services for SPV Home lighting system.
- RINL : Pre-despatch Inspection of materials & Capacity assessment of Industrial Units.
- MMRDA : TPI services for Construction of ROB
- ONGC Petro additions Limited: Third Party construction supervision of Unit and offsites

Apart from these, CEIL secured many Third Party Inspection assignments from clients like, BPCL; Vijay Tanks and Vessels; Paramount Ltd., Patels Airtemp (I) Ltd; DRDO, Jindal Saw Ltd; Neuman & Essar and Heurty Petrochem (I) Pvt Ltd.; ERDMP & statutory audit assignments from GAIL, IOCL, Cairn India Ltd.

The Board of Directors of the Company has recommended for the financial year 2017-18, a final dividend of ₹350/- per share (of face value of ₹100/- per share) in addition to ₹350/- per share interim dividend already paid during the year. With this, the total dividend for the financial year 2017-18 works out to ₹700/- per share. Payment of final dividend is, however, subject to approval of shareholders in the ensuing Annual General Meeting of the Company. The dividend, if approved and declared in the forthcoming Annual General Meeting, would result into total dividend outflow of ₹700 Lakhs and dividend distribution tax of ₹143.19 Lakhs aggregating to total outflow of ₹843.19 Lakhs.

### Corporate Governance

The Company is committed to good Corporate Governance as per the requirements of SEBI Regulations and DPE Guidelines in this regard. The Board of Directors support the broad principles of Corporate Governance. In addition to the basic issues, EIL Board lays strong emphasis on transparency, accountability and integrity. As required under SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 and DPE Guidelines on Corporate Governance, the Report on Corporate Governance, together with the Auditors' Certificate on compliance of conditions of Corporate Governance, along with the Management's Reply on the comments of Auditors is annexed to this report.

### Number of Meetings of the Board

The Board met ten times during the financial year 2017-18, the details of which are given in the Corporate Governance Report annexed to this Report which forms part of the Annual Report. The intervening gap between any two meetings was within the period prescribed under Companies Act, 2013, SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 and DPE Guidelines on Corporate Governance. For further details regarding number of meetings of the Board and its committees, please refer Corporate Governance Report, annexed to this Report.

### Composition of Audit Committee

The recommendations made by the Audit Committee during the year were accepted by the Board. The other details of Audit Committee like composition, terms of reference, meetings held are provided in the Corporate Governance Report annexed to this Report.

### Declaration by Independent Directors

The Company has received necessary declaration from each independent Director under Section 149(7) of the Companies Act, 2013, that he meets the criteria of independence laid down in Section 149(6) of the Companies Act, 2013, SEBI (Listing Obligations and



Disclosure Requirements) Regulations, 2015 and DPE Guidelines on Corporate Governance.

### Training of Independent Directors

The Company has a well defined Training Policy for training to Board Members which inter-alia include the various familiarisation programmes in respect of their roles, rights, responsibilities in the company, nature of the industry in the company operates, business model of the company etc. Further, the same is also taken care during the various strategy meets of the Company and different presentations in the Board/ Committee meetings on the statutory Laws. The details of such familiarisation programmes / Training Policy have also been posted on the website of the Company at the <http://engineersindia.com/corporate-governance/m-160> web-link.

### Directors and Key Managerial Personnel (KMP)

#### Directors

##### • Inductions

Shri Chaman Kumar was appointed as Additional Director (Non-official Independent) w.e.f. 8<sup>th</sup> September, 2017 in terms of Ministry of Petroleum & Natural Gas, Government of India, letter no. C-31034/2/2017-CA/FTS:49128 dated 8<sup>th</sup> September, 2017. Shri Rajesh Kumar Gogna was appointed as Additional Director (Non-official Independent) w.e.f. 20<sup>th</sup> September, 2017 (date of allotment of DIN) in terms of Ministry of Petroleum & Natural Gas, Government of India, letter no. C-31034/2/2017-CA/FTS:49128 dated 8<sup>th</sup> September, 2017. Shri Jagdish Chander Nakra, Director (Projects) was appointed as Additional Director and Chairman & Managing Director w.e.f. 12<sup>th</sup> February, 2018 (A.N.) in terms of Ministry of Petroleum & Natural Gas, Government of India, letter no. C-31/1/2017-CA(14564) dated 12<sup>th</sup> February, 2018. Shri Lalit Kumar Vjih, Executive Director, was appointed as Director (Technical) w.e.f. 2<sup>nd</sup> May, 2018 (A.N.) in terms of Ministry of Petroleum & Natural Gas, Government of India, letter no. CA-31018/1/2017-PNG (98) dated 2<sup>nd</sup> May, 2018. Shri Ashish Chatterjee was appointed as Director (Government Nominee) w.e.f. 26.07.2018 in terms of Ministry of Petroleum & Natural Gas, Government of India, letter no. C-31033/1/2016-CA/FTS:42979 dated 26<sup>th</sup> July, 2018.

##### • Re-appointments

In accordance with the provisions of the Articles of Association of the Company, Shri Vipin Chander Bhandari, Director (HR) and Shri Rakesh Kumar Sabharwal, Director (Commercial) would retire by rotation, at the ensuing Annual General Meeting, and being eligible, offers themselves for reappointment. In accordance with the provisions of the Companies Act, 2013, Shri Chaman Kumar, Shri Rajesh Kumar Gogna, Non-official Independent Directors, Shri Lalit Kumar Vjih, Director (Technical) who were appointed as Additional Directors and Shri Jagdish Chander Nakra who was appointed as Additional Director and Chairman & Managing Director after the date of last Directors' report, shall vacate their offices at the ensuing Annual General Meeting. Necessary notices have been received from them under section 160 of the Companies Act, 2013, proposing their candidature for appointment. The same has also been given on the website of the Company at <http://engineersindia.com/corporategovernance/m-160>. The Board recommends their appointment. Brief resume of the Directors seeking appointment/ reappointment together with the nature of their expertise in specific functional areas, disclosure

of relationships between Directors inter-se, names of companies in which they hold Directorships and the membership/ chairmanship of Committees of the Board along with their shareholding in the Company etc. as stipulated under SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, DPE Guidelines on Corporate Governance and other statutory provisions are given in the Annexure to Notice of 53<sup>rd</sup> Annual General Meeting.

##### • Retirements

After the date of last Directors' Report i.e. 3<sup>rd</sup> August, 2017, Shri Sanjay Gupta, Chairman & Managing Director ceased to be the Chairman & Managing Director of the Company w.e.f. 1.11.2017 due to his retirement on attaining the age of superannuation on 31.10.2017. Ms. Sushma Taishete, Director (Government Nominee) ceased to be Director of the Company w.e.f. 24<sup>th</sup> November, 2017. Shri Ajay Narayan Deshpande, Director (Technical) with additional charge of Chairman & Managing Director and Director (Finance) ceased to be Director of the Company w.e.f. 1.02.2018 due to his retirement on attaining the age of superannuation on 31.01.2018. Shri Jagdish Chander Nakra, ceased to be Director (Projects) consequent to his appointment as Chairman & Managing Director w.e.f. 12.02.2018 (A.N.). The Board placed on record its sincere appreciation for the valuable services rendered and contributions made by Shri Sanjay Gupta, Chairman & Managing Director, Ms. Sushma Taishete, Director (Government Nominee) and Shri Ajay Narayan Deshpande, Director (Technical) with additional charge of Chairman & Managing Director and Director (Finance) of the Company.

##### • Additional Charge

Shri Ajay Narayan Deshpande, Director (Technical) was entrusted with the additional charge of the Post of Chairman & Managing Director for a period of 3 months w.e.f. 1.11.2017 to 31.01.2018 (i.e. till the date of his superannuation) or until further orders whichever is the earliest vide Ministry of Petroleum & Natural Gas, Government of India, letter no. C-31018/9/2017-CA-PNG:16545 dated 31.10.2017. Shri Ajay Narayan Deshpande, Director (Technical) was also entrusted with the additional charge of the Post of Director (Finance) for a period of 3 months w.e.f. 1.11.2017 to 31.01.2018 i.e. till the date of his superannuation or till the appointment of a regular incumbent to the post or until further orders, whichever is the earliest vide Ministry of Petroleum & Natural Gas, Government of India, letter no. C-31018/3/2017 (4273) dated 21.12.2017. Shri Jagdish Chander Nakra, Chairman & Managing Director was entrusted with the additional charge of the Post of Director (Projects) for a period of 3 months from 13.02.2018 to 12.05.2018 or till the appointment of a regular incumbent to the post or until further orders, whichever is the earliest vide Ministry of Petroleum & Natural Gas, Government of India, letter no. CA-31018/2/2018-PNG (23190) dated 9.03.2018. Additional charge of the post of Director (Technical) was entrusted to Shri Jagdish Chander Nakra as Director (Projects) for a period from 1.02.2018 to 12.02.2018 vide Ministry of Petroleum & Natural Gas, Government of India, letter no. CA-31018/1/2018-CA-PNG dated 16.03.2018. Additional charge of the post of Director (Technical) was entrusted to Shri Jagdish Chander Nakra as Chairman & Managing Director for a period from 13.02.2018 to 30.04.2018 or till the appointment of a regular incumbent to the post or until further orders, whichever is the earliest vide Ministry of Petroleum & Natural Gas, Government of India, letter no. CA-



31018/1/2018-CA-PNG dated 16.03.2018. Additional charge of the post of Director (Finance) was entrusted to Shri Jagdish Chander Nakra as Director (Projects) for a period from 1.02.2018 to 12.02.2018 vide Ministry of Petroleum & Natural Gas, Government of India, letter no. CA-31/1/2017-PNG (14564) dated 28.03.2018. Additional charge of the post of Director (Finance) was entrusted to Shri Jagdish Chander Nakra as Chairman & Managing Director for a period from 13.02.2018 to 30.04.2018 or till the appointment of a regular incumbent to the post or until further orders, whichever is the earliest vide Ministry of Petroleum & Natural Gas, Government of India, letter no. CA-31/1/2017-PNG (14564) dated 28.03.2018. Shri Jagdish Chander Nakra, Director (Projects), was entrusted with the Additional charge of the post of Chairman & Managing Director w.e.f. 1.02.2018 till 12.02.2018 vide Ministry of Petroleum & Natural Gas, Government of India letter no. C-31018/9/2017-CA-PNG:16545 dated 5.04.2018. Shri Jagdish Chander Nakra, Chairman & Managing Director was entrusted with the additional charge of the Post of Director (Projects) for a period of 6 months from 13.05.2018 or till the appointment of a regular incumbent to the post or until further orders, whichever is the earliest vide Ministry of Petroleum & Natural Gas, Government of India, letter no. CA-31018/2/2018-PNG (23190) dated 9.05.2018. Shri Jagdish Chander Nakra, Chairman & Managing Director was entrusted with the additional charge of the Post of Director (Finance) for a period of 6 months w.e.f. 1.05.2018 or till the appointment of a regular incumbent to the post or until further orders, whichever is the earliest vide Ministry of Petroleum & Natural Gas, Government of India, letter no. CA-31/1/2017-PNG (14564) dated 14.06.2018. Shri Jagdish Chander Nakra, Chairman & Managing Director was entrusted with the additional charge of the Post of Director (Technical) for a period of one day i.e. 1.05.2018 vide Ministry of Petroleum & Natural Gas, Government of India, letter no. CA-31018/1/2018-CA-PNG dated 14.06.2018.

#### Key Managerial Personnel

- Company Secretary: Shri Rajan Kapur, Company Secretary of the Company has resigned from the post of Company Secretary w.e.f. 26.07.2018. The Board in its meeting held on 9.08.2018 has appointed Shri Narendra Kumar, Manager (CS) as Company Secretary of the Company till new whole time Company Secretary is selected and appointed by the Board.
- CFO : During the period under review, the position of CFO was occupied as follows:
  - Shri Ram Singh, Director (Finance) was holding the position till 30.04.2017 (date of his superannuation).
  - Shri R.K. Garg, ED (F&A), was holding the position from 15.05.2017 to 30.06.2017 (date of his superannuation).
  - Shri V.C. Bhandari, Director (HR), was Designated as CFO of the Company w.e.f. 1.07.2017.

#### Secretarial Auditor

M/s Agarwal S. & Associates, Practicing Company Secretaries, was appointed to conduct the Secretarial Audit of the Company for the

financial year 2017-18, as required under Section 204 of the Companies Act, 2013 and Rules thereunder. The Secretarial Audit Report for the financial year 2017-18 along with the Management's Reply on the comments of Secretarial Auditor is annexed to this Report.

#### Vigil Mechanism/Whistle Blower Policy

The Company has formed the Whistle Blower Policy/Vigil Mechanism and no personnel have been denied access to the Audit Committee. The same has also been given on the website of the Company at <http://engineersindia.com/corporate-governance/m-160>.

#### Transfer of Amounts/Securities to Investor Education and Protection Fund

A detailed disclosure regarding the same has been given in the Corporate Governance Report which is annexed to this Report. The same has also been given on the website of the Company at <http://engineersindia.com/corporate-governance/m-160>.

#### Listing on Stock Exchanges

The Company is listed on the BSE Ltd. and National Stock Exchange of India Ltd. The Company has paid Listing fees for the Financial Year 2017-18 to the above Stock Exchanges in time.

#### Nomination and Remuneration Committee

EIL is a Public Sector Undertaking (Government Company) and the appointment of Directors, both Executive and Non-Executive are made by the Government of India and are being paid remuneration as per the terms of their appointment. The Company has a Nomination and Remuneration Committee and detailed disclosure in this regard has been given in the Corporate Governance Report which is annexed to this Report.

#### Performance Evaluation of the Board

EIL is a Public Sector Undertaking (Government Company) and the appointment of Directors, both Executive and Non-Executive are made by the Government of India. Therefore, the Company has not laid down any criteria for performance evaluation of the Independent Directors and the Board.

#### Particulars of Contracts or Arrangements made with Related Parties (RPTs)

In line with the provisions of the Companies Act, 2013 and the Listing Regulations, the Company has formulated a Policy on materiality of Related Party Transactions and also on dealing with Related Party Transactions. The same has been posted on the website of the Company at <http://engineersindia.com/corporate-governance/m-160>. The Company gives the disclosure regarding material transactions with related parties on quarterly basis along with the compliance report on Corporate Governance. As per requirements of Section 134 (3) of Companies Act, 2013 read with rule 8 of Companies (Accounts) Rule, 2014, particulars of contracts or arrangements with related parties as referred in section 188 (1) of the Companies Act, 2013 is annexed to this report. During the year, there were no material RPTs. Further, suitable disclosure as required by the Accounting Standards (AS18) has been given in the Notes to the Financial Statements.

#### Details of Loans/Investments/Guarantees

In compliance with the provisions of the Companies Act, 2013, the details of investments made and loans/guarantees provided as on 31.03.2018 are given in the respective Notes to the financial



statements.

#### Extract of Annual Return

In accordance with Section 134(3)(a) of the Companies Act, 2013, an extract of the annual return in the prescribed format is annexed to this report. The same has also been given on the website of the Company at <http://engineersindia.com/corporate-governance/m-160>.

#### Cost Auditors

EIL does not fall under the cost audit rules and therefore, there is no requirement of cost audit for the Company in terms of amended Companies (Cost Records and Audit) Rules.

#### Conservation of Energy, Research and Development, Technology Absorption, Foreign Exchange Earnings and Outgo

In accordance with the provision of the Companies Act, 2013 and rules framed thereunder, particulars relating to Energy Conservation Technology Absorption are given under Research & Development and Sustainable Development Sections of the Directors' Report.

Information regarding imports, foreign exchange earnings and expenditures etc. (excluding exchange difference on conversion of foreign currency) is as following: (Figures in ₹ Lakhs)

Sl. No.	PARTICULARS	STANDALONE	
		Year ended 31 <sup>st</sup> March, 2018	Year ended 31 <sup>st</sup> March, 2017
<b>a)</b>	Expenditure (disbursement basis) in foreign Currency on account of:		
(i)	Know how and professional fees including sub-contracts (others)	591.70	1808.76
(ii)	Sub-contractor/Construction Material turnkey projects	1100.43	1610.75
(iii)	Others (foreign travel, living allowance, membership fees, agency commission, foreign office expenses)	3096.58	4499.47
<b>b)</b>			
(i)	Earnings (accrual basis) in foreign exchange on account of professional fees including ₹ 107.79 Lakhs (Previous year: ₹ 85.80 Lakhs) earned in local foreign currencies, which are not repatriable to India against which, an expenditure of ₹ 38.69 Lakhs (Previous year: ₹ 50.17 Lakhs) incurred in local foreign currencies.	22583.95	30059.73

#### Significant and Material Orders

There are no significant and material orders passed by the regulators or courts or tribunals impacting the going concern status and Company's operations in future.

#### Other Disclosures

No disclosure or reporting is required in respect of the following items

as either these were not applicable or there were no transactions on these items during the financial year 2017-18:-

1. Details relating to deposits covered under Chapter V of the Act.
2. Issue of equity shares with differential rights as to dividend, voting or otherwise.
3. Issue of shares (including sweat equity shares) to employees of the Company under any scheme.
4. Neither the Managing Director nor the Whole-time Directors of the Company receive any remuneration or commission from any of its subsidiaries.

Further, the names of Companies which have become or ceased to be its subsidiaries during the year are NIL whereas the companies which have become or ceased to be joint ventures or associate companies during the year are NIL.

The Company has in place internal complaints committee under the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013. Further, during the financial year 2017-18, there were no cases filed under the above act.

There are no material changes and commitments affecting the financial position of the Company which have occurred between the end of the financial year and the date of this report.

#### Code of Conduct

EIL has formulated a Code of Business Conduct and Ethics for Board of Directors and Senior Management Personnel. The confirmation of compliance of the same is obtained from all concerned on annual basis. All Board Members and Senior Management Personnel have given their confirmation of compliance for the year under review. A declaration duly signed by C&MD is given under para 2(e) of the Report on Corporate Governance annexed to this Report. The Code of Business Conduct and Ethics for Board of Directors and Senior Management Personnel are given on the website of the Company at <http://engineersindia.com/corporate-governance/m-160>.

#### Right to Information

Under the provisions of Section 4 of the Right to Information Act, 2005, every public authority is required to display necessary information to citizens to secure access to information under the control of public authority in order to promote transparency and accountability in its working and functioning.

EIL, being a responsible public sector undertaking, has displayed essential information on its website under the head RTI. The management has notified CPIO and the First Appellate Authority in compliance with requirements of the RTI Act. Between April 01, 2017 and March 31, 2018, a total of 154 (One hundred fifty four) RTI applications were received by the Company. The applications received have been disposed of by providing requisite information as per the guidelines. Apart from RTI applications, the Company also received Appeals against decision of CPIO, which too have been duly attended and appropriately disposed of by the First Appellate Authority.

#### Directors' Responsibility Statement

Your Directors state that :

- a. in the preparation of the annual accounts for the year ended March 31, 2018, the applicable accounting standards read with requirements set out under Schedule III to the Companies Act,



have been followed and there are no material departures from the same;

- b. the Directors have selected such accounting policies and applied them consistently and made judgements and estimates that are reasonable and prudent so as to give a true and fair view of the state of affairs of the Company as at March 31, 2018 and of the profit of the Company for the year ended on that date;
- c. the Directors have taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding the assets of the Company and for preventing and detecting fraud and other irregularities;
- d. the Directors have prepared the annual accounts on a 'going concern' basis;
- e. the Directors have laid down internal financial controls to be followed by the Company and that such internal financial controls are adequate and are operating effectively; and
- f. the Directors have devised proper systems to ensure compliance with the provisions of all applicable laws and that such systems are adequate and operating effectively.

#### **Auditors**

M/s Arun K Agarwal & Associates, Chartered Accountants were appointed as Auditors of the Company for the financial year 2017-18 by the Office of Comptroller & Auditor General of India.

#### **Bankers**

Bankers of the Company include State Bank of India, Indian Overseas Bank, Vijaya Bank, Corporation Bank, Bank of Baroda, Punjab National Bank, Union Bank of India, HDFC Bank, ICICI Bank, Indian Bank, Bank of India, Oriental Bank of Commerce, Canara Bank, IDBI Bank, Axis Bank and IndusInd Bank.

#### **Particulars of Employees**

As per the provisions of Section 197 of the Companies Act, 2013 and rules made thereunder, Government Companies are exempted from

inclusion of the statement of particulars of employees. The information has, therefore, not been included as part of the Directors' Report. However, the same information is open for inspection at the registered office of the Company on all working days between 10.30 a.m. to 12.30 p.m. prior to the Annual General Meeting.

#### **Acknowledgement**

Your Directors are grateful for all the help, guidance and support received from Ministry of Petroleum & Natural Gas and from other Ministries of the Government of India. Your Directors are also grateful to the Bankers, Statutory Auditors, Comptroller & Auditor General of India and the investors for their continued patronage and confidence in the Company.

Your Directors thank all our esteemed clients for the faith and trust reposed in the Company. With continuous learning, skill upgradation, technology development, we will continue to provide world class professionalism and services to our clients.

Your Directors thank all associates, vendors and contractors within the country and abroad, for their continued support without which EIL could not have achieved the desired results. Your Directors are grateful to all the Foreign Missions in India and Indian Missions abroad in countries where EIL has business operations for their continued help and support.

Your Directors wish to convey their appreciation to all employees for the valuable services and cooperation extended by them and are confident that they will continue to contribute their best towards achieving still better performance in future.

For and on behalf of the Board of Directors

Place: New Delhi  
Date : August 10, 2018

J.C. Nakra  
Chairman & Managing Director