

3. Institutions:

3.1 OIL INDUSTRY SAFETY DIRECTORATE (OISD)

The Oil Industry Safety Directorate (OISD) assists the Safety Council under the Ministry of Petroleum and Natural Gas, which is headed by Secretary, P&NG as Chairman and includes Additional Secretary, Joint Secretaries, Chief Executives of all Public Sector Undertakings under the Ministry, Chief Controller of Explosives, Advisor (Fire) of the Government of India, Director General Mines Safety, Director General of Factory Advice Service & Labour Institutes and two Chief Executives from private/JC companies, on rotation basis as members. In the 2013-14, private sector had been represented in Safety Council by M/s Cairns Energy and M/s. Essar Oil. The job description of OISD is as under:-

Development of Safety Standards

OISD develops Standards / Guidelines / Recommended Practices for the oil and gas sector through a participative process involving all the stakeholders (including the public at large), drawing inputs from international standards and adapting them to Indian conditions by leveraging the experience of the constituents. These standards cover inbuilt design safety, asset integrity and best operating practices in the field of production, processing, storage and transport of petroleum. OISD standards are reviewed periodically to ascertain needs of developing new standards, updating / amending existing standards to incorporate the latest technological developments as well as current experiences on the ground. As on date, OISD has developed 113 technical safety standards for the oil industry. 11 of these standards had also been included in statutory provisions of Petroleum Rules and Gas Cylinder Rules.

During the current year, 06 existing standards have been revised / amended and revision / amendment of 06 more standards are under advanced stage of completion. 02 new standards had been adopted by Safety Council in 2013-14 (so far) and 01 new standard is in advanced stage of adoption.

External Safety Audits (ESA)

OISD is carrying out safety audits of oil & gas installations to monitor compliance to OISD standards. E&P Installations of PSU as well as private sector companies in on-land as well as in offshore areas are audited periodically. 2012-13

Pre-Commissioning Safety Audits (PCSA)

Pre-Commissioning safety audits are conducted where, green-field developments and also major additional facilities at existing locations are being done, to ensure *ab initio* compliance of these facilities to the OISD standards at the construction stage itself. During the first half of the year 2013-14, 16 nos. of such PCSAs had been conducted in line with the requests made by the Industry members.

Safety Performance Evaluation of Industry

Annual evaluation of Safety Performance of the Industry Members is done by a specially developed methodology, which takes cognizance of hazards associated, incident recorded during the year and safety management system of the installation. Safety awards, for 2011-12, had been handed over to the recipients by Hon'ble Minister of Petroleum & Natural Gas and Hon'ble Minister of State for Petroleum & Natural Gas in a glittering function at Delhi. Safety awards were presented in the following groups:

- Exploration & Production (Oil & Gas Assets (Onshore); Offshore Production Platforms)
- Refineries & Gas Processing Plants (Refineries; Other Processing Plants)
- Cross Country Pipelines (Crude Pipeline; Gas/LPG Pipeline; Product Pipeline)
- POL Marketing Organizations
- LPG Marketing Organizations
- Award for Individual's Contribution Towards Safety

Knowledge sharing collaborations:

OISD is the safety regulator for upstream offshore operations in India. OISD has a MOU with Bureau of Safety and Environmental Enforcement (BSEE) of the Department of the Interior, Govt. of USA for knowledge sharing and capacity building in the area of offshore safety.

OISD has also entered into an MOU with Centre for Chemical Process Safety (CCPS) under the aegis of AIChE, USA for knowledge sharing in the area of Process Safety Management of Chemical Process Plant on 14.05.2013. This event got an editorial mention in the prestigious "Hydrocarbon Processing" journal. Follow up meeting had been held during July and October, 13 through video conferencing.

Incident Investigation & Analysis

OISD investigates as well as participates in investigation of major incidents (depending upon the severity/damage) to analyze the cause of the incident. A databank of incidents of the oil industry is maintained and analyzed to assess trends, areas of concern and required corrective action. These are then disseminated to the industry through safety alerts, advisory notes, workshops, training programmes, website links etc.

During the year 2012-13 and first half of 2013-14, 18 and 10 (respectively) major incidents were investigated by OISD which includes major incidents like Hazira Terminal Fire, Visakh Refinery Fire, Chala LPG Bulk TT BLEVE etc.

3.2 CENTRE FOR HIGH TECHNOLOGY (CHT)

Centre for High Technology (CHT) was established by Ministry of Petroleum & Natural Gas (MOP&NG) in 1987 as a specialised agency of the oil industry to assess futuristic technology requirements for acquisition, development and adoption in the field of refinery processes, petroleum products, additives, storage and handling of crude oil, products and gas.

CHT acts as the Technical Wing of MOP&NG for implementation of scientific and technological programmes of Govt. of India. Major functions of CHT include assessment of technology requirement as also operational performance evaluation and improvement of the refineries. CHT acts as a focal point of oil industry for centralised technical assistance, knowledge dissemination, performance data base, exchange of information and experience. CHT also coordinates funding of research work in refining and marketing areas and pursue the programmes of “Scientific Advisory Committee on Hydrocarbons” of MOP&NG.

3.3 ENGINEERS INDIA LIMIED (EIL)

Engineers India Limited (EIL) was established in 1965 with its head office in New Delhi to provide engineering and related technical services for petroleum refineries and related projects. Over the years, it has augmented its span of services and excelled in various fields to emerge as a leading Project, Design, Engineering and Turnkey (LSTK) contracting company in the fields of:

- Petroleum Refining
- Petrochemicals, Chemicals & fertilizers
- Crude, Petroleum products & Gas Pipelines
- Offshore/ Onshore Oil & Gas
- Terminals & Storage
- Sub Surface Strategic Storage
- Mining & Metallurgy
- Infrastructure

EIL in the year 2000-01, forayed into the infrastructure sector and since then has secured several noteworthy and significant assignments related to modernization/development of international airports, intelligent buildings and water management. In 2010-11, EIL has also taken diversification initiatives into fertilizer, nuclear and solar power and upstream E&P.

An ISO 9001 certified company, EIL has a network of regional offices in Chennai, Vadodara and Kolkata; branch office in Mumbai, overseas engineering /marketing office in Abu Dhabi, which is a hub of the company's activities in Middle East. There are Inspection/Procurement offices at various locations all over India and also in London, Milan and Shanghai with construction offices at different project sites both in India and abroad. Besides, EIL has a wholly owned subsidiary in Malaysia (EIL Asia Pacific Sdn Bhd) for executing projects and one subsidiary in India (Certification Engineers International Ltd) for providing certification and inspection services. To strengthen its domestic and overseas business, EIL has formed two joint ventures – M/s TEIL Projects Ltd with M/s Tata Projects Ltd in New Delhi and M/s. Jabal EILIOT Company with M/s IOT Infrastructure & Energy Ltd and M/s Jabal Dhahran Company Ltd in Saudi Arabia.

EIL provides a comprehensive range of project related technology and engineering services spanning from project conceptualizing to project commissioning which includes revamp, capacity expansion and modernization of plants.