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Special Issue

Success Stories of NSCI Safety Award Winners - 2024



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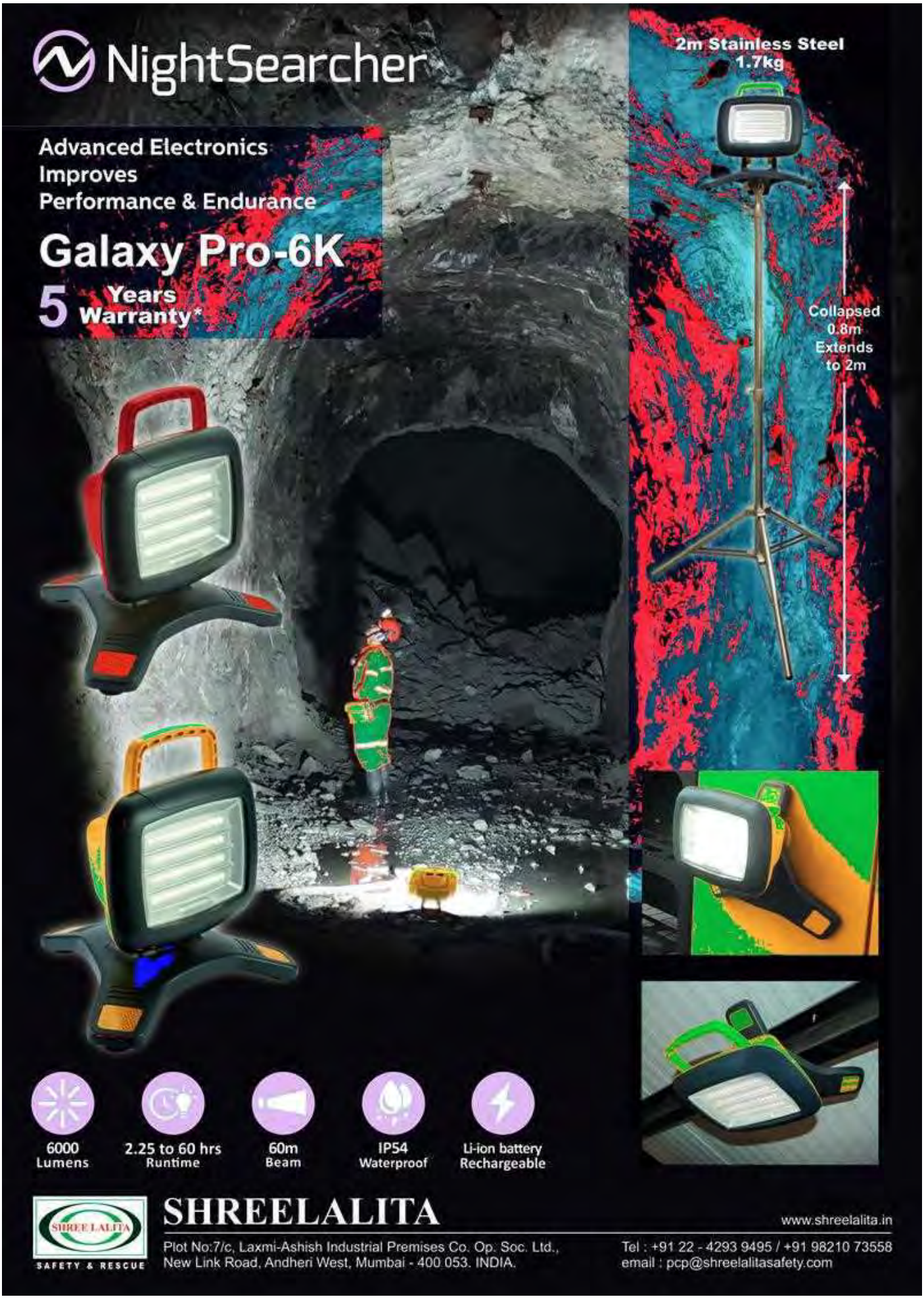
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EDITORIAL

Safety is more than just a set of rules—it is a culture, a mindset, and, above all, a commitment to safeguarding human lives.



We present this special edition of Industrial Safety Chronicle dedicated to the top winners of the prestigious NSCI Safety Awards for the year 2024, highlighting their exemplary Occupational Safety and Health practices. A special coverage of the Platinum Award winner, ***M/s. Indian Farmers Fertiliser Cooperative Ltd., Kalol Unit, Gandhinagar, Gujarat****, which has achieved this highest honour for the second consecutive year, also features.*

The winners demonstrate their best in proactive risk management, top management commitment, innovative training, leadership-driven safety culture, the application of advanced technologies and dedication to continuous improvement. Their efforts have not only prevented incidents but also set new benchmarks for safety excellence across sectors.

In this issue, you will find their stories, strategies, and tools - practical insights they have adapted and implemented within their own organizations. Whether it's use of new digital technology for hazard reporting, a peer-led safety mentorship program, or a shift in mindset, these practices are intended to inspire meaningful actions.

The winners of the 2024 awards were honoured at a glittering function held on 17th January 2025 in Mumbai. The event witnessed an overwhelming gathering of over 500 attendees, including invitees and representatives from award-winning organizations. In total, 112 organizations from the manufacturing, construction, MSME, and service sectors received the awards across four levels: ***Sarvashreshtha Suraksha Puraskar (Golden Trophy)****,* ***Shreshtha Suraksha Puraskar (Silver Trophy)****,* ***Suraksha Puraskar (Bronze Trophy)****, and* ***Prashansa Patra (Certificate)****, besides a special* ***Platinum Trophy.***

We are confident that the success stories of the topmost award-winning organizations will inspire our readers and others to take meaningful actions to further strengthen safety practices in their organisations.



Dr. Lalit R. Gabhane
Director General & Chief Editor



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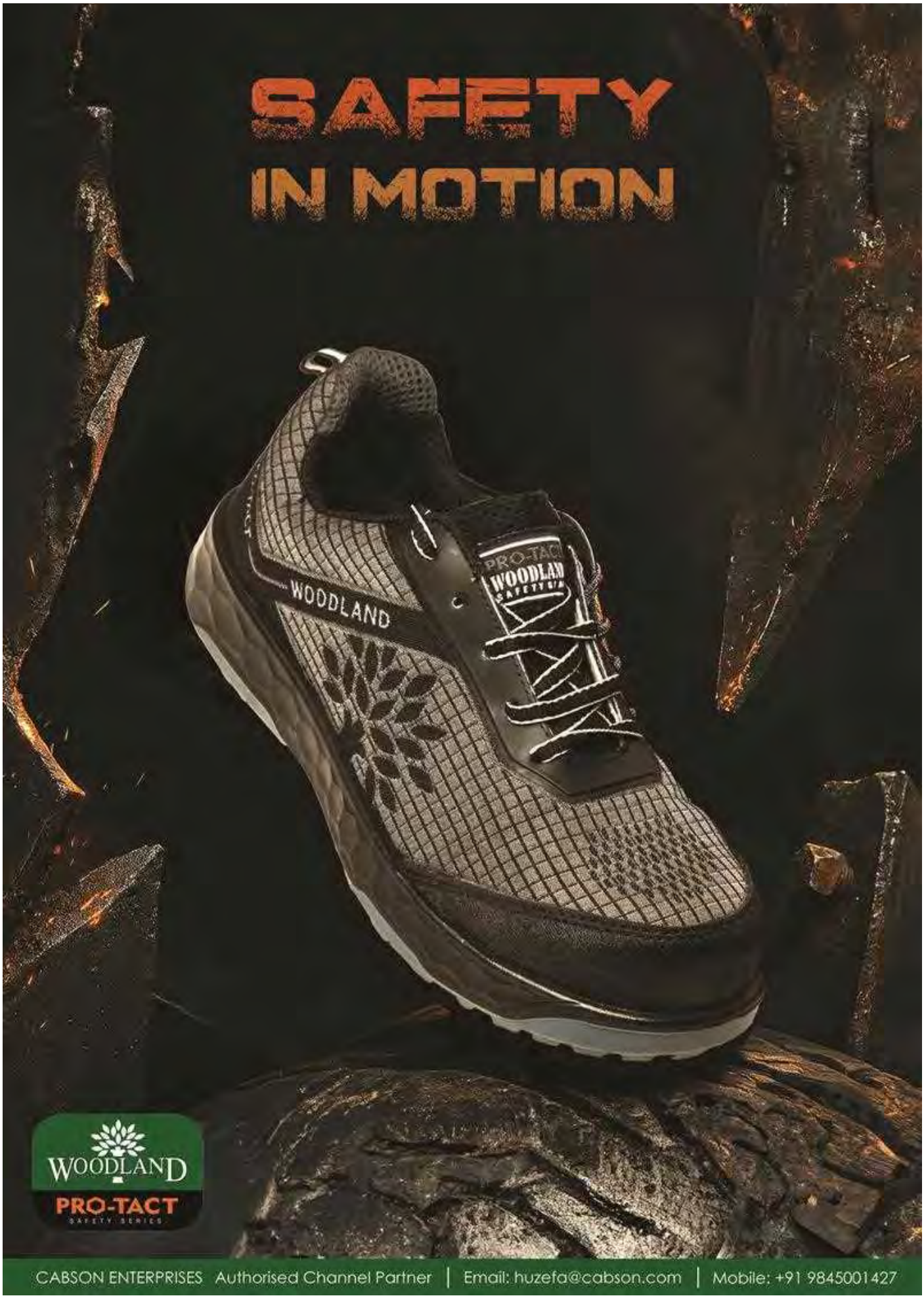


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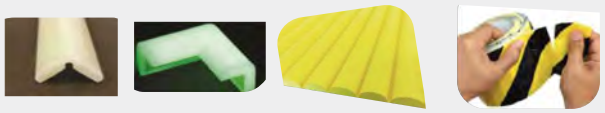




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Recognition for Factories, Construction Establishments, MSME Units and Service Industries - NSCI Safety Awards Scheme

Safety awards play a vital role in promoting and sustaining a culture of safety across industries. By formally recognizing organizations and individuals that prioritize and implement effective safety practices, these awards serve as powerful motivators for continuous improvement. They not only acknowledge past achievements in maintaining safe work environments but also encourage proactive measures to prevent future incidents. As a result, safety awards contribute to a significant reduction in workplace accidents, injuries, and fatalities. This, in turn, leads to increased employee morale, as workers feel valued and secure in their work environments. Higher morale often translates into better job performance, lower turnover rates, and greater overall productivity. Furthermore, organizations that consistently receive safety awards enhance their reputation, making them more attractive to top talent and trusted by clients and stakeholders. From a financial standpoint, fewer accidents mean reduced costs related to medical expenses, insurance premiums, legal liabilities, and operational downtime. Ultimately, safety awards are not just recognition tools—they are strategic investments in a safer, more efficient, and more sustainable workplace.

There are industries and organizations that are taking proactive steps to improve their workplaces and minimize risks. Therefore, it is essential to recognize such industries and organizations for their Occupational Health and Safety (OHS) performance at the national level through an awards scheme. This initiative will also help motivate other industries and organizations to:

- Minimize accidents across various sectors of the growing economy
- Ensure the continued protection of people against workplace hazards
- Demonstrate support for international OHS standards, including ILO conventions
- Enhance the sustainability of industrial development
- Motivate industries to achieve the highest standards of safety and health
- Benchmark and promote best practices in safety and health

NSCI Safety Awards

National Safety Council of India (Council) operates Awards scheme for four sectors viz. Manufacturing, Construction, MSME and Service. The Awards Scheme has been introduced by the Council in the year 1998 for the Manufacturing sector and subsequently for the Construction, MSME and Service sectors in 2005, 2009 and 2020 respectively. These awards are first of its kind which takes into consideration the effective implementation of Safety Management System established by the organisations and the consistency of their Safety Performance.

The objective for launching these schemes is to provide a national level recognition and reward the organisations in Manufacturing, Construction, MSME and Service sectors for their meritorious Occupational Safety & Health (OSH) performance & commitment to reduce workplace injuries, implementations of the best OSH practices and encourage continual improvements.

NSCI Safety awards application process is thorough and well-structured, with questions that encompass all key components of an Occupational Health and Safety (OHS) management system. These questions require detailed information on policies, procedures, risk assessments, training, incident reporting, performance monitoring, and continuous improvement initiatives. As a result, the very act of completing the application form serves as a valuable self-assessment tool for participating industries. It prompts organizations to critically evaluate the effectiveness of their existing OHS practices, identify any gaps or areas for improvement, and reflect on their commitment to maintaining a safe and healthy workplace. This introspective process not only strengthens their OHS systems but also reinforces a culture of accountability and continuous improvement.

Who Can Participate?

Manufacturing Sector

Industrial undertakings in the manufacturing sector registered as factories under the Factories Act, 1948 and have commenced the manufacturing activity before the assessment period i.e. three calendar years previous to the Awards Year are eligible to apply.

The industrial undertakings (Manufacturing units) are grouped in six groups for the Award purpose as follows:

Group	NIC Code*	Main Activity
A	19	Petroleum refineries, gas processing units and petro-chemical complexes
A-1	19	LPG CNG bottling plants, oil/gas terminal depots, aviation fuel stations, lubricating oil plants and oil/gas pipelines
B	20,21	Manufacturing chemicals & chemical products, manufacture of pharmaceuticals, medicinal chemical and botanical products

Group	NIC Code*	Main Activity
C	35	Power Generation (Thermal/ Hydel/ Nuclear Power Plants)
D	23,24,25,27, 28,29 & 30	Engineering, Cement, Steel, etc.
E	10,11,12,13, 14,15,16,17, 18,22,26,31, 32,36 & 38	Other industries not covered in above e.g. Manufacture of food products beverages, textiles, tobacco products, electronic items, paper & paper products, rubber & plastic products etc.

Construction Sector

The Awards Scheme prescribes the following eligibility criteria for participating for organization from Construction Sector.

Any establishment or contractor "registered under the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 [BOCW (RECS) Act, 1996] or under the Contract Labour (Regulation and Abolition) Act 1970 [CL(R&A) Act, 1970] or licensed under CL(R&A) Act, 1970" for executing "building and other construction work" as defined under the BOCW (RECS) Act, 1996 and employed 100 or more building workers in the project for at least 200 days during assessment period.

OR

Any Project Management Consultant (PMC), whose client or their contractors registered under BOCW (RECS) Act., 1996 or CL(R&A) Act, 1970 or licensed under CL(R&A) Act, 1970 for executing "building and other construction work" as defined under the BOCW (RECS) Act, 1996 and employed 100 or more building workers in the project for at least 200 days during assessment period. (Kindly refer the application for details).

The awards scheme for construction sector has been categorized in two groups as follows w.e.f. award year-2018 based on Construction Activities defined in the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.

Group	Nature of Construction Activity
A) Buildings	Residential, Commercial (Educational, Hospital, Malls, Offices, Hotel, IT Hub etc.)
B) Non-Buildings	Streets, Roads, Railways, Tramways, Airfields, Irrigation, Drainage, Embarkment & Navigation Work, Flood Control Work, Generation, Transmission and Distribution of Power, Water Work, Oil & Gas Installation, Electric lines, Wireless, radio, television, telephone, telegraph and overseas communication, Dams, canals, resrvoirs, watercourses, Tunnels, Bridges, Viaduct, Aquaducts, Pipelines, Towers, Cooling towers, Transission towers, Factory, any other not covered above.

MSME Sector

The MSME Scheme is open to manufacturing enterprises as defined under Section 2(e) & classified under Section 7 (1) (a) of the Micro, Small and Medium Enterprises Development Act, 2006. Accordingly, the following types of enterprise* engaged in the manufacture or production of goods are eligible to apply:

i. **Micro enterprise** – where the investment in plant and machinery or equipment does not exceed Rs.1 crore and Annual Turnover does not exceed Rs. 5 crore.

ii. **Small enterprise** – where the investment in plant and machinery or equipment does not exceed Rs.10 crore and Annual Turnover does not exceed Rs. 50 crore.

iii. **Medium enterprise** – where the investment in plant and machinery or equipment does not exceed Rs.50 crore and Annual Turnover does not exceed Rs. 250 crore and which has filed Memorandum with the District Industries Centre as required under the Micro, Small and Medium Enterprises Development Act, 2006.

Note: While calculating the investment in Plant and Machinery, the cost of Pollution Control, research and development, industrial safety devices shall be excluded.

*As per the Notification No. S.O. 2119(E) dated 26th June,2020 of the Ministry of Micro, Small & Medium Enterprises, Govt. of India

Group	Types of Enterprises
Group A	Micro & Small Enterprises
Group B	Medium Enterprises

Service Sector

The service sector scheme opens to the following establishment only who have registered under the Shop & Establishment Act, 1948 (registered premise only) or any other applicable statute and commenced their operation for minimum of 3 years period before the awards year:

1. Hotels having more than 100 rooms or 15 m height and above
2. IT establishments having high rise buildings (15 m heights & above) or floor area above 1,000 m^2
3. Hospitals having 100 or more beds or 15 m height and above
4. Electricity Transmission line/distribution line (11 KV above) Station
5. Corporate/Bank/Insurance offices located in high rise buildings (15 m heights & above) or floor area above 1,000 m^2
6. R & D Centre/laboratory employing more than 100 employees (Independent center not covered in the Factories Act,1948)
7. Warehouses having floor area above 10,000 m^2 / Transportation

8. Airport operation (Ground activities managed by airport owner/operator)
9. Shopping Mall (Activities managed by Owner/ Operator) having floor area above 50,000 m^2
10. Ports (Major port registered under the Major Port Trusts Act, 1963 and Non-Major Ports (minor ports) registered under the IPA Act, 1908

Assessment Process

The complete process of awarding the organizations for their achieving excellence in safety performance and effective implementation of safety management system is depicted below:

(i) Receipt of Applications: The applications for NSCI Awards would be invited from organizations by NSC, Awards section in the month of March of every year. The filled-in Application form (online/offline mode) required to be submitted by organization along with its annexures and entry fee to Awards section before the last date of submission.

(ii) Assessment by technical team: Technical team, constituted by NSC, would assess the applications on the basis of criteria developed by NSC. The first merit list is to be prepared based on assessment of applications by the technical team.

(iii) Data verification through authorities: Data verification would be sought through statutory authorities for manufacturing, MSME and service sectors and client organisation for construction sector in respect of reportable accident, dangerous occurrence and prosecution & conviction.

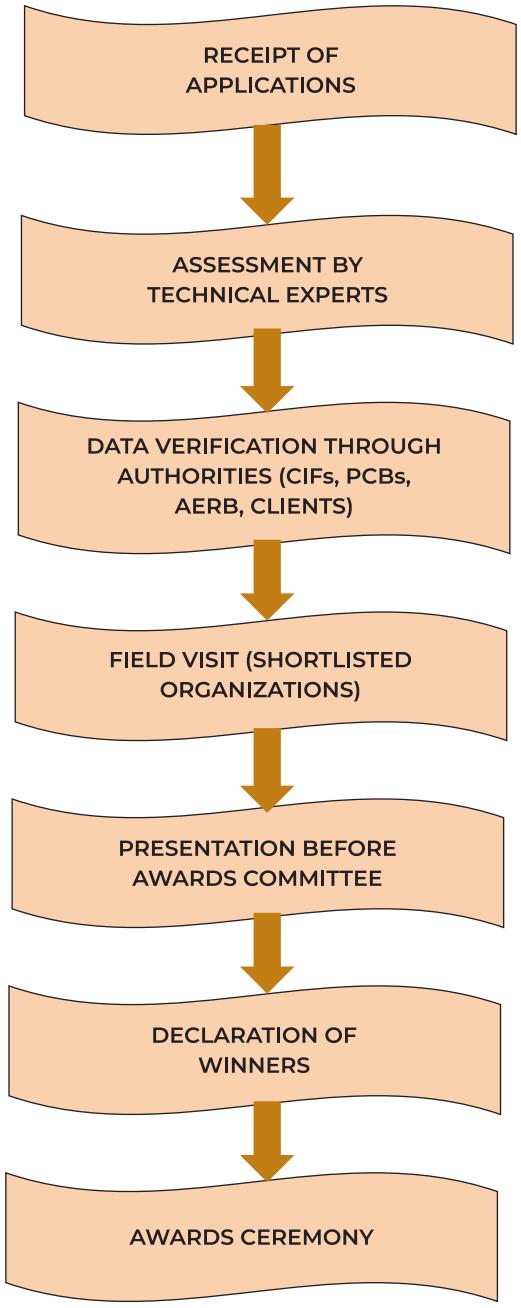
(iv) Field Visit: The field visits to be conducted to the shortlisted organizations by technical team from NSC with an objective to assess the implementation of the safety system & practice on the shop floor. The second merit list would be prepared after field visit.

(v) Presentation Before Awards Committee: The top-ranking organizations in merit list would be called for presentation on safety management system before the Awards Committee, constituted by NSC Board. The objective of the presentation is:

- To demonstrate senior management's commitment to HSE
- To substantiate the data / information given in the Application by including extract of relevant documents, photos, etc.
- To explain how effectively the HSE management systems and procedures are implemented to achieve HSE excellence.

The final merit list would be prepared based on the above stages of assessments.

(vi) Declaration of winners: Winners would be adjudged by the committee based on the final merit list. The winner lists would be published on NSC website. Those organisations secured more than the qualifying score but could get any award will be issued 'Certificate of Appreciation' and their names would also be uploaded on NSC website.



(vii) Presentation of Awards at Special Function: The awards would be presented to the award winners by the hands of VIP.

Awards Committee

The NSCI awards are adjudged by an Awards Committee constituted by the Board of Governors of the Council. The Committee comprises of NSC Board Members, Senior Executives from esteem organizations/ Institutes, Occupational Health specialist as well as industrial safety expert.

UNIQUE FEATURES OF NSCI SAFETY AWARDS

- The Assessment criteria are objective, comprehensive, rigorous and takes into consideration of sustained performance over three years for manufacturing sector, one year each for construction & Service sector and two years for MSME Sector previous to the Award Year.
- To demonstrate the team work, the application form for manufacturing sector to be signed by the Chairman of the Apex Safety Committee and Worker's representative on the Apex Safety Committee. In Construction sector, it should be signed by the In-charge of the establishment and authorized representative of the client organization. Whereas, for MSME sector the form to be signed by Owner/Entrepreneur/Occupier along with Worker's representative and in Service sector the form to be signed by Employer.
- To recognise the team work involved in achieving the award winning performance, each organization is requested to send a 3-member team comprising the Unit Head, Safety Department Head and a Senior Worker-member on the Safety Committee for receiving the award.
- In construction sector, the client organistions are also conferred along with the establishments to recognize their contribution in the achievement.

Benefits to award winning organizations

The NSCI Safety Award winning organizations derive the following benefits.

- It benchmarks their health and safety performance at national level
- It demonstrates management's commitment to high standards of SHE
- It enhances the morale of the employees
- It accords national level recognition to their SHE performance
- It heightens the prestige of the organization
- It enhances business sustainability

Conclusion

The NSCI Safety Awards Scheme was launched by the National Safety Council of India (NSCI) with the objective of encouraging organizations to adopt robust safety management systems, procedures, and best practices. This initiative aims to foster a culture of safety across industries by recognizing and rewarding exemplary performance in Occupational Safety, Health, and Environment (SHE) management. Over the years, the sustained efforts of NSCI through this awards scheme have significantly contributed to enhancing safety standards and promoting health and environmental awareness across diverse sectors, including Manufacturing, Construction, MSMEs, and the Service industry. As a result, the scheme has played a vital role in motivating organizations to prioritize workplace safety, reduce accidents, and align with national and international OHS standards.

WATCH AWARDS PROMO VIDEO ON https://youtu.be/EdDdxN-3aG4

SCAN TO WATCH



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Indian Farmers Fertiliser Cooperative Ltd., Kalol Unit
District - Gandhinagar, Gujarat

(Manufacturing Sector - Platinum Award Winner)

A JOURNEY TOWARDS EXCELLENCE IN SHE MANAGEMENT

Fertilizer plants manufacturing Ammonia & Urea are amongst the most complex and hazardous plants in Chemical industry. Manufacture of anhydrous liquid ammonia and Urea involves processing of hydrocarbons under high temperature, high-pressure conditions in presence of various catalysts, chemicals, etc. All this has the potential to severely affect the safety of equipment, personnel involved and the environment. Recognizing this, IFFCO-Kalol is continuously putting efforts for improvement in the Safety of plants and personnel. Right from Project conceptualization stage, safety and reliability have been considered the principal criterion for evaluation of technologies for various process plants. Plants are well designed and built incorporating all inbuilt process safety measures to the highest standards.

1.0 Background of the Factory

IFFCO Kalol is the oldest unit of IFFCO. Ammonia - Urea Complex at Kalol was installed and commissioned in the year 1974. The unit built over an area of 96 hectares, started commercial production in April 1975. The ammonia plant is a Natural gas-based plant of 1970's vintage and Urea Plant is based on M/s Stamicarbon Technology. IFFCO Kalol Unit is presently producing about 1650 MTPD of Urea and 1100 MTPD of Ammonia. IFFCO has also established Nano Fertiliser Plant at its premises for the production of Nano Urea and Nano DAP liquid fertiliser.

IFFCO Kalol Unit has established and implemented Integrated Management System (IMS) consisting of Environment Management System (ISO 14001: 2015), Occupational Health & Safety Management System (ISO 45001:2018) and Quality Management System (ISO 9001: 2015). IFFCO - Kalol unit is also certified with ISO 50001:2015 (Energy Management System) and IFA protect and sustain Product Stewardship certification.

2.0 Commitment of Top Management Towards SHE

The safety philosophy and commitment are spelt out in our SHE policy at corporate level as well as unit level. SHE policy is duly issued by the Managing Director at corporate level and by the Occupier at unit level. IFFCO Kalol is committed to provide a Healthy and Safe working Environment to all the employees, contractors, visitors & other stakeholders.

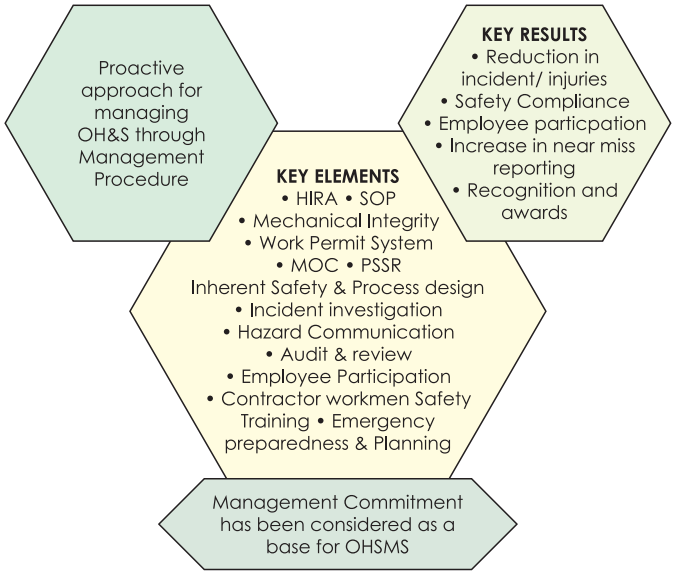
At IFFCO Kalol unit, Occupational health and safety is treated as an integral part of our business activity. Management believes that Safety is not a priority, it's a core value.

- IFFCO Kalol is committed to continual improvement of OH&S Management System, and to meet the OH&S legal and other requirements.
- Safety, health and environment protection are direct responsibilities of management and employees at all levels and those are considered collectively as one of the measures for their career development.
- IFFCO management has always been committed to implement & maintain best in class safety systems and procedures.
- IFFCO management is highly focused on providing world class & quality safety equipments and PPEs. Budget is not any constraint for safety.
- IFFCO management considers Safety training, a very important tool for maintaining safe work environment at workplace and strives to provide all the required resources for imparting safety training to each and every employee and contract workers.
- In all business decisions due care is paid to optimize consumption of resources and minimize generation of waste.
- Safety performance of the unit is discussed monthly and quarterly in the safety committee meetings and quarterly review meeting at management level.
- A resume of Health and Safety performance occupies an important place in the Annual Report of the company for information of all concerned.

3.0 She Management, its Linkages with Key Result Areas and Outcomes

IFFCO Kalol unit has established and implemented Safety management system based on a proactive systematic approach for improving and managing safety through management procedures. Emphasis is given on controlling the hazards by applying the hazard control hierarchy of Avoid, Prevent and Mitigate. The methodology is based on PDCA approach for continual improvement in overall safety performance of the unit.

Various elements of SHE management system are shown in the following pictogram:



Some of the elements of SHE management system at IFFCO Kalol Unit are discussed here briefly:

- **Hazard identification, frequency estimation,** consequence analysis, facility siting evaluation, inherently safer process evaluation and risk analysis have been carried out by using advanced software and techniques such as Hazop Study, Failure mode & effects analysis, Fault tree analysis, event tree analysis, quantitative risk assessment etc. In addition to that audit, Inspections, Incident investigation, Case studies, Job safety analysis, Hazard spotting etc. are used to identify hazards, assess risks and implementation of control measures.

  All the pressure vessels/pipe lines are provided with Safety Relief Valves, Audio-Visual alarms, trips and Safety interlocks.

- **Safe Operating Procedures**

  Safety Manual, Safe working methods & procedures, Safety rules, Safety Policy, Safety work permit procedure, tagging procedures, Do's and Don'ts of hazardous jobs, start up and shutdown procedure Emergency Shutdown Procedures etc. have been formulated and propagated among the employees to eliminate any unsafe act and the same are reviewed periodically.

- **Mechanical Integrity & Quality Assurance**

  The mechanical integrity of the equipments and pipelines is ensured by annual inspection, non-destructive testing and preventive /predictive maintenance procedures which involves,

  - Replacement with upgraded Material of Construction
  - Regular Inspection of Critical Vessels / Tanks.
  - Online Monitoring of Critical Parameters.
  - Residual Life Assessment of Boilers and Renovation of Boilers
  - Replacement of ageing Equipments. Replacement of Autoclave (V-1201) in Urea Plant. Replacement of HP Stripper in Urea Plant.
  - Online Vibration Monitoring Systems for all major Compressors.
  - Ultrasonic Testing for inspection of Pressure Vessels, Piping, and Storage Tanks, for integrity assessment of weld joints.
  - Pulsed Eddy Current Testing (PECT) Inspection of condition of metal in any insulated Pipeline such as Ammonia transfer, Ammonia Precooling, Steam etc.
  - DP Test and Radiographic testing of joints and tapping, metallography to check defects in microstructure, boroscopy of tubes for detecting defects, Various actuators, MOVs, RV, Control valves and interlocks are checked for proper functioning during annual turnaround.

- **Safety Work Permit System**

  Safety work permit system (for hot work, cold work, vessel entry, work at height, electrical work etc.) and safe operating procedures are strictly implemented to provide safe working environment during the maintenance and any plant job.

- **Management of Change**

  Management of Change committee is constituted for management of all modifications to process chemicals, technology, equipment, facilities, and process conditions or any changes within the documented technology.

- **Safety Training Modules**

  Safety training modules have been prepared for Employees, Contract workmen including security staff, IFFCO trainees including Graduate Engineer Trainees, apprentice trainees, vocational trainees and Visitors.

- **Contractor Safety Management**

  SHE system and procedures of the contractors are reviewed, and only reputed and experienced contractors are awarded the job. All the contractor staff are imparted safety induction training prior to their deployment at work site. Various job specific PPEs are issued to all the contractors on returnable basis by F&S department. Tool box talk or job specific trainings are also imparted to the contractor staff at worksite.

- **Incident Investigation**

  To prevent the reoccurrence of any incident, it is necessary to know exactly how and why incident occurred. All level of employees are made responsible for prompt reporting of any incident and all near misses / accidents / first aid cases are

investigated by plant supervisor / plant in-charge / Special nominated committee; as per the severity of the incident.

- **Personal Protective Equipments**

  Quality PPEs (Respiratory and Non respiratory) confirming to relevant National/ International standards for head-to-toe protection have been made available and use of required PPEs is ensured.

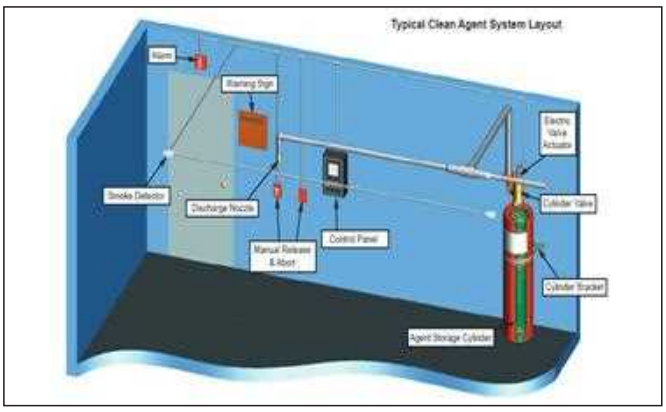


- **On-site Emergency Plan**



Onsite emergency plan has been prepared for the factory. Emergency mock drills are conducted as per plan. Offsite mock drills are conducted in collaboration with District crisis group (DCG). Emergency mock drills are also conducted with NDRF battalion stationed at Gandhinagar.

- **Novec Automatic Fire Suppression System** has been installed at IT Server room and Plant telephone exchange.



- **Colour Coding of Pipelines**



4.0 Statutory Compliance and Implementation of the Recommendations of Studies, Audits, Committees, Etc.

IFFCO Kalol is IMS (ISO-9001, ISO-14001 & ISO-45001) certified company and committed to meet the OH&S legal and other requirements beyond statutes also. Compliance of the safety provisions under various statutes such as, Factories Act, MSIHC Rules, Environment Protection Act, Indian Electricity Rules, Static and Mobile Pressure Vessels Rules, Petroleum Rules, Indian Boiler Regulations etc. is done on top priority. External safety audit is carried out as per statutory requirement. Internal safety audit and visual inspection of plant is carried out by management level committee. IMS Internal audits, surveillance audits and recertification audits are carried out as per their schedule. QRA study, HAZOP study, HAC etc. is also carried out as per requirement. Compliance of the recommendations of all such studies, audits, safety committee and various other committees is strictly ensured within stipulated time interval and a copy of these reports and compliance status are submitted to concerned statutory bodies too.

5.0 Employees Participation and Involvement in SHE Matters

Involvement of the employees in SHE matters plays a crucial role in improving the safety culture. At IFFCO Kalol, different schemes/ measures have been implemented to increase the participation from the employees and workers in enhancing the safety of the plant.

- **Safety Committee**

  Safety committee is constituted to ensure participation of the employees of management

and worker level in safety management and to strengthen the safety culture in the organization.

Through **Shop Floor Safety Committee Meetings** participation of all levels of employees in safety management is ensured. It raises the safety consciousness among all cadres of Employees who are directly involved in operation & maintenance of equipments at shop floor.

- **Safety Campaigns**

National Safety Week, Road safety week/month, Electrical Safety week, Environment week are celebrated, and **National Fire Service week** is observed every year with a goal to create awareness among the employees and workers regarding safe work practices and working environment.

- Various **competitions like Safety Slogan, Safety Poster, Safety Essay, safety Quiz, fire drill etc**. are organized for different groups of employees and their family members. All the winners and the runners are awarded with fabulous prizes.

- **Online Suggestion Scheme**









Online suggestion scheme is established to motivate employees to come out with creative thinking and noble ideas. The purpose of this scheme is to improve safety, productivity, quality and environment. All the suggesters are motivated through cash prizes. Best suggestions are rewarded and recognized by the management.

- **Good House Keeping Competition**

Through good housekeeping competition, all the sections participate in making their workplace clean and tidy thereby preventing fires and incidents caused due to poor housekeeping. Winner sections are awarded with fabulous prizes.

- Employees are also involved in the preparation of SOPs and investigation of incidents.

6.0 Special Efforts for SHE

6.1 Process Safety Initiatives:

- **Single Push Button Emergency Trip System To Trip Complete Urea Plant**

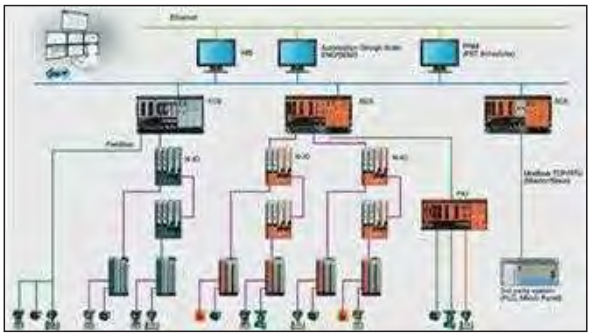
- An emergency stop switch is a safety mechanism used to shut off plant machinery in an emergency when it cannot be shut down in the usual manner.
- Earlier operators had to operate different logics to stop all plant sections separately, to shut down the complete plant in emergency situation
- The trip logic has been so developed that in case of any abnormality/emergency only one push button shall be operated through DCS and sequential safe shut down of the plant can be achieved in very short time

without asking the operational staff to go to field for manual shut down operation thereby exposing them to hazardous situation / chemicals.



- **ESDS (Emergency Shut Down System)**

ESD (Emergency Shut Down System) has been installed to manage and control the start and stop sequences of a plant or machine in order to achieve safe shutdown of the plant in case of any abnormal/emergency /event to protect man , machine and environment. The major purpose of an ESD system is to keep the process in a safe state in case the predetermined setpoints have been exceeded or in case the process goes beyond the safe operating conditions. In this situation the ESD system will come in line and based on pre-configured cause and effect diagram, shut **down the plant or process in a safe manner**. The ESD is composed of safety functions with sensors, logic solvers and actuators. Action of ESD is very fast and it acts in milli seconds. The ESD first read sensors, do the calculation and logic which is required to determine the dangerous conditions, generates the output for the final control element to prevent the hazardous situations. Implementation of this safety feature has enhanced man and machinery safety significantly.





Time Synchronization between control system, Emergency shutdown system and system-1 (rotary Machine vibration analysis system)

In IFFCO Kalol urea complex, Time synchronization between all plant control systems(DCS) , safety systems(ESD) and rotary Machine analysis systems (System-1) is being achieved through GPS master clock.

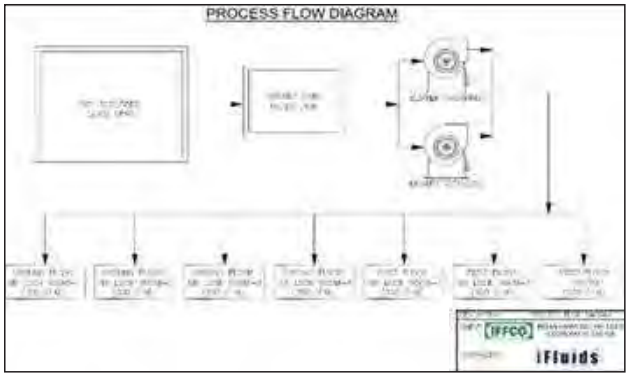
Time synchronization/ matching plays vital role in fault finding, event analysis and match time between systems which are connected to it. This enables to establish actual sequence of events in interlinked systems to facilitate for root cause analysis.

- **Close Circuit Ammonia Drainage System**

Closed drain system has been provided for draining of carbamate solution, Liquid ammonia and Urea Solution in Urea plant. Carbamate solution and Liquid ammonia from carbamate and ammonia pump and Urea Solution from Urea solution pump and Urea solution filters are drained through closed loop and collected in Wastewater tank from where ammonia is recovered through hydrolyser and no ammonia is released in plant drain system.

- **Control Room Pressurization and Ammonia Neutralization System**

A Pressurization and ammonia neutralization system has been installed in the Urea Control room. The pressurization system is designed to maintain a positive air pressure in the airlock rooms to prevent the ingress of contaminants or hazardous gases from entering or spreading into the control room thereby ensuring the safety of the personnel inside the room in case of any toxic gas leakage or other emergencies. The dry scrubber has also been installed for Ammonia neutralization to mitigate the harmful effects of ammonia, by neutralizing it. The ammonia free air enters the airlock lobby. The dry scrubber-based ammonia neutralization system is first and unique in its nature.



- **Installation of Centrifugal Pump for Ammonia Transfer to Ensure Life Safety and Process Safety**

In most of the fertilizer units including ours; reciprocating ammonia supply pump is used for supply of liquid ammonia at very high pressure as per process requirement.

The use and operation of such pumps are associated with the risk of damage /breakdown of plungers, barrels, tie-rods, manifold valves, end covers etc. This may result in heavy release of ammonia into the atmosphere causing exposure and adverse health effects to persons & the environment.

Several such incidents involving damage/breakage of these type of pumps have already taken place in similar industries worldwide; causing severe ammonia leakage and exposure.

Considering the safety of persons by avoiding such incidents', reciprocating pump is being replaced by Centrifugal pump in urea plant for high pressure ammonia supply to meet process requirements even at high cost of investment. The cost of this project is around 40 Crores.

- **Common Header for RV's**

  All the RVs (Ammonia System, Carbamate System) are not directly discharging to atmosphere. RV Discharge are connected to common vent header which is connected to vent stack at a suitable safer height. Through vent stack, gases and vapours are discharged to atmosphere and liquid is collected in Ammoniacal Water Tank.

- **MOV for Ammonia Pump**

  Motor operated valve has been installed in the suction line of hot ammonia pump at Ammonia plant to ensure effective isolation by closing the valve remotely in case of any emergent situation.



- **SOP Register**

  Various SOPs related to process safety of the plant have been prepared and updated as and when any modification takes place in the process. SOP is discussed and reviewed with the field staff and experienced workforce and updating/revision details are entered in SOP register.

6.2 Other Initiatives: -

- **Ammonia Storage Tank Safety And Layers Of Protection)**

- **Risk Based Inspection (RBI)** :

  RBI process assures the mechanical integrity of Ammonia Storage Tanks, ammonia pipeline etc. by assessing the Risk to set acceptable limits.

  Ammonia storage tanks are double integrity cup-in-tank, comprising of an inner cup and an outer tank. The outer tank is designed for full containment of ammonia vapours and liquid in the event of failure of inner tank. The tanks are provided with insulation to avoid heat transfer. Excessive Ammonia vapours are transferred to ammonia plant with the help of refrigeration compressor. Flare stack is provided for burning excessive vapors. The instrumentation (alarms & interlock) system, pressure relief valves, vacuum relief valves for tank safety are provided as per good engineering practice, standards & codes.

- **Lock Out and Tag Out (LOTO) Station**

  Lock Out and Tag Out procedure has been established for Isolation of energized equipments/ machineries.



- **Online Near Miss Reporting System**

  Any unsafe condition, near miss incident, and unsafe act can be reported by means of this system. Mobile app is also developed for the same and can be used by all employees.



- **Induction Training & Toolbox Talk**

  Induction training is given to Contract workmen before allowing them to start job at plant site and periodically safety meetings/ safety talk/ toolbox talk is arranged with contract workmen on various safety aspects.



- **Sprinkler System**

  Remotely operated sprinkler system has been installed at Ammonia loading pumps, Ammonia loading gantry (rail & road) at ammonia storage area, ammonia & Carbamate pumps in Urea plant for neutralization and dilution of ammonia vapour in case of any leakage thereby controlling its spread. Automatic sprinkler system has been installed for the protection of Automated Storage & Retrieval System (ASRS).





- **Hazardous Installation Audit Committee**

  A management level Visual Inspection committee is setup which carries out quarterly Inspection of hazardous installations.



"DIPHOTERINE" for Chemical Burns

Diphoterine solution has been made available at all control rooms. It is an emergency rinsing substance which is capable of reacting with both acids and alkalis when applied to either type of chemical spill, stopping the aggressive action of a corrosive or irritant chemical, halting the reaction with the skin and eyes thereby reducing the severity of burn and recovery time significantly. It is effective against a wide range of classes of chemical products (acids, alkalis, oxidizing agents, reducing agents, alkylating or chelating agents and solvents).





- **Emergency Escape Hood**

  Escape hood for escape in case of any toxic release (Ammonia, HCl, H_2SO_4, SO_2 etc.) has been made available at strategic locations. It can be very easily used for escape in case of emergency.



- **Environment Management System**

  IFFCO Kalol has adopted the following approaches and innovative measures to improve the environment.

  - Installation of Vibro Priller at prill tower top in urea plant to reduce product temperature and dust emission.
  - Reduction in gaseous emission by recovery from vent gases.
  - Minimize the use of raw water by recycle and re-use of the process condensate / water.
  - **Rainwater harvesting modules** of approx. 25m^3 capacity have been installed at various locations in factory and township premises.





  - Replacement of High Energy Consuming Ballast, Lamps etc. with energy efficient Compact Fluorescent Lamps (CFL), LED lighting fixtures have been carried out at plant and township.

Green belt development by more & more tree plantation.

  - Environmental related parameters such as pH, flow and ammoniacal nitrogen are monitored on line and data is transmitted to servers installed at SPCB as well as CPCB.
  - IFFCO Kalol unit has installed a Solar Photovoltaic system of 995.26 kWp capacity at roof top of various buildings at plant and township area.
  - Continuous Ambient Air Quality Monitoring station (CAAQMS) has been installed near Plant main gate and commissioned for monitoring of PM10, PM 2.5, SOx, NOx, and Ammonia in the ambient air.

- **Occupational Health Manahement**
  - IFFCO Kalol unit has a well-equipped and full-fledged Occupational Health Centre with sufficient staff and ambulance.



  - Preemployment medical examinations are conducted.
  - Elaborative full body checkup of all employees above the age of 45 years is carried out in multi-specialty hospitals.
  - All the employees under 45 years are medically examined by our medical officer once in year at our occupational health center.
  - All the employees and contract workmen working in hazardous areas, defined as per Act, undergo the entire medical test once in 6 months.
  - Audiometry of employees those who are working in high noise area is done at every six months.
  - First aid boxes have been made available at all plant areas.
  - Proper collection and disposal of Bio-medical waste generated at plant and township Occupational health Centre (OHC)
  - Kalol unit has mutual aid agreement with neighboring industries such as ONGC and GAIL.
  - Kalol Unit has NABL accredited lab for the analysis of relevant parameters in relation to Safety, Health and Environment.
  - Safety showers with eye wash unit have been installed at strategic locations all over the plant area.

7.0 Use of Advanced Digital Technology to Enhance Safety

There has been a rapid increase in the use of emerging technological innovations to enhance the safety of a chemical process plant.

- At IFFCO Kalol unit, application of digital technologies such as online databases,

Geographic Information Systems (GIS), 3D modelling, 4D Computer-Aided Design (4D CAD), robotics, laser scanning, photogrammetry, wireless technology, sensor-based technologies, and automation have significantly increased the effectiveness of process safety management.

- An integrated system with robotic arms, bulk conveyors and automated storage and retrieval system (ASRS) has been installed for loading, unloading, storage and shipping of finished material at Nano Fertiliser Plant. This integrated system involves use of advanced robotics technology for material handling, eliminating human intervention thereby reducing incidents and injuries.

- **Distributed Control System**
  - The process control is sufficiently automated by a suitably designed high reliability instrumentation system.
  - Distributed Control Systems are provided in ammonia, urea, boiler, and other control rooms. Early warning alarms and provision of adequate pressure relieving systems are incorporated in critical areas to prevent possible mishap. The system provides various advanced features such as **trend analysis, remote DCS access to Key personnel, history logging, data logging, sequence of events etc**.





  - Microprocessor based highly accurate protection relays for protection of panels, transformers, and other electrical installations.
  - Online busbar and breaker terminal temperature monitoring system at 11 KV HT panel.
  - Conventional MCCs are being replaced by Intelligent MCCs in a phase wise manner.
  - Online Database: MSDS, safety manuals and SOPs have been made available to all the users through a common network drive in the computer system thus making it readily available for reference.

- **License Management System**
  - IFFCO Kalol has established an online system of License management for ensuring the tracking of applicable licenses under various Statutory norms. If any license is going to expire, then, an E-mail alert will be generated to the concerned person to initiate renewal application of the said license.



- **PMMS portal:**

  The online system is utilized To maintain Logbooks

  To generate Maintenance Reports, to maintain the Equipment maintenance history and to generate and execute Maintenance Schedules

  Deviation based Notification and alerts are initiated.

  In case of any deviation from the periodic maintenance schedule automatically to the concerned Engineer, Sectional Head and HOD of Operation and Maintenance department both.

  Proxy Switch (Laser Based Switch) has been installed on Ammonia Pump and Ammonia Pump Assembly to detect any Ammonia Leak, from Ammonia Pump Plunger due to damage/ displacement of Tie Rod. In case

of any minor ammonia leakage from the plunger due to damage/ displacement of Tie Rod, the Proxy Switch will detect the same and give alarm & subsequently will trip the running pump through the Trip System installed on DCS and a major accident /heavy leakage of ammonia due to damage in pump plunger can be averted.

- IFFCO Kalol has installed Yokogawa make ProSafe-RS, the world's first truly integrated "safety PLC" for the process industries system as Emergency shutdown system (ESD) for safety of man, machine and Environment. It is an independent system with Safety Integrity Level 3 (SIL-3). SIL3 system ensures that the frequency of risk occurrence is reduced to less than 1/1000 under the current conditions.
- If the process value continues in an unsafe direction and the trip level is reached, the SIS executes an emergency shutdown action, preventing the process from exceeding the safe levels.
- An online health monitoring system has been established for employees where the entire health checkup data and history can be retreived anytime for future references.
- CCTV cameras have been installed for safety at various critical locations.
- Ammonia and Hydro-carbon detectors for continuous monitoring of the working atmosphere.





State of art portable digital gas detectors/ multi gas detectors with continuous data logging facilities are provided for monitoring of work environment for any hazardous gas/ vapor.

- **Online Visitor Safety Management System**

A system has been set up in which a visitor safety film is shown to all the visitors on safety aspects, do's and don'ts etc. at the visitor lounge at factory gate. After watching the film, the visitor has to undergo an online safety quiz through Visitor kiosk, based on the information displayed in the safety film. Gate pass is automatically issued to them after successfully completing the quiz through online system.





Intelligent addressable microprocessor-based fire alarm system has been installed in the plant. It is also integrated with a clean agent extinguishing system. State of art beam detection system has been installed at Urea empty bag Storage area.

Artificial Intelligence based Sensors are used to collect data of Rotary & Reciprocating critical plant equipments and provide information regarding root cause of deviations /defects etc. in advance by using AI technology. Thereby, it helps in proactive approach of maintenance and reduce unplanned downtime by detecting the potential damage.

"Safety starts with me" initiative

It is a new concept to make the employees & IFFCO trainees aware of their roles and

responsibility toward safety of themselves as well as plant. Safety messages were circulated among all the IFFCO Kalol employees by Unit head. Safety speech competition on the topic "Safety Starts With Me" was organized for the employees and trainees. Ball pens marked with "Safety Starts With Me" slogan were distributed as a part of this initiative.

Monthly Safety Day

Monthly Safety Day is being observed at IFFCO Kalol on different themes related to safety. Every month a theme is declared and based on that theme safety programs are organized for all stakeholders.

Safety orientation and practical assessment for newly joined trainees

Safety orientation Training programs are conducted for all newly joined trainees. Written test on F&S aspects and practical examination are also conducted to check their awareness level about Fire & safety systems and procedures.

8.0 Significant Achievements:

- Kalol unit has completed more than **13 years (4925 days till 31.12.2024)** without any reportable accident.
- IFFCO Kalol Unit has received the Prestigious **"NSCI Platinum Award- 2024 For Highest Outstanding Performance"** in manufacturing sector for second consecutive time. Since its inception, Platinum award has been awarded for the first time to any organisation by NSCI and last year IFFCO Kalol Unit had created history by becoming the first organisation to qualify and win this most prestigious award among all the applicant organisations from manufacturing sector.
- IFFCO Kalol unit has been awarded with **Global Safety Summit (GSS) Safety award-2024** in Large Enterprises- Fertiliser Manufacturing Sector, by Fire and Safety Forum (HQ- World Safety Forum London, United Kingdom) and United Nations Global Compact Network India (SDGs Outreach Partner), & AMITY University Knowledge Partner.
- IFFCO Kalol Unit has been declared the winner of Prestigious **International Safety Award (MERIT Award) by British Safety Council (BSC), UK** for demonstration of excellence in Occupational Health and Safety management.
- IFFCO Kalol unit has been awarded prestigious **'Sarvashreshtha Suraksha Puraskar' twice consecutively for the year 2021 and 2022 by National Safety Council of India** for the excellent SHE peformance in the manufacturing sector.
- IFFCO Kalol Unit won the FAI 2022-23 Best Production Performance Award in Nitrogen fertilizer unit, Ammonia and Urea category.
- The Training Centre at IFFCO-Kalol has been approved by **Directorate of Industrial Safety and Health (DISH), Gujarat** for imparting HSE trainings as per section 111-A of the Factories Act-1948.
- IFFCO Kalol has established visitor safety management system.
- **Approx. 3500 persons** have been imparted safety & health training during the calendar year 2024.
- As a part of effective Solid waste Management system at IFFCO-Kalol, Composting machine with curing chamber Crusher / Shredding machine for handling of horticulture waste have been installed at site and Biodegradable waste such as Canteen & horticulture waste are being converted into manure.

9.0 Conclusion

IFFCO-Kalol is committed to implement Safety management system seeking continual performance improvement. Genuine concern and sincere commitment of the top management, wholehearted efforts by each individual, demonstrative leadership, employee involvement, compliance of safety statutes and strict adherence to operating discipline and good engineering practices as well as use of advanced digital technology has brought in an ambiance where there is a total commitment of all the employees to get along with their jobs with lot of confidence and safety consciousness. Recognitions like Prestigious Awards from National Safety Council of India (NSCI), FAI Awards on Safety, Environment and overall plant performance, National Energy conservation awards from GOI etc. over the years are the testimony of endured efforts being put in by all the employees of IFFCO –Kalol unit in achieving and maintaining high standard of Safety, Health and Environment in all facets of their work.

Article written by:
Mr. Sandeep Ghosh,
Sr. General Manager (Unit Head- IFFCO Kalol);
Mr. Rajnikant Sharma,
Dy. General Manager (Fire & Safety)



Shri Sandeep Ghosh, Sr. General Manager (Unit Head- IFFCO Kalol) and his team receiving the ***"NSCI PLATINUM AWARD-2024".***

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Indian Oil Corporation Ltd., Digboi Refinery, Assam

(Manufacturing Sector – Group 'A' "Sarvashreshtha Suraksha Puraskar – 2024" Award Winner)

1. Background of the Factory/Site/Establishment

Digboi Refinery, located in the lush green landscapes of Assam, holds a unique distinction as India's first and one of the world's oldest operating refineries. Its origin can be traced back to the late 19th century when AR&T Company successfully drilled India's first commercial oil well in 1889. This discovery led to the establishment of the Assam Oil Company (AOC) in 1899 to manage the burgeoning oil exploration activities.

The refinery was officially commissioned on 11th December 1901, and the first consignment of kerosene was dispatched by 2nd January 1902. Since then, Digboi has not only been a vital contributor to India's petroleum industry but has also evolved as a beacon of industrial resilience and innovation.



Roopkali, an elephant employee of the Assam Oil Company, shifting a tank

In 1981, the refinery was nationalized, with refining and marketing operations being transferred to Indian Oil Corporation Limited (IOCL), while upstream exploration was entrusted to Oil India Limited. A major modernization initiative in 1996 significantly boosted Digboi's operational efficiency and technological capability.

Today, Digboi Refinery stands ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO 27001:2013, and ISO 50001:2018 certified, assuring excellence in quality management, environmental sustainability, occupational health and safety, information security, and energy management. It is particularly known for producing one of the finest qualities of paraffin wax in the country, while continuing its rich legacy of innovation, operational excellence, and commitment to nation-building.

2. Commitment of the Top Management to SHE

The leadership at Digboi Refinery places Health, Safety, and Environment (SHE) at the very heart of its operations, treating it as a core value rather than a mere compliance requirement.

Some initiatives showcasing Top Management's commitment include:

- **Visible Leadership:** Top executives actively participate in field safety inspections every month, touring various locations within the plant to identify and rectify safety concerns. Special portal named "Safety inspection tour" is there for the same.
- **Safety Pledges:** Every meeting, irrespective of its agenda, begins with a HSE safety pledge, reinforcing the refinery's culture of prioritizing safety.



Safety Pledge

- **Monthly Safety Meetings (MSHECM):** Issues related to HSE are discussed thoroughly in monthly meetings, ensuring that concerns regarding health safety and environment are addressed and closed with accountability.
- **Monthly Safety Day Celebrations:** Every 1st day of the month is observed as Safety Day, where management interacts directly with ground-level workers, discusses a new safety topic, and awards individuals contributing significantly to safety culture enhancement.
- **National & Indian Oil Safety Observances:** Events such as the Indian Oil Safety Day, National Safety Day, and Fire Service Week were organised with enthusiasm, featuring competitions, training sessions, and award ceremonies.



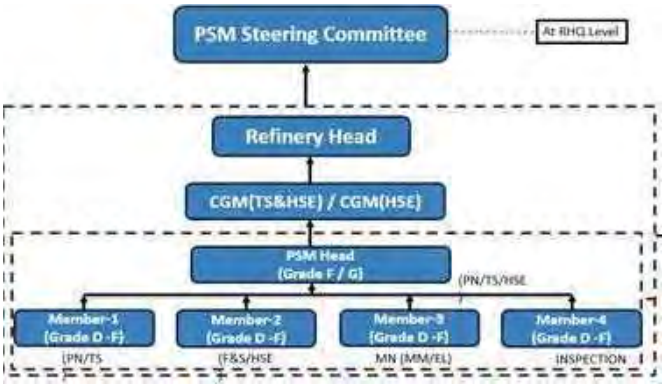
Observation of Fire service week

- **Emergency Preparedness:** Top management directly monitors mock drills conducted at various hours to assess and improve emergency readiness. Scenarios such as major fires at critical locations, rescues from height, etc, were simulated, and corresponding mock drills were carried out.



Mock drill debriefing session

- **PSM:** Detailed roadmap for implementation of Process Safety Management (PSM) in Digboi Refinery (DR) is prepared along with roles and responsibilities allotted at each level. In this a management system was introduced that focus on prevention of, preparedness for, mitigation of, response to, and restoration from catastrophic releases of chemicals or energy from a process associated with a facility.



The commitment demonstrated by the top management ensures a safety-first culture that permeates all levels of the organization.

3. Employees' Participation and Involvement in SHE Matters

At Digboi Refinery, employees at all levels are actively involved in safety initiatives, ensuring a robust and participative SHE ecosystem.

Key participatory activities include:

- **Training & Awareness Programs:** Regular training on work permit systems, live fire-fighting, and PPE usage is provided. Specialized training for contractors and newly inducted employees enhances their understanding of safe working practices.


Live firefighting training to employees

- **Root-Level Safety Engagement:** Zone-wise Safety Committee Meetings (ZSCM) allow management to listen to and act upon safety concerns at ground level. Unsafe conditions within the plant area were identified, and appropriate corrective actions are being discussed in meetings to ensure a safer environment.
- **Near Miss Reporting Culture:** Regular reporting, review, and closure of near-miss incidents are emphasized through digital portals, strengthening a proactive risk identification approach.
- **Contractor Communication:** A portal specifically designed to convey safety violations to contractors ensures real-time feedback and timely corrective actions.



Contractor Communication Portal

- **Safety Competitions:** Employees enthusiastically participate in competitions organized during National Safety Week and Fire Service Week, reinforcing awareness through creative engagement.



Competition on Tool box talk for employees

- **Active Use of Safety Portals:** Employees, staff, and contract workers utilize online portals to report unsafe acts, unsafe conditions, and near-miss incidents from anywhere within the refinery premises.
- **On-Job Training:** Fire and Safety Officers conduct PPE awareness sessions at control rooms, emphasizing practical knowledge over theoretical instruction.



On job training provided for proper use of PPE

- **Recognition & Reward:** Employees demonstrating exemplary safety behaviour are recognized and awarded during Safety Day events, encouraging a positive reinforcement cycle.
- **Behaviour-Based Safety (BBS) Program:** Employees engage in peer-to-peer safety observations and interventions under the BBS program, promoting accountability and mutual care.

4. Implementation of Recommendations of Studies, Audits, Committees, etc.

Digboi Refinery has established a proactive mechanism for the implementation of audit recommendations, committee suggestions, and external study findings:

- **Regulatory Compliance:** Recommendations from OISD, PNGRB, Factory Inspector audits, and internal HSE audits are implemented promptly, with compliance tracked meticulously.
- **Asset Integrity Management:** Periodic surveys and inspections of gratings, cranes, chains, monitors, and structural audits of plant buildings ensure structural integrity and operational safety.



Onsite and Offsite mock drills



- **Work Permit System Enhancement:** Only trained and authorized personnel serve as Gas Safety Inspectors (GSIs) and Fire Permit Signatories (FPS), ensuring the robustness of the permit-to-work system.
- **Structural Upgrades:** Necessary maintenance and reinforcement activities have been undertaken for administrative offices, warehouses, and storage facilities based on structural audit recommendations.
- **Emergency Preparedness:** Recommendations from mock drill evaluations are promptly addressed, ensuring continuous improvement in emergency response protocols.
- **Hipo near miss:** A detailed investigation is carried out by the committee for each high potential Hipo near miss incident. Based on the findings, necessary recommendations are provided to prevent recurrence and enhance workplace safety.

The diligent implementation of these recommendations has strengthened the refinery's SHE management systems and enhanced operational safety.

5. Special Efforts and Approaches to SHE and Significant Achievements

Digboi Refinery has undertaken several path-breaking initiatives to strengthen SHE performance:

- **Advanced Fire Training Facility:** A state-of-the-art fire training ground has been established, featuring live fire-fighting modules, SOP displays, and realistic simulation models for training in hot work, work at height, and excavation activities. Mannequins with different PPE types are also used for practical training.



Display of various Protective Suits at Safety Park

- **Behaviour-Based Safety Observation System:** Launched to promote a proactive safety culture through peer observations and positive reinforcement.
- **Scaffold Certification and Tagging:** A new yellow tag has been introduced to declare scaffolding unsafe until the abnormalities identified in the checklist are resolved. This provides a more effective way to communicate hazards and prevent unsafe actions.



- **Strengthening Emergency Response:** Two additional tenders have been added to the fleet, including one multipurpose tender, making Digboi Refinery the first among IOCL refineries to deploy a multipurpose fire tender.
- **Safety Publications and Digital Campaigns:** Monthly safety newsletters, leaflets, and highlights are displayed digitally at strategic refinery locations.
- **Awards & Recognition:** Achievements include the prestigious NSCI Sarvashreshtha Suraksha Puraskar 2024 and AV Ogole Award for outstanding fire and safety practices.



Sarva Shreshtha Suraksha Puraskar-2024 Golden Trophy in Manufacturing Sector, Group-A category for demonstrating outstanding performance in OSH

- **Accident and Fire Free Days:** The refinery has celebrated significant milestones in accident-free and fire-free days, highlighting the tangible results of its SHE initiatives.
- **Learning from Accidents:** Following the past accident at Gujarat Refinery, detailed firefighting plans were developed for the most critical locations. Additionally, various fire safety surveys were conducted to evaluate and strengthen our preparedness for similar Accidents.

These initiatives underscore Digboi Refinery's unwavering commitment to continual improvement in safety management. They reflect a proactive approach to risk mitigation, workforce protection, and fostering a strong safety culture across all operations.



Detailed fire fighting plan for largest crude tank

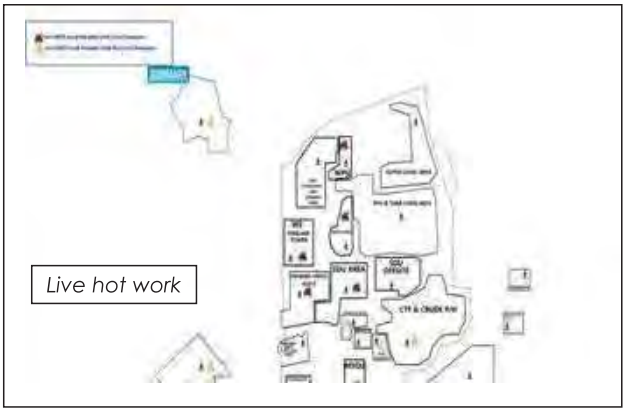
6. SHE Management, its Linkages with Key Result Areas and Outcomes

At Digboi Refinery, SHE management is deeply integrated with key result areas (KRAs) across all operational levels. The refinery follows a structured SHE governance model that emphasizes proactive risk identification, compliance with statutory requirements, and continual improvement through audits and reviews. SHE performance is not only a compliance metric but also a core component of individual and departmental KRAs, ensuring accountability and ownership at every level. Regular monitoring of leading and lagging indicators, such as near-miss reporting, incident investigation, training hours, and environmental parameters, enables data-driven decision-making. As a result of this alignment, the refinery has witnessed measurable improvements in safety culture, no accidents, enhanced emergency preparedness, and improved environmental performance. This integrated approach has positioned Digboi Refinery as a benchmark in SHE excellence within the IOCL network, fostering a safer and more sustainable work environment for all stakeholders.

7. Use of Advanced Digital Technology (AI, AR/VR, Robotics, Drones, etc.) to Enhance Safety

Recognizing the role of technology in enhancing safety, Digboi Refinery has implemented several digital initiatives:

- **Online safety related portals:**
  - a) **Contractor Communication Portal:** Real-time communication of safety violations and closure of observations through a centralized online platform.
  - b) **Online Near-Miss Reporting Portal:** Enables instant reporting and tracking of near misses from any part of the refinery, with automated escalation mechanisms. This system allows anyone, including contract workers and employees, to report unsafe conditions, unsafe acts, or near-miss incidents. The goal is to identify and eliminate potential hazards before they result in actual accidents, thereby enhancing preventive safety.



c) E-MOC (Management of Change) System: A completely digital MOC process enabling transparent, efficient, and accessible change management.

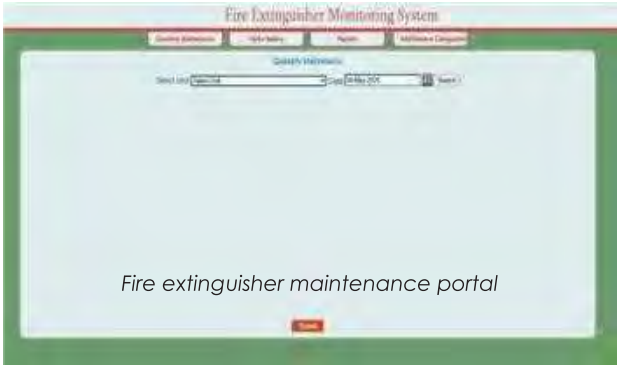


Management of change

d) Behaviour based safety portal: A platform launched to foster a proactive safety culture by encouraging peer-to-peer safety observations, positive reinforcement, and corrective actions. It empowers employees to take ownership of safety through regular monitoring and behaviour feedback.



e) Fire extinguisher maintenance portal: This portal is dedicated to ensuring the health and readiness of all fire extinguishers, the most immediate first aid firefighting tools. It maintains complete details including hydro testing status, location mapping, and maintenance history for each extinguisher both inside and outside the refinery.



f) E lockout and tagout portal: Designed to protect personnel from electrical and mechanical hazards during maintenance and servicing activities. This portal facilitates digital control of lockout/tagout procedures ensuring that energy sources are isolated and safely de-energized before work begins.



E lockout and tagout portal

g) Incident reporting system: A real-time communication tool that enables users to send immediate alerts about fire, emergencies, or first-aid situations with a single click. It ensures rapid dissemination of critical information to all stakeholders for quick response and resolution.



Incident reporting system

h) Safety inspection tour: Monthly field safety inspections are conducted by top executives, who visit various areas of the plant to identify safety gaps and ensure adherence to protocols.



Safety inspection tour

I) **Live hot work:** A centralized digital display tracks all ongoing hot work activities (like welding or cutting) across the plant in real time, highlighting exact locations. This helps in monitoring risks, coordinating safety teams, and ensuring compliance with fire safety standards.



Near miss reporting portal

- **Speed Radar Gun:** Monitors vehicle speeds within refinery premises, automatically enforcing penalties and encouraging safe driving practices.
- **Portable CCTV Monitoring:** Real-time monitoring of critical project activities to ensure compliance with SHE norms.
- **Swadhyay E-Learning Platform:** Facilitates continuous upskilling of employees in various SHE modules on safety.
- **Digital standee:** Safety-related publications, such as safety newsletters, leaflets, booklets, and highlights, are displayed on digital standees placed at strategic locations like refinery entry gates.



Digital standee

- **Fire fighting robot:** Efforts toward adopting digital technology include a live demonstration of a firefighting robot to evaluate its feasibility for inclusion in the emergency response fleet.



- **Live hot work:** Daily hot work activities across the plant are monitored and displayed on a centralized screen, indicating their exact locations in real time.

The integration of these digital solutions has not only enhanced SHE compliance but has also fostered a smarter, more responsive safety culture at Digboi Refinery.

* * *

Hindustan Petroleum Corporation Ltd., Mundra Delhi Pipeline

(Manufacturing Sector – Group A1 - Sarvashreshtha Suraksha Puraskar – 2024 Award

1. Background of the factory

Hindustan Petroleum Corporation Ltd. (HPCL) is a major Public Sector Oil Company engaged in refining, marketing and distribution of petroleum products in India. HPCL has been conferred with MAHARATNA status in the year 2020. MDPL Head Office (HO), HPCL at Jaipur is operating a group of pipelines of Mundra Delhi Pipeline (MDPL), Palanpur Vadodara Pipeline (PVPL) and Awa Salawas Pipeline (ASPL).



MDPL: 1053 Kms Long cross-country Pipeline known as the Mundra Delhi Pipeline with a Pipeline Diameter of 18"/16" starting from Mundra in Gujarat State & terminating at Bahadurgarh in Haryana. Design Capacity of MDPL is 8 MMTPA (Million Metric Ton per Annum). Under MDPL HO jurisdiction of MDPL is up to 889 KM in addition to PVPL (235 KM Long) and ASPL (93 KM long). The Pipeline consists of a product Pumping Station at Mundra (Gujarat), intermediate Tap Off cum Booster Stations at Palanpur (Gujarat), Ajmer (Rajasthan) & Jaipur (Rajasthan), Intermediate pumping stations at Bhachau (Gujarat), Santalpur (Gujarat), Pindwara (Rajasthan), Awa (Rajasthan)

PVPL: HPCL has laid a Petroleum Product spur line for transmission of finished petroleum products from the Tap off point Palanpur (Gujarat) to Vadodara (Gujarat). The pipeline length is 235 km & 18" diameter. Associated facilities along the pipeline route are 5 nos. SVs (sectionalizing valve stations) and one IPS (Intermediate Pigging Station). Palanpur is common station for both pipelines MDPL and PVPL

ASPL: HPCL has laid a Petroleum Product Pipeline for transmission of finished petroleum products from the Tap off point Awa (Rajasthan) to Salawas (Jodhpur) Rajasthan. The pipeline length is 93 km with 10" diameter. Associated facilities along the pipeline route are 2 nos. sectionalizing valve stations at chainages 33.23 & 66.71 km respectively. Awa is common station for both pipelines

MDPL HO handles total length of more than 1210 Kms length of pipelines, spanning through states of Gujarat & Rajasthan in India. Pipeline transportation of petroleum products is proven to be more eco-friendly, safe and economical compared to all other means of transportations.

2. Commitment of the top management to SHE (Safety, Health & environment

To management at HPCL - MDPL is very much committed to adopt and implement best SHE practices. At MDPL, we have a well-defined, written HSE policy; reviewed and adopted every year or after any change in Process or change in Top management of the factory. It clearly states that as an integral part of our' business, we strongly believe that no work, service, or activity is so important or urgent that safety be overlooked or compromised. Safety of employees and Public protection as well as corporation assets is paramount and a way of life at HPCL-MDPL. MDPL considers that safety is one of the most important tools that enhances productivity and helps reducing national loss.



HPCL in its vision statement itself has stated that the Company will be a model of excellence in meeting Social Commitment, Environmental, and Health and Safety norm. It also has also stated that Company will give highest priority to enhancing safety and environment protection. To ensure this, company shall spare no efforts and adopt state of art technologies, best engineering standards and best in class work practices. The company is committed to provide a culture that supports safety as NUMBER 1 PRIORITY and provide excellent training to employees, contractors and its stakeholders.

To further stress upon the quality & safety in all areas of operations in MDPL, we have also adopted a QEHS policy which is made part of IMS and reviewed periodically along with other IMS documents. The policy for MDPL was first adopted in the Year 2007.

Last QEHS Policy dated 01.07.2018 was in effect till 07.01.2022 which was then reviewed/updated and signed/issued by MDPL In-Charge with effect from 07.01.2022

Top management reviews HSE performance of MDPL at different frequency viz. daily, monthly, quarterly, half yearly and yearly through Daily incident report, Monthly HSE reports, Security and HSE index, Safety committee report, MARG, Internal audits and safety audits.





Gaps, Suggestions, Feedbacks so received from the Top Management being taken in the true spirit, detailed root cause analysis done, compliance/implementation action plans are drawn and horizontal implementation are ensured. Collective participation, suggestions/feedback are taken in brain storming sessions/video conferencing, wherein Top Management also participate and provide with valuable inputs.



All necessary technical/financial approvals, guidance, mentoring are a source of inspiration and motivation that is received from the Top management for effective implementation suggestions across the installation. This has helped location achieving continuous improvements, implementing series of innovation and wining various national/international awards.

To create a collaborative environment that promotes safety as a shared responsibility throughout the organization, Half yearly Management Review Meetings (MRMs) are conducted in MDPL which are attended by complete top management of MDPL including Pipeline Head, Department Heads at HO, Location Heads and Management Representative. These meetings serve as a crucial platform to promote a strong safety culture and ensure the well-being of employees. The objectives of these meetings are -

- **Safety Awareness:** Reinforce the importance of safety in the workplace and create a safety-conscious atmosphere among employees.
- **Communication:** Facilitate open communication between top management and the workforce about safety concerns, incidents, and best practices.
- **Policy Review and Implementation:** Review existing safety policies and procedures, and discuss their effective implementation throughout the organization.
- **Incident Analysis:** Analyze previous safety incidents to identify root causes and develop strategies to prevent similar occurrences in the future. Safety Training: Discuss safety training needs, evaluate the effectiveness of current training programs, and plan for additional training sessions if required.
- **Performance Evaluation:** Review safety performance metrics, assess progress towards safety goals, and make necessary adjustments to improve safety outcomes
- **Recognition and Incentives:** Acknowledge and reward employees and teams for outstanding safety practices and contributions to the safety program.
- **Equipment and Infrastructure Safety:** Discuss the maintenance and inspection of equipment and infrastructure to ensure safe operations.



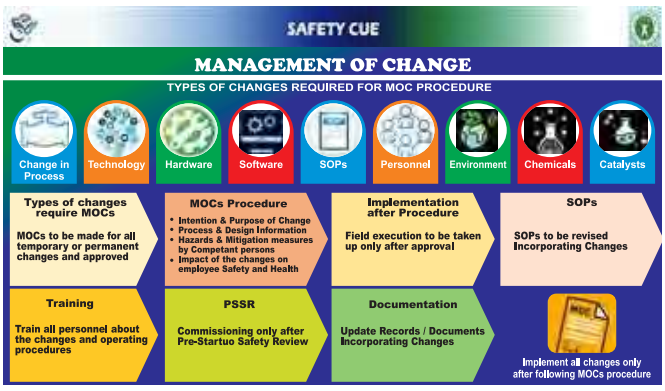
3. Employees participation and involvement in SHE matters

Corporation has well established HSE set up, with assignments of responsibilities clearly defined right from corporate level, Refinery level, Marketing SBUs, Pipeline SBU level to until individual locations. Executive Director (HSE- Marketing) & Executive Director HSE (Corporate & Refineries) at HQO-Mumbai, has overall control on HSE activities, responsible for review, evaluation and enabling locations with apt resources, infrastructure and in time approvals.

At Project & Pipeline SBU Level: Deputy General Manager- HSE is responsible for SBU HSE activities, including Audits and compliances. Then down the line, MDPL has very senior and experienced DGM-HSE who is overall in-charge of HSE for all MDPL locations and he is supported by Senior Manager-HSE. All pipeline locations have a Designated Safety Officers (DSOs), responsible for HSE activities specific to the location.

Assignment of Responsibilities at Various Levels for implementation of the HSE policy at MDPL is as below:

- HSE policy of the organization is finalized and signed by C&MD of HPCL and the same is displayed in English, Hindi & local language at all the locations of HPCL. (Refer Annexure 3.1.2)
- To implement the HSE policy, HSE objectives and targets are decided by TOP MANAGEMENT (Directors and Executive Directors) after a lot of brain storming discussion in AOP Meet, which is conducted every year just at the starting of the financial year.
- To implement the HSE policy at the locations, HSE programs like Sachet, Ekagra, Safety & Security Index are built to achieve HSE goals by CGM & GM rank Officials at HQO & HO level. (Refer Annexure 3.1.3)



The activities undertaken by Line Managers to achieve HSE objectives in their Departments / Sections.

1. Location In-Charge ensures and enhances the Safety culture among officers and workmen at the location.
2. To implement the HSE programs at MDPL Locations, MDPL-HO prepares and project Yearly budget to for marketing expenses and for capital projects for the locations.
3. Location In-Charge ensures Implementation of the Capital projects to enhance the safety of the location and also ensures utilization of marketing expenses for maintenance of the existing HSE facilities and infrastructure at the locations.



4. Location In-Charge also ensures full automation of the safety facilities, safety interlocks integration with PLC & SCADA system, monitoring & control of critical operating parameters, implementation of SOP etc.
5. Ensure celebration of National Safety Week, Electrical Safety Week, Fire Service Week, Road Safety Week, World Environment Day, etc. programs as per direction received from HO to reinforce behavior-based safety culture in employees and contract workmen at the locations.
6. Ensure display of fire organization charts, HSE policy, Standard Operating procedures, Do's & Don'ts of equipment etc.
7. Ensure the compliance to OISD requirements at locations.
8. Ensure compliance for HAZOP study and Risk analysis.
9. Innovations in fire & Safety are implemented at locations and its integration with PLC & SCADA system is ensured.

4. Implementation of the recommendations of studies, audits, committees

At all MDPL locations, Internal OSH Audit is conducted quarterly as per OISD 145. Multidisciplinary safety audit (MDSA) is conducted through Internal OSH Audit Team comprises HQO HSE Chief, HSE In- charge/Location head of other Pipeline Locations. This team thoroughly inspect preventive, predictive maintenance, updated drawing, layout, safety & security management, logics, alarms, tripping protocols, testing and calibration of equipment, Equipment efficacy and performance, Statutory quality controls, Statutory and legal compliances, trainings and feedback system. Major initiatives and improvements made by the location w.r.t OISD, OEM, SOPs and statutory requirements on safety, health and environment of man, machine, material, environment and processes are also highlighted and shared with other location for overall development / upgradations. Upon inspection, report is submitted to the top management at HQO, with a copy to the Location for compliance and implementation of recommendations.



External Safety Audit - External safety audit of Mundra Delhi Pipeline is being carried out annually. The audit is carried out by a team of certified third-party experts. They visit and inspect all locations of MDPL and its sectionalizing valve stations. The audit starts with an opening meeting at the dispatch station and proceeds to the terminal station. The observations and finding are discussed at each location. Finally, the agency provides an audit report comprising of its observations and recommendations. Based on these recommendations the management of MDPL sets targets for compliance and review.

T4S Audit - PNGRB ACT regulations mandates T4S audit every three years for multi-product pipelines (Technical specification audits). The audit team are experts in pipeline operations and maintenance. They have knowledge and experience in pipeline projects. The organization is accredited by PNGRB for the audit. The team audits each and every location and on sample basis few SV stations under each location. The audit checklist as per PNGRB is used for auditing. The audit process is exhaustive with field inspections, document checking and demonstration of the emergency preparedness and adequacy. The same was carried out during the period 2021-21 (Jan – Feb 2021).



OISD Safety Audit – Every five years, OISD Audit is conducted by dedicated team from Oil Industry Safety Directorate which consists of experienced members from OISD and different OMCs. Whole purpose of the Audit is to check overall Safety standard of the location. This team thoroughly inspect preventive, predictive maintenance, updated drawing, layout, safety & security management, logics, alarms, tripping protocols, Fire & Safety systems, testing and calibration of equipment, Equipment efficacy and performance, Statutory quality controls, Statutory and legal compliances, trainings and feedback system.



Once the final report received, a meeting is called at HO level as well as location levels. For each improvement, concerned officer responsibility is assigned and target is fixed. Monthly all points compliance status is being reviewed by location in charges and report to be submitted to head office.

Head office reviews the report and submit compliance and action taken report to HQO on monthly basis. HQO in turn submits the compliance to the external agencies OISD/PNGRB along with all the supporting documents. All these points to be complied as per timelines decided by OISD/PNGRB.

If the external agency is satisfied with response submitted, then they close the audit observation and the same stands complied.

5. Special efforts and approaches to SHE and significant achievements

"Safety First" culture is widely inculcated until the last worker/Stake holder at the installation. Employee understands the importance of safety that enhances productivity. The organizational goals are achieved, implementing and adhering with safest operational means. Loss control meetings are conducted with participation of workforce that includes employees, security, contract personnel and other stakeholders. All safety health matters are discussed and corrective, preventive measures are taken in time bound manner. Employees and workforce undertake planned general inspection. Feedbacks taken therein effectively addressed in process improvements, initiatives, innovations and implementation of best of best practices and compliances. This built a healthy bonding with working personnel and has brought all round outstanding performance year by year.





"Every worker is a safety implementer" is the key operating slogan at the location. Any unsafe act or envisaged risk or potential hazard is immediately brought into the notice of management or workers are empowered even to "Stop any unsafe process or act" on there and then basis. This has immensely motivated workers and helped location attaining various technological and process improvement. Location workers takes prompt action with active participation of workforce in implementing mitigation measures on envisaged risk, potential hazards, identified thru occupational health hazard survey, planned general inspections, same is deliberated in Management Review & Safety and Health Committee Meetings, Brother to brother safety compliance groups. Safety suggestions so received from fields are complied with corrective & preventive measures for horizontal implementation and monitor compliance status of recommendations.

Various Safety Incentive Scheme like Safety Quiz, Essay Writing, Slogan Writing and Physical Competitions have been organized for workman for HSE awareness. Safety Magazines, Safety Newsletter and Safety booklets have been circulated among employees and workman for awareness towards safety.



Details of competitions are as follows-

1. Safety Quizzes
2. Physical Competitions
3. Essay writings
4. Slogan writings

Safety training programs were organized for workmen in all locations of MDPL during fire safety weeks. Various motivational programs like rewarding Best Safety Practices/ suggestions or disciplined use of /PPE are also part of our HSE Management. In AOP Meeting also target has been set for zero incident and zero tolerance to unsafe culture.



To increase the safety culture among the workers & security staff, an initiative on behavioral based safety 'SACHET' is implemented at MDPL. Multi programs were organized under this scheme. SACHET cards distributed to all contract workmen. Safety badges also awarded to workers, who followed the safety rules & increase the safety awareness among co-workers.

6. Use of advanced digital technology (AI, AR/VR, Robotics, Drone etc.) to enhance safety

HPCL MDPL runs its business adopting innovative approach/measures in HSE Management practices beyond the scope of statutory requirements. MDPL has been pioneer in implementing innovative ideas, initiatives, best of Industrial practices, and technological upgradations to its HSE Excellence. State of Art technology, fully automated SCADA and PLC based operations and safety management system, Series of interlocks, Alarms and Tripping Mechanism, Legal and Statutory Compliance, Robust training management and evaluation system, managed through highly motivated, competent and dedicated workforce and active stakeholders supply chain makes MDPL a strong contender to various National Awards, accolades and Certification



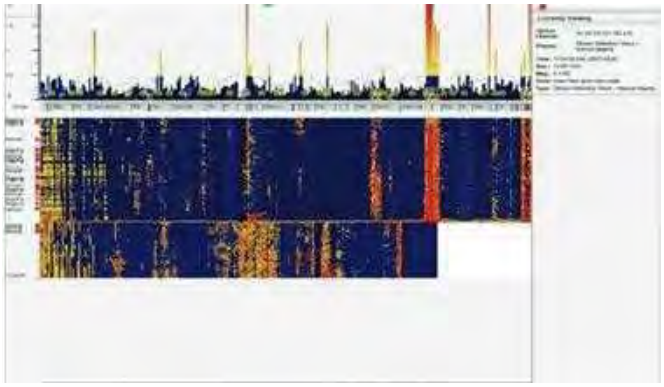
We at MDPL strongly believe that Public safety is paramount and at no point of time, public safety shall be compromised.

Few of Significant HSE initiatives and innovative approach/measures adopted at MDPL/ASPL/PVPL towards safety excellence are as follows;

1. Pipeline Intrusion detection System (PIDS): PIDS works on the principal on detecting the disturbance of transmission of laser signal to and fro in certain length of OFC. This detects manual, mechanical disturbance in the vicinity of the pipeline.



2. Security tracking system (STS): STS ensures the real-time tracking of security line walkers who are doing physical inspection and it is based on the mobile application with GPS feature.



3. Dedicated OFC based communications between all the stations for seam less operations.
4. UV/IR Flame detectors, heat detectors and Hydrocarbon detectors in Pipeline process areas.
5. High-Definition CCTV (Close circuit television) Network (Dedicated Optical fiber network with back up).
6. Health & Safety Portal is provided to monitor the performance, learn from failures and improve the health and safety management system.



* * *

PI Industries LTD., Bharuch, Gujarat

(Manufacturing Sector – Group B- Sarvashreshtha Suraksha Puraskar – 2024 Award Winner)

1.0 Background of the factory/ site / Establishment

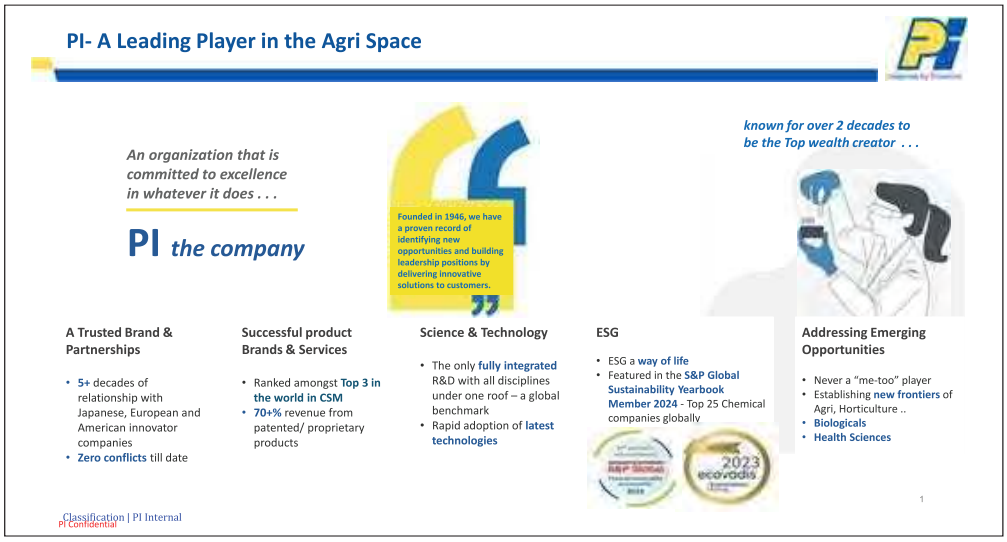
PI Industries Ltd. Plot No. 237, GIDC Panoli, Tehsil: Ankleshwar, District: Bharuch, Gujarat

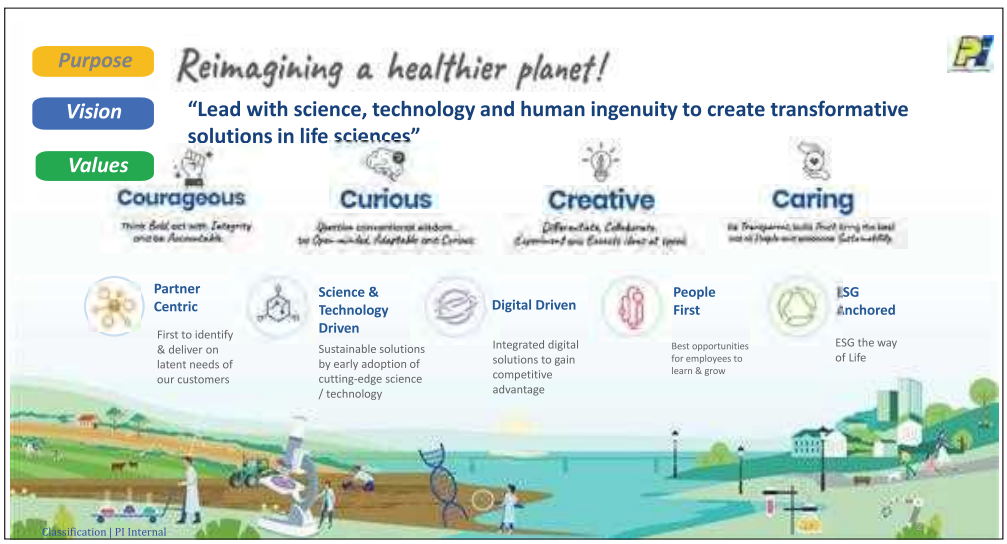
PI Industries Limited is manufacturer of agricultural and fine chemicals, and polymers. The Company produces fine chemicals, crop protection, plant nutrients, and seeds, and engineering plastics for use in the automobile, electrical, and home appliances industries. Simultaneously, we partner with global innovator companies across the value chain - Custom Synthesis to manufacturing to co-marketing & distribution of their products.

As far as the technology is concerned, the organization has an advanced R&D Center at Udaipur where development of various cost-effective techniques. Once techniques developed we conducts different type of trails like lab trials, kilo-lab trials and pilot trials which helps to established the process and generation of all kind of DATA. These data utilized during the commercialization of product at manufacturing location. We have developed expertise in reaction capabilities and unit operations capabilities.

A few of reaction capabilities are:

Sr.	No.Name of Reaction
1	Pyrazoles
2	Reduction
3	Diazotization
4	Grignard
5	Halogenation
6	Nitration
7	Phosphorylation
8	Acetylation
9	Cyanation etc.





2.0 Commitment of the top management to SHE.

Top Management reviewed details of HSE performance on monthly basis which are discussed in Executive Committee Meeting (ECM) which is chaired by Board of Director while Management Committee Meeting (MCM) which is chaired by the Chief executive officer (CEO) and Vice Chairman and Managing Director (VCMD) and Daily Review Meeting (DRM) with Site head and other leaders available at site.

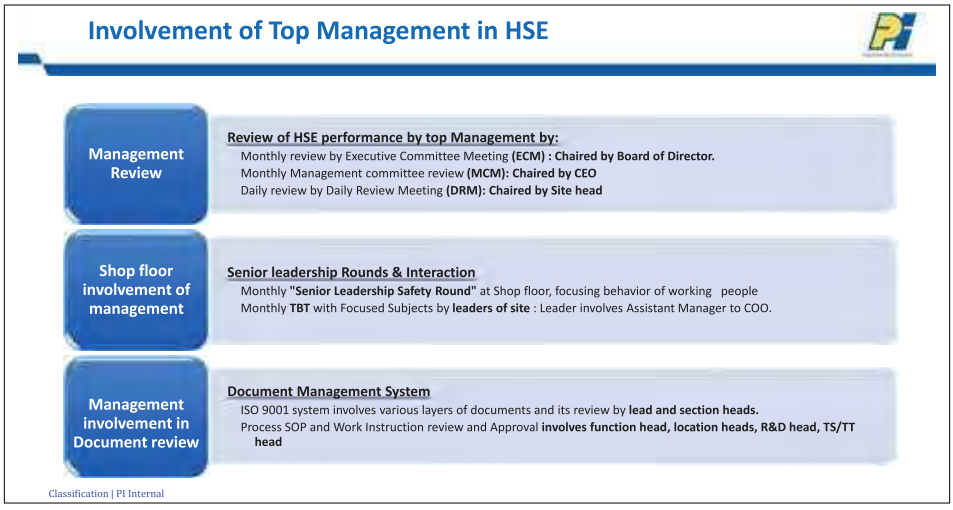
In addition, quarterly meeting with Chief executive officer (CEO) and annual meeting which is chaired by Vice Chairman and Managing Director (VCMD).

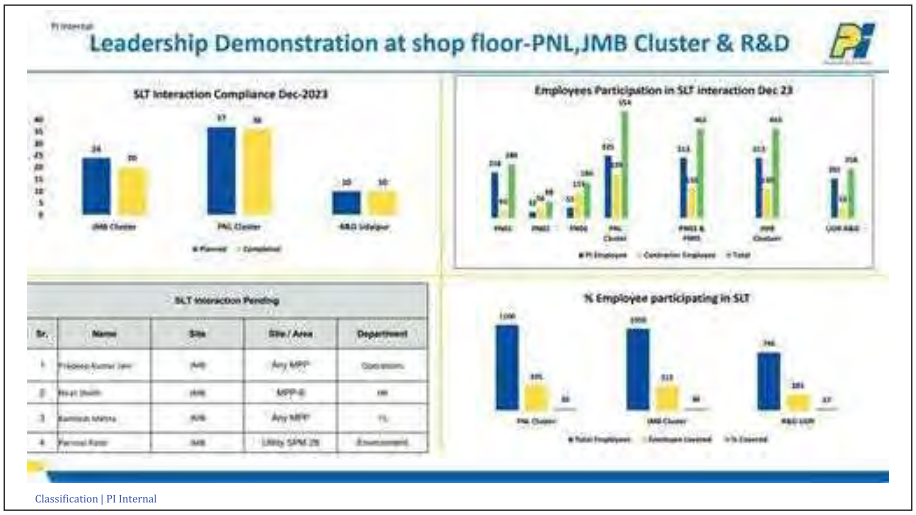
Management Review Meeting (MRM) is also scheduled on a half yearly basis. The agenda of the meeting is circulated in advance. The major agenda points include the discussion on compliance with legal and other regulations, HSE performance, fulfilment of objectives and targets, inspection/audit findings, Responsible Care codes, training and awareness, etc.

Management prioritizes safety through monthly "Senior Leadership Rounds" in the factory, focusing to map the behavior of working people, ensuring thorough safety inspections and prompt resolution of concerns People who all are involved in the plant safety round are from Assistant Manager to Chief Executive Officer (COO).

In addition, TOP Leadership fortnightly interacted with whole group of working people (employees and contractual worker). Each member of TOP Management is positively involved in such training where he delivers, on relevant topics on basis of training material available with us mean time he utilized knowledge, experience and learning which helps to make the interaction session more effective. Topics of training of the TOP Management interaction are also decided and released in advance, beginning of each month.

These initiatives underscore the organization's commitment to fostering a culture of safety, where proactive engagement and collaboration drive continuous improvement. By regularly assessing and addressing safety challenges, the management reinforces its dedication to employee well-being and operational excellence, establishing a robust framework for sustainable safety practices throughout the organization.





3.0 Employees' participation and involvement in SHE matters.

Line managers are responsible for the safety of their work area under role and responsibility that are defined in their Job Description.

Besides this, in their routine jobs they are responsible for:

- Safety inspection of all activities and corrective actions.
- Inspection of safety equipment like, SCBA (self-contained Breathing apparatus), safety showers, fire extinguishers, fire hydrants, etc. in their area.
- Maintaining safety critical instruments like sensors and alarms, safety valves, deluge systems, safety interlocks, etc. by continuous inspection.
- Ensure good housekeeping at workplace.
- Ensure labelling of equipment's and pipelines as per safety guidelines.
- Ensure 5S activities.
- Ensure chemicals are stored as per compatibility.
- Provide for the smooth functioning of Autonomous Maintenance Team (AMT) and Daily Maintenance Team (DMT) meetings in their area.
- Activities of all behavior-based safety in their area
- Monitoring waste generation, water consumption, raw material consumption, emissions, etc. in their area and taking corrective action whenever required.
- Authorizing work permits in their respective areas (except confined space entry permit and hot work permit).
- Providing Toolbox Talks to contractual workers on safety related topics.

Company is running a perennial suggestion scheme program, in which suggestion from all the employees whether regular or contractual are welcome. The suggestion are basically meant for improving work culture, process safety, work place safety, waste reduction, and other related matters. After scrutinizing all the suggestions, the accepted suggestions are awarded by appreciation letter and memento. The suggestions are awarded on a quarterly basis, and in each quarter top 3 suggestion are awarded. At the end of the year, during Founder's Day celebration all quarters' top suggestions are awarded and out of those, top 3 are separately felicitated by the President (O).

4.0 Implementation of the recommendations of studies, audits, committees, etc.

Based on the Management Committee Meeting minutes, action tracker is chalked out and circulated with first person responsible and targeted for compliance to each department and concerned person and reviewed on monthly basis.

The Minutes of Meeting (MOM) comprehensively cover all discussions and improvement suggestions from the safety committee meeting. Ensuring that all significant issues are addressed and every suggested improvement is implemented underscores the committee's commitment to safety. This proactive approach fosters a culture of continuous improvement and accountability within the organization. By diligently recording and acting upon these deliberations, the company reinforces its dedication to safeguarding employee well-being and maintaining operational excellence.

Incident highlighting the Root cause and corrective action for implementation and avoid the recurrence. CAPA is tracked by tracker on monthly basis and same is review in daily review meeting and TOP management monthly meeting.

5.0 Special efforts and approaches to SHE and significant achievements (tangible and non-tangible);

Innovation is in the DNA of our organization and our organization has continued to apply SHIFT (Systems, Habit, Innovation, Focus, and Technology) in all its processes and performance year on year.

One production block is completely running with DCS while other plants have the data logger facility. Other production and critical operational areas are equipped with PLC systems along with alarm. All these systems help to minimize human intervention which results in prevention of human injuries and improve HSE Performance.

One plant having online sampling system, which prevented total human intervention.

The company has always encouraged and appreciated new ways of doing things and doing things first time right. To develop culture of innovation among employees and contractors, well established suggestion scheme is in place where employees participate approximately at an average of one suggestion per person per month in the field of Safety, Health, Environment, Emergency Preparedness, reduction in water consumption, waste management, cost rationalization, and process optimization.

Some of the Innovations undertaken by organization are:

- The site has adopted AI based surveillance technology to monitor the entire plant premises and detect any anomalies based on the behavioural aspects of individual.

  Accident Prevention: AI can analyse vast amounts of data from sensors, cameras, and other sources to identify potential hazards in real-time. By detecting anomalies or patterns indicative of impending accidents, AI can trigger alerts.

  Enhanced Surveillance: AI-powered surveillance systems can monitor large areas with greater efficiency than human operators. These systems can detect suspicious behavior, unauthorized access & PPEs violations.
- Risk based Process Hazard and Risk Analysis (PHRA) using tools of HAZOP and SIL assessment through LOPA has been adopted. It has resulted in the provision of safeguards and control measures to bring down the process risks well under acceptable limits.
- Use of Powered Safety Goggles: Increased the Safety of personnel who were working wearing spectacles earlier.
- Use of Mobile SCBA set: Helps in handling emergencies more efficiently, which was demonstrated during a recent off-site emergency mock drill conducted at our site.
- Specially developed AV for Video briefing to contractors, new employees and visitors: Proper and efficient sharing of Information.
- Portable Blower with collapsible hoses: Helpful during emergency and if some confined space entry is to be done at some isolated place, it can be used for providing breathing air.
- Introduction of Reward and recognition policy: Encourages personnel for continuous betterment and development of self, policy and processes.
- Introduction of Spirit of the month concept: Encourages personnel for continuous betterment and development.
- Introduction of BRAVO awards for identifying all round top performing individuals: Encourages personnel for continuous betterment and development.

R&D team's continuously efforts has been able to achieve below mentioned goals:

- Replace the hazardous chemical with less hazardous chemical e.g., Introduced a wide range spectrum and water-based rice herbicide a SC formulation to replaces fossil fuel based rice herbicides thereby eliminating consumption of solvents.
- Avoid use of Toxic chemicals: Launched new generation insecticide to replace the existing hazardous product
- Flow chemistry start adopting – flow chemistry greener & more sustainable.
- Maximum Recycling: Only around 20% of the total effluent generated is discharged, rest is recycled.
- Reduction in cost of waste treatment: Saved more than INR 2.27 Cr from budgeted cost for waste treatment by rationalization of waste and adopting new technologies like Ozonation, Fenton treatment, etc.
- Reduction in generation of waste: Adopted dry vacuum pumps in place of multistage steam jet ejectors, leading to considerable reduction in waste generation.
- Water conservation: Adopting RO treatment and recycling the permeated cooling towers.
- Energy conservation: Adoption of state-of-the-art energy efficient equipment and lighting.

6.0 SHE management, its linkages with Key Result Areas and outcomes;

During the annual appraisal of any employee his active participation in field of safety and health is considered. The following parameters are considered in the employee annual appraisal:

- Participation in Central and Zonal Safety committee meetings
- Involvement for reporting of near miss cases
- Involvement in Incident investigation
- Active participation during emergency i.e. emergency handling and first aid facility
- Participation in mock drills
- Participation in safety week celebration
- Participation in Behavior Based Safety programs
- Attendance in mandatory trainings.
- Participation in safety circle to achieve the pre-decided project.
- Participation in Job safety analysis.
- Participation in Hazard Operability study.
- Weightage also given on winning safety hero & spot awards.

On the basis of the same, during the Annual Meet, top three employees are awarded with the **BRAVO award** and this award is provided by Vice Chairman and Managing Director (VCMD). Apart, BRAVO, we monthly identified safety Heros and Spot the award of working people who support to ensure workplace become free

from any hazard and imminent danger.

7.0 Use of advanced digital technology (AI, AR/VR, Robotics, Drone etc.) to enhance safety

The site has adopted AI based surveillance technology to monitor the entire plant premises and detect any anomalies based on the behavioural aspects of individual.

Accident Prevention: AI can analyse vast amounts of data from sensors, cameras, and other sources to identify potential hazards in real-time. By detecting anomalies or patterns indicative of impending accidents, AI can trigger alerts.

Enhanced Surveillance: AI-powered surveillance systems can monitor large areas with greater efficiency than human operators. These systems can detect suspicious behavior, unauthorized access & PPEs violations.

Video analytics & AI:

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b) Trespassing
c) Loitering
d) Vehicle wrong way detection
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NPCIL - Kaiga Generating Station-3&4, Uttara Kannada, Karnataka

(Manufacturing Sector – Group 'C' Sarvashreshtha Suraksha Puraskar – 2024 Award Winner)

A. Background of the Station

Today with the advancement of our nation in the field of nuclear technology, it is proved that nuclear power is commercially viable, environmentally benign and an inevitable source of energy of future. Organization is committed to put forth conscious effort to ensure safety of the public and occupational workers as well as protection of the environment while meeting the consistent, safe & reliable operation of the plant. This calls for the safety culture to ensure efficient and economical, environmentally benign energy generation, consistent with quality, safety and reliability. The NPCIL corporate management has accorded top-most priority to safety & quality performance.



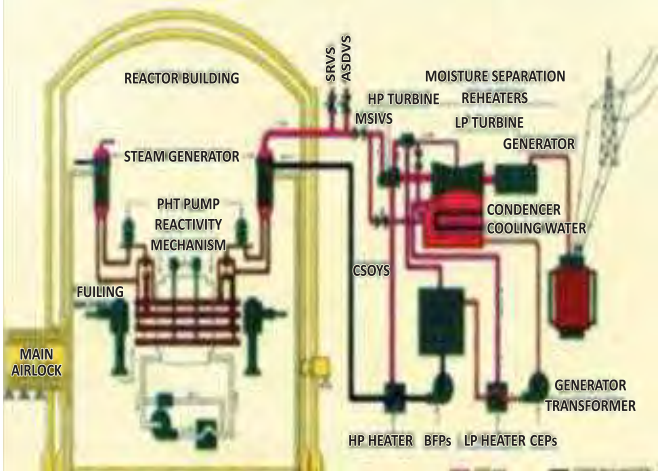
Kaiga Generating Station - 3&4

Nuclear Power Corporation of India Limited (NPCIL) is a Public Sector Enterprise under the administrative control of Department of Atomic Energy (DAE), Government of India having comprehensive capability in all facets of Nuclear Technology namely, Site Selection, Design, Construction, Commissioning, Operation, Maintenance, and up gradation of nuclear power reactors. Safety is given overriding priority in all facets of nuclear power reactors. At present, NPCIL operates 24 nuclear power reactors (including Rajasthan Atomic Power Station Unit-1, 100 MW PHWR, owned by DAE and managed by NPCIL, which is under long shutdown) with an installed capacity of 8880 MW. Currently NPCIL is constructing eight Reactors (6100 MW) comprising of KKNPP-3&4 (2 x 1000 MW, LWRs), KKNPP-5&6 (2 x 1000 MW, LWRs) and Gorakhpur Haryana Anu Vidyut Pariyojana (GHAVP) Unit-1&2 (2x700 MW PHWRs) which are under various stages of construction. In respect of ten 700 MW PHWRs in fleet mode, having Administrative Approval and Financial Sanction of the GoI, various preparatory activities such as land acquisition and R&R, Environmental clearance, procurement activities of long delivery equipment, studies for regulatory clearances, site infrastructure development, public outreach, tendering for main plant civil works etc. are in various stages of progress. With progressive completion of all the above project units, NPCIL's total installed capacity is envisaged to reach 21980 MW by 2031-32.

The unit has been constructed and commissioned under the direct supervision and control of NPCIL. The plant is being operated under the guidelines and regulations from Atomic Energy Regulatory Board. KGS-3&4 is owned by Nuclear Power Corporation of India Limited, a Government of India enterprise. Kaiga Generating Station-3&4 is certified for ISO 14001:2015 Environment Management System, ISO 45001: 2018 Occupational Health and Safety Management System and ISO 9001:2015 Quality Management System by Bureau of Indian Standards (BIS). Kaiga on the banks of River Kali in Uttara Kannada district of Karnataka in the Western Ghats of India.

B. Working principle of Nuclear Power Plant at Kaiga-3&4

Kaiga Generating Station-3&4 has two Pressurized Heavy Water Reactors (PHWRs) utilizing nuclear fission process with installed power generation capacity of 220 MWe each. They use natural uranium as fuel, and Heavy water as moderator and coolant. It consists of 306 horizontal pressure tube assemblies which contain the fuel bundles (12 bundles per pressure tube), through which pressurized heavy water coolant circulates, are housed in a stainless steel vessel called Calandria. The pressure tube assemblies containing natural uranium fuel bundles are surrounded by heavy water moderator at near ambient pressure and temperature in the calandria. The calandria is supported at either ends End Shields. The calandria houses all reactivity and reactor shut down devices. The fuelling is carried out during the operation of the reactor by means of remotely operated fuelling



machine. The heat produced by fission in the uranium bundles is transferred by the circulating heavy water to the light water (de-mineralized water) contained in the secondary side of the steam generators to produce steam. This steam in-turn drives turbine which is coupled with the generator to produce electricity.

C. Commitment of the top management to SHE:

Kaiga Generating Station-3&4 generates electricity from Nuclear energy, using highly advanced, economically viable and environmentally benign Technology. Top management is committed to practice Quality, Environment and Occupational Health & Safety Management Systems conforming to National and International Standards in consultation and participation of workers' representatives and stake-holders in our activities, products and services. The Systems, Structures and Components of the plant are designed, operated and maintained with topmost priority given to safety so that the impact on employees, contractors, environment and public around the plant is negligible and enhances satisfaction of stake-holders. Station is committed to provide safe and healthy working environment to all employees, eliminate hazards and reduce OH&S risks, protect the environment and prevention of pollution in all working processes. Activities in the plant are periodically reviewed for setting and improving objectives & targets for Quality, Environmental and Occupational Health & Safety. We commit for maintaining excellence through continual improvement in Quality, Environmental and Occupational Health & Safety and comply with the statutory & legal requirements

D. Employee Competence & Training

The all-round competence, skill and fitness for working in specific areas are rigorously monitored and required actions are taken by Training Department. Different authorization based trainings are also given to the employees which are evaluated with written examination / interviews, etc.

Mandatory training programs like Fire Safety, Industrial Safety, Radiological Safety, Heavy Water Handling, Station Protection Code, Security Awareness, Environmental Management System, Occupational Health and Safety Management System, Quality Assurance, First Aid, Diesel and chlorine leak handling Trainings are conducted for all station employees and contract workers. Apart from these trainings, job specific training programs and need based trainings are conducted regularly to all workmen during the course of employment. Safety films are screened during safety training programs.









E. Employees' participation and involvement in SHE matters

Involvement of the employee in SHE matters plays an important role in improving the safety culture at NPCIL KGS 3&4, various schemes/measures have been implemented to increase the participation from the employees and workers in enhancing the safety of the plant

- **Safety Committee:** Station Level Apex Safety committee is constituted to ensure participation of Management, Group head, Section head, line managers and workers level in safety management to strengthen the safety culture in the organization. Whereas Sectional level safety committee meeting ensure participation of all cadres of employees who are directly involved in operation and maintenance section wise where section head is chairman.
- **Safety Campaign:** National safety week, National Fire service week, road safety week etc. is observed every year to create awareness among the employees regarding safe work practice and maintaining safe work environment.
- **Field visit for maintaining good housekeeping and plant material condition:** In our NPP there is schedule to visit each area of plant for maintaining good housekeeping and plant material condition assessment by housekeeping committee members where each level of employee's participation from each section is ensured.
- **Pre-job briefing:** Pre-job briefing is conducted in supervision of engineer, supervisor and working crew member. All job starts only after Pre-job briefing is conducted.
- **Industrial and Fire safety training:** Industrial and Fire safety training program framed at our station as per Head quarter instruction. It is mandatory in nature at our NPP. Both department and contract employees participate in training program.
- **Mock drill:** Diesel leak emergency handling exercise, Fire emergency exercise, Chlorine Emergency Exercise, Plant emergency/Onsite, Offsite Emergency exercises are crucial activity to bring awareness to employees about safety.





F. Improvement of Safety Culture

An excellent safety culture prevails at KGS-3&4 in line with corporate safety policy & mission. Special emphasis is given on accident prevention, safety training programs and field surveys. Station recognizes safety functions as an overriding priority and encourages proactive involvement of safety professionals in monitoring and implementation of corrective action programme with participative rather than regulatory approach. The management expectations on safety culture is disseminated through continual training, periodic safety committee meetings at various levels. The concerted efforts of management, line managers and staff in unison have paid rich dividends by way of several awards and recognitions to the station from internal and external agencies. It is observed that the safety performance of the station is consistently improving by bringing down the frequency rate and severity rate to nil values.

Participation of workers is ensured through Sectional Level and Station Level Safety Committee meetings. There are sixteen sectional safety committees, which meet once in a month and a Station Level APEX Safety Committee which meets on quarterly basis. Representatives of Contract workers also included in the Sectional Safety Committee meetings.

There are no industrial accidents since December 2007 and the units are operating without a fire incident since March 2005.

G. Compliance to legal requirements:

Station has identified all legal requirements for compliance as applicable to various environmental aspects and Occupational Health and Safety hazards pertaining to business activities. Evaluation of compliance of the legal requirements and any change in legislation, regulation and other requirements are done periodically

H. Management review of HSE management system

Process parameters and safety related issues are reviewed during daily meetings. Progress of daily work status is reviewed. Job observations by senior officers are also presented during daily review meetings. Parameters like collective dose, internal dose, cases of over-exposure exceeding prescribed limits, cases of personal contamination, incidents of heavy water spillages, on-power entries, effluent releases from the station are monitored regularly to identify areas for improvement in radiological safety. The meetings are attended by station management, senior officers and section heads.



I. Emergency Preparedness Plan

In spite of this, as, as a prudent measure, plans exist for dealing with emergency situations involving large release of radioactive materials from the plant. Features in design as well as in operation of nuclear power plants make the occurrence of a severe reactor accident a very low probability event. Such plans envisage the participation of both the station authorities as well as the local administration (the latter for situations involving off-site emergencies).

The following exercises are a part of the station emergency preparedness plan.

1. Fire Emergency & Exercise
2. Chlorine Emergency & Exercise
3. Diesel Emergency & Exercise
4. Plant / Site Emergency Exercise
5. Off Site Emergency Exercise





J. Implementation of the recommendations of studies, audits, committees, etc.

Following audits are conducted at our Nuclear Power Plant by the committees contributed for the purpose. Recommendations of audits compliance and action taken report sent to HQ and Regulatory body AERB.

1. Regulatory Inspections by Atomic Energy Regulatory Board:
2. Corporate Peer Review by in house team of NPCIL:
3. Corporate Peer Review Follow-up Review
4. Biennial Shut Down-Corporate Peer Review
5. Monsoon Survey and Flood Prevention Committee
6. Fire Prevention Committee
7. Zero Leak Committee
8. Hot Spot Reduction Committee
9. Station Operations Review Committee
10. Operating Experience Review Committee
11. Root Cause Analysis Committee
12. Internal Audit for Integrated Management System
13. BIS audit
14. IMS Audit by external auditor.

K. Special efforts and approaches to HSE and significant achievements

KGS-3&4 is maintaining excellent track records in HSE front. Station has completed 6332 accident-free days and 7344 fire free days as on 11th April 2025. Implementation of following HSE programs led to sustainability of accident-free operation of the station and paved way for a strong safety culture.

a) Job Observation Program:-

A dedicated team of senior engineers are observing jobs carried out in the station on a regular basis. After conducting job observation, a presentation is made during daily meeting and findings are placed before the management.

The following aspects are observed / reviewed during job observation for further improvement.

i. Team work
ii. Pre job briefing
iii. Procedural adherence
iv. Adherence to Industrial Safety practices
v. Foreign Material Exclusion
vi. Communication
vii. Environmental condition
viii. Error reduction technique
ix. Post job debriefin

b) Housekeeping inspection by senior management:

There are 6 housekeeping inspection committees functioning at KGS-3&4. Each committee comprises of 5 -7 members. The committees are visiting whole plant areas on Tuesdays for inspecting housekeeping, fire safety aspects, occupational safety and environmental safety aspects of the station. Observations made during such visits are discussed in the daily meetings and deficiencies are followed up through the Low Level Event (LLE) Management System software. Trending and categorization of LLEs reported is done on quarterly basis.

c) Industrial Safety Permit and Hot Work Permit System:

Safety of plant personnel and equipment is ensured by strictly adhering to safety permits and Safe Operating Procedures. At KGS-3&4 safety permits are available in electronic form. Safety permits are required for works like removal of hand rails, hatch blocks, work at height, hot works, electrical works and working in confined areas.

d) Process Safety:

Licensing and qualification of operating and maintenance staff is done in order to ensure error free operation. Only qualified and authorized personnel are allowed to operate various process and systems of nuclear power stations. Class room training and field training is imparted prior to qualifying and licensing of employees. License will be issued by AERB by conducting qualification interviews.

e) Inspection of power tools and extension boards:-

Inspection of power tools is conducted on quarterly basis and tagging is done during such inspections. All extension boards and electrical tools used at plant premises are inspected by Safety Inspectors and certified for fitness.

f) Illumination and Noise Level Survey:-

Illumination levels are checked at important areas and cross checked with AEFR (Atomic Energy Factories Rules 1996) standards. At KGS-3&4 Illumination Survey is carried out on monthly basis. Noise prone areas are monitored quarterly and employees exposed to noise level above 85 dBA are undergoing audiometric examination. Noise defenders / Ear muff Stations are installed at high noise areas.

g) Inspection of Scaffoldings:

100% scaffold inspection program is introduced at KGS-3&4. Scaffold inspection is carried out whenever a scaffold is erected for work at height. Safety permits are issued prior to scaffold erection and the erected scaffolds are inspected by Industrial Safety staff. The scaffolds are certified to ensure safe work at heights as per approved station guidelines.

h) Levy of fine in work order for violation of safety rules:

Provision is made in the work order for imposing fine in case of violation of safety rules by contractors. Safety officer report cases of violations to respective engineers in charge for imposing fine.

i) Witnessing of load testing of material handling equipment's by safety staff:

All material handling equipment's in the station are load tested once in 12 months as per provision of the Atomic Energy Factories Rules 1996. Safety Officer or his representative, witness load testing of all material handling equipment's in the station.

j) Crane/Forklift operation by authorized personnel:

Authorization is done for Fork Lift, Jumbo Truck, Crane operators and height work. Training passes are issued to employees after authorization. Safety training pass is given to all contract workers, after imparting safety training. Authorization committee under the Chairmanship of Maintenance Superintendent for operation of Crane/Forklift is existing at the station.

k) Height work qualification structure:

Employees performing height work at more than 2.5 mtrs are medically and physically qualified before deployment on works. Physical fitness is tested on height work qualification structure.

l) Testing of electrical hand gloves:

A test facility has been established for testing electrical hand gloves. All electrical hand gloves are tested once in 6 months frequency.

m) Fire Safety:

At our NPP Fire detection and alarm system installed entire of the plant to detect the fire at incipient stages and configured with Sprinkler system.

Hydrogen detector installed at Turbine Generator and battery room.

n) Personal Protective Equipment (PPE):

Wearing of Safety Helmet and Safety Shoes is made compulsory in all KGS-3&4 plant areas. All contract workmen are provided with safety shoes, double lanyard safety harness and safety helmets. Separate colour code is followed in the station for departmental and contract workers for wearing safety helmets.









L. Recognition and Awards for station employees

To develop HSE culture in the station all employees are motivated for achieving high in the form of recognition and rewards.

a) Nomination of employees to external training programs conducted by National Safety Council of India, DGFASLI, Regional Labour Institutes, etc.

b) Prize for Near Miss (NM) reporting for individual employees.

c) Housekeeping competitions among Sections and felicitation during celebration of National Safety Day.

d) Safety seminar titled "For the workers by the workers" conducted every year.

e) Competitions and felicitation of employees on National Safety Day, Fire Safety Day, World Environment Day, Energy Conservation Day and Productivity Day for departmental and contract employees, township residents, school children etc.

f) Nomination of workers to NPCIL Performance Awards etc

g) Safety Awards for Best Drivers.

h) Safety Competitions for Departmental & Contract employees.

i) Awareness campaign for Drivers on road safety by external agencies.

j) Invited talks by experts form National Safety Council of India and NSC Karnataka Chapter.

k) Safety Awards for Departmental & Contract employees.

M. Public Awareness programme, Corporate Social Responsibility, Kaiga Nature Club and Environment Stewardship Programmes for the welfare of surrounding community & achievements

1. Inauguration of School building at HPS Devalamakki
2. Inauguration Multipurpose Hall at Kurnipet
3. Comprehansive eye screening camp at Mallapur
4. Comprehansive eye screening camp at Malavalli
5. Inauguration of school building at GPLS, Nelepal, Mavinamane
6. Inauguration of School building at GHPS, Beegar
7. Teachers training on vision test on 04.03.2024 at Kaiga Township
8. Higher Primary School, Ulga village, Ghadasai
9. Higher Primary School, Nage village, Devalamakki
10. Bhoomi Pooja School Building Bhaira & Mallapur













N. Safety Awards and Recognitions

1. KGS-3&4 has bagged many prestigious Safety Awards from various agencies like National Safety Council of India, NSC-Karnataka Chapter, Nuclear Power Corporation of India, Atomic Energy Regulatory Board and DGFASLI.
2. KGS#3&4 has bagged safety award from National Safety Council of India 13 times continuously for effective implementation of Occupational Health and Safety Management system.
3. KGS-3&4 has bagged safety awards from NSC-Karnataka Chapter every alternate years as this award is being bestowed on industries once in two years.
4. KGS-3&4 has received the most coveted NPCIL Safety Award 10 times in a row since 2014.



Shri B Vinodkumar, Site Director is receiving NPCIL Safety Award – 2023



Shri B Vinodkumar, Site Director is receiving AERB Industrial Safety & Fire Safety Award – 2023



Shri B Vinodkumar, Site Director is receiving Sarvashreshta Suraksha Puraskar-2024 from NSCI.

Awards	Year
National Safety Council (NSC) of India	
Suraksha Puraskar (Bronze)	2012, 2013, 2021
Shrestha Suraksha Puraskar (Silver)	2014, 2015, 2019
Sarva Shrestha Suraksha Puraskar (Gold)	2016, 2017, 2018, 2020, 2022, 2023, 2024
National Safety Council (NSC) Karnataka Chapter Awards	
Utthama Suraksha Puraskara	2013, 2015
Unnatha Suraksha Puraskara	2017, 2019, 2021, 2023
NPCIL Safety Awards	
NPCIL Safety Award (Winner)	2014, 2015, 2016, 2018, 2019, 2020, 2021, 2023, 2024
NPCIL Safety Award (Runner up)	2017
AERB Awards	
AERB Industrial Safety Award	2022
AERB Fire Safety Award	2022, 2023

O. Conclusion

KGS-3&4 has made an over whelming progress in safety front due to effective safety programs implemented by station management. Participation of all stake holders in HSE programs has yielded good returns as the station is operating for 6332 days of accident-free days and 7344 days of fire free days as on 11th April 2025. The awards and accolades not only demonstrate results but an indicator towards strong leadership in Health and Safety practices. These records show the commitment of the top management and highest standards of safety practices being followed by employees and contract workers.

Article contributed by:

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* * *

Most Prestigious Safety Award in India

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Objectives

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Apply at **https://nsc.org.in**

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or contact ***022-44002841/842*** *or visit* **https://nsc.org.in**

ITC Ltd., India Tobacco Division, Pune, Maharashtra

(Manufacturing Sector – Group 'E' - Sarvashreshtha Suraksha Puraskar – 2024 Award Winner



1.0 Background of the Factory

The India Tobacco Division (ITD), Pune Cigarette Factory, a pivotal establishment within the India Tobacco Division of ITC Limited, represents the zenith of modern cigarette manufacturing. Inaugurated in 2010, this state-of-the-art facility is strategically situated in the industrious expanse of Ranjangaon MIDC, Shirur Taluka, Maharashtra, a mere 50 kilometers from the bustling metropolis of Pune. This factory is the embodiment of ITC Limited's commitment to innovation, safety, quality, and leadership in the tobacco industry.

The Pune factory is the culmination of ITC's extensive experience and leadership in the tobacco sector, boasting a countrywide distribution network that is unparalleled in its reach and efficiency. The factory's inception was a milestone, further cementing ITD's position as the industry vanguard in technology absorption and skilled workforce development. The facility's operations are a testament to the company's dedication to maintaining the highest standards of safety and hygiene, ensuring that every process, from the initial handling of unprocessed tobacco to the final packaging of cigarettes, adheres to stringent safety and quality control measures.

ITD Pune Cigarette Factory, a prominent entity within ITC Limited's Tobacco Division, exemplifies the company's dedication to excellence and sustainability. Established in 2010, the Pune factory has significantly bolstered ITC's reputation as a leading cigarette manufacturer while pioneering efforts in environmental health and safety (EHS) and sustainability. The factory's commitment to international quality control standards and cutting-edge technology is further validated by numerous esteemed EHS and sustainability certifications. These include ISO 14001 for Environmental Management Systems, ISO 45001 for Occupational Health & Safety Management Systems, SA 8000 for Social Accountability, and ISO 50001 for Energy Management Systems, highlighting the factory's focus on operational excellence and employee welfare. Additionally, the Pune factory has earned a 5-star rating in Health and Safety Management from the British Safety Council and the Safety Innovation Award from the Institution of Engineers (India). Last year, we achieved the NSCI 5 Star rating and the prestigious Safety Shield, underscoring its commitment to maintaining top-tier EHS standards. The factory's accolades also encompass energy efficiency, having been recognized as an Excellent Energy Efficient Unit by the Confederation of Indian Industry (CII). These accomplishments reflect the factory's steadfast dedication to sustainable practices and its role as a responsible corporate citizen in the global tobacco industry.

2.0 Top Management Commitment to EHS

ITC's India Tobacco Division Pune Factory is steadfast in its commitment to Environmental, Health, and Safety (EHS) standards, aligning with the company's overarching goal to ensure the greenest and safest operations. The Pune facility operates with a robust EHS policy that emphasizes minimizing environmental impact and fostering a positive ecological footprint. This commitment is evident in the factory's rigorous monitoring of resource usage, adherence to national and international benchmarks, and regular performance audits to enhance Safety, Environment, water, energy, and waste efficiencies. The factory's dedication to providing a safe and healthy workplace is reflected in its infrastructure, designed to exceed national legislation and match the best international

standards. Furthermore, the Pune Factory actively engages in ITC's low carbon growth plan, utilizing around 85.4% of energy from renewable sources such as wind, and solar, and contributing to the company's significant carbon sequestration efforts through its Afforestation Programme.

The Board establishes the Environment Health & Safety (EHS) objectives, which guide the creation of the corporate strategy aimed at achieving these aims. Following this, each Division formulates its own plan, which informs the annual EHS strategy for each unit, ensuring alignment with the overarching corporate and divisional plans. The EHS goals and benchmarks stem from both internal and external considerations, are quantified, and matched with suitable indicators that reflect the comprehensive EHS Policy. The senior leadership of ITC & ITD is dedicated to integrating EHS considerations into all strategic planning and decision-making processes. The organization publicly shares its EHS performance and goals in its sustainability report, which adheres to the most recent Global Reporting Initiative Standards (GRI) and is accessible on its website. Moreover, the Senior Management has issued guidelines for environmental governance and ensured sufficient resources for environmental policy implementation. Ongoing environmental enhancements are achieved through regular evaluations of the aspect-impact for Operational Controls and Management Programs, setting objectives and targets across all departments and levels.

At the ITC Ranjangaon factory, the top management integrates safety considerations into the business strategy through various methods, following a structure that begins with the EHS Policy, progresses to the EHS System, and culminates in a culture driven by EHS values. At ITD Ranjangaon, a top-down approach to safety is championed, starting with the EHS policy and extending through systems and culture, led by the General Manager and supported throughout the organization, from department heads to external contractors.

I. Implementing ITC EHS Policy & Establishing Defined EHS Goals:

At ITD Ranjangaon, we set safety objectives that are in harmony with the company's broader mission and vision. Unit sets safety objectives in line with the company's overarching goals. At the beginning of each year, the Divisional Management Committee underscores the significance of safety. The senior leadership evaluates the objectives for the EHS and sustainability plan, deliberating on the upcoming year's initiatives. Through regular monthly meetings, unit leaders assess the EHS and sustainability outcomes, focusing on areas such as training, goals, adherence to legal standards, and the execution of remedial measures following plant inspections and internal audits.

3. Employees Participation and involvement in EHS Matter

Embedding Safety in Core Values

Our establishment adheres to the EHS guidelines set by ITC and the directives of the Factories Act of 1948, forming EHS committees that encompass representatives from both management and the workforce. The Factory Head leads the Central EHS Committee, which includes an equal representation of management and staff, with the responsibility of enacting the EHS policy at the unit level through quarterly meetings. These meetings are scheduled in advance, with recorded attendance and disseminated minutes to ensure transparency and public knowledge. Similarly, the Departmental EHS meetings, presided over by the Department Head, engage supervisors and staff members to



deliberate on EHS matters and expedite resolutions to previously raised issues.

Our commitment to EHS goes beyond the obligatory gatherings, fostering a culture of proactive engagement throughout the facility. The Hazard Spotting program encourages staff to identify and report potential risks using either a paper form or a digital application equipped with QR codes, thus enabling timely intervention and preventive action. This opportunity is also extended to visitors, allowing them to contribute to our safety efforts. All submissions are meticulously evaluated, and the efficacy of the resultant actions is thoroughly verified.

At ITD Ranjangaon, safety is woven into the very fabric of our organizational ethos and daily practices, nurturing an atmosphere where every employee, from the ground up, is acutely aware of and committed to safety. Our adherence to a Behavioural-based Safety System (BBS) is complemented by thorough safety culture evaluations, encompassing educational programs, consistent scrutiny via Management Review meetings (MRM), and targeted initiatives like 'SUSA'. Such a strategy guarantees the elevation and consistent application of safety measures across the board.

In addition, we observe significant safety-related events such as National Road Safety Month, National Safety Day and World Environment Day, as well as Electrical Safety Week and Fire Services Day & National Energy Conservation Day engaging our plant's vast employee base in these observances. We celebrate the dedication, involvement, and proactive involvement of our workforce and service providers. Regular assessment of the safety culture is imperative for measuring an organization's dedication to maintaining a secure workplace. This evaluation is instrumental in identifying potential safety risks and enacting preventative strategies to protect both our facilities and personnel. Prioritizing compliance with safety standards not only fulfils legal obligations but also bolsters operational efficiency and curtails costs related to business activities.

Establishing Safety Metrics: The Division sets up critical safety-oriented key performance indicators (KPIs), encompassing proactive assessments such as Unsafe Acts, Unsafe Conditions, SUSA (Safe and Unsafe Acts), Safety Suggestions,

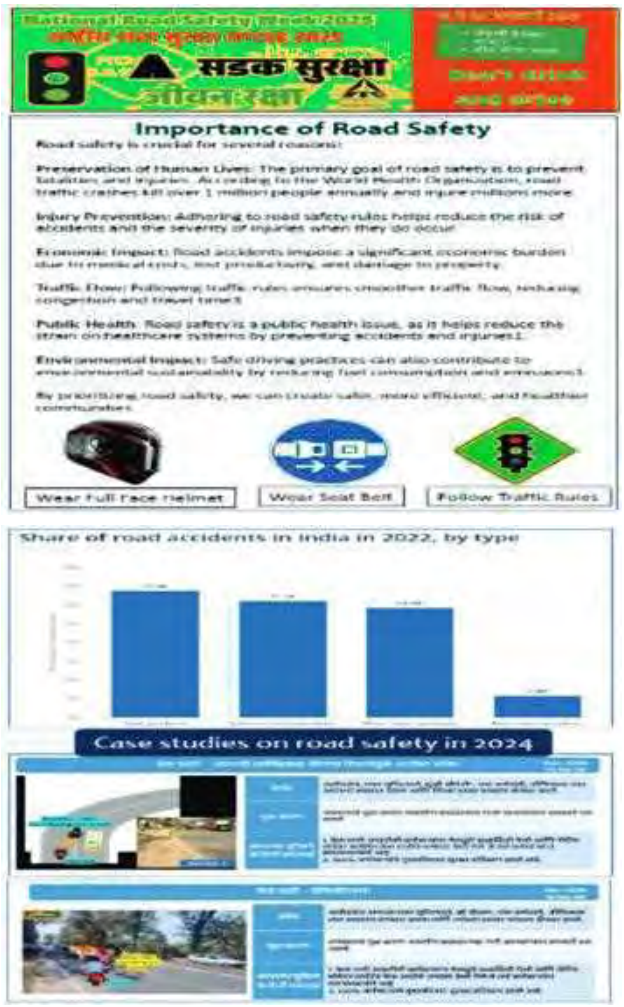






Safety DOJO models have been developed for training in areas such as Machine Guarding, Lockout/Tagout (LOTO), Height Safety & Ergonomics, Eye Protection, and Waste Management.

Scheduled Planned Job Observations, and EHS (Environmental, Health, and Safety) training initiatives. These KPIs undergo regular scrutiny to assess progress and identify areas for improvement. The General Manager oversees the monthly Business Performance Review (BPR) sessions, during which these KPIs are thoroughly examined. Specialized teams are tasked with the management of these KPIs to enhance their influence and effectiveness.



Safety Bulletin published during National Road Safety with last year case studies, accident statistics & awareness message.





Defensive driving training conducted by third party & Traffic police Ranjangaon





Quiz conducted on road safety & Four-wheeler Simulator training arranged



Work station activity conducted on BBS during safety week.



Safety DOJO room inaugurated and information given all employees.



Drawing & Essay competition conducted during National Safety Week.



Nukkad Natak on Home Safety, Electrical Safety, Road Safety during Family Function



Mental Stress and Fatigue Management Training During Road Safety Month for Operators and Drivers.



Session on Aids Awareness b Company Doctor during World Aids Day.



CEHS Committee members taking shop floor EHS Awareness



Risk Assessment by Managers to shop floor employees









Suraksha Sankalp Campaign, held in November 2024, featured various competitions such as the Safety Quiz, Master in Hazard Hunt & Risk Detection, My Machine, My Area, My Safety Excellence Score, and Guardian of Safety.







Tree plantation activities were carried out at the factory, and SeedBalls were distributed to 700 employees. Additionally, a quiz, a "Best Out of Waste" competition, and a drawing contest were organized to celebrate World Environment Day.





Cross-functional Teams (CFT) Collaboration for EHS Audits, Inspections

The unit promotes interdepartmental cooperation, involving teams from operations, maintenance, security, and human resources, to conduct risk management and embed safety measures into different business facets. It has equipped internal auditors with training from accredited bodies like DNV, NFPA, LPA, etc. These skilled individuals, including employees and managers, are tasked with executing departmental and process-specific EHS audits regularly, following a timetable approved by the General Manager.

Training & Education, Rewards & Recognition:

This department is committed to the continuous provision of educational and training initiatives for all staff tiers, with the objective of enhancing safety awareness and adherence to established safety standards and protocols. A detailed training framework is in place, pinpointing the exact training requisites, encompassing EHS Orientation, EHS Refresher Courses, Practical EHS Training, Fire Hazard Training, Electrical Hazard Prevention, Traffic Safety, Safety Beyond the Workplace, Domestic Safety Education (inclusive of LPG handling), Emergency First Response, Introduction to Emerging Technologies, and updates on new safety regulations. In parallel, the department implements a system of rewards and recognition to honor staff members who make significant contributions in areas such as continuous improvement (kaizen), workplace organization (5S), maintenance of premises, and proposing safety enhancements





Reward and Recognition for Best Safety Suggestions Hazard and Hunt Team Housekeeping & 5S Competition Best Safety Stories

Safety Training at ITD Pune team in action



Employee engage in Extinguishing Fire



First Aider engaged in resuing the victim



Fire Hydrant Operation Training



Off the Job Safety Program



Trained Fire Fighters engage in Extinguishing Fire



Cleaning Equipment (Machine) Training



Extinguisher Operation Training



MHE Safety Training by OEM Engineer (Genie, GR-20)

4. Implementation of the recommendations of studies, audits, committees, etc.

At the ITD Ranjangaon facility, we've established a robust and all-encompassing safety audit system that ensures our commitment to continual enhancement, fostering a safer plant environment, a healthier workforce, and eco-friendly products. Biannual internal audits are conducted in alignment with the ISO 14001/45001 standards for Environmental Management and Occupational Health & Safety. The management representative proactively disseminates the audit agenda and timetable to all Heads of Department. Accompanying this, a summary of audit coverage, responsibilities, and deadlines is distributed and subsequently reviewed in the ISO MR Review meetings. Following the departmental resolution of audit points, the internal auditor collaborates with the respective department to confirm the effectiveness of the actions taken. In addition, bi-monthly internal EHS Audits are performed in accordance with ITC Corporate EHS protocols by a multidisciplinary team comprising Department managers and Engineering personnel. These audits are organized via ITC's digital inspection tool, ensuring a systematic approach. Findings from these audits are compiled and addressed prior to the corporate audit. Moreover, the Unit facility regularly conducts a Fire safety audit on a monthly basis, overseen by the security team.

Additionally, audits spanning across different units are conducted every quarter. In conclusion, an annual audit is performed by the Corporate Environmental, Health, and Safety (EHS) team. This process is executed by a cadre of skilled and certified auditors. Scores from these audits are assigned based on the corporate EHS standards. The resulting action plan is then examined during the Central Safety Committee Meeting and the findings are communicated back to the Corporate EHS on a quarterly basis. Here, we showcase some of the enacted suggestions from the audits and committees for illustrative purposes:-

1. Improvement in Risk assessment System by incorporating Residual risk which is done in Gensuite EHS Digital application accordingly risk assessment of all areas has been incorporated in Application with residual Risk.
2. Quarterly EHS bulletin on EHS to make all employees aware on EHS related updates and what unit specifically doing on various EHS parameter including initiatives.
3. Engaging employees on EHS subject through further strengthening toolbox meetings and on-the-job training on emergency handling equipment.
4. Post assessment system strengthening through online e-learning modules on EHS training.

5 Systems strengthening to improve reporting of near miss incidents through various communication forums.

6 Incorporating EHS requirements and assessment during recruitment process at unit level

7 Improving workplace ergonomics by conducting ergonomic study through experts and taking actions accordingly

8 Incorporation of Stress management in Periodic medical examination of all employees and strengthening programs and initiatives for the physical fitness of employees.

9 Improvement in secondary containment for Diesel Day tanks for DG sets.

10 Strengthening EHS Inspections of Portable tools and developing a system of proper tagging.

11 Project area Safety improvements through system of Inspections, Training and Risk assessment.

12 Improvement in Labeling of Equipment's like air receivers, MHEs, pipelines. (reflective tape in al MHE).

13 Use of Al Based cameras for MHE for pedestrian detection and use of Bio metric access control of MHE

14 Strengthening of Vehicle Safety by incorporating vehicle checklist at Material gate.

15 Emergency switches provided with standard sticker.

16 Pressure Gauge changed and optimum range marked.

17 SCBA (Self Contained Breathing Apparatus) video and training ensured.

18 All Eyewash station provided with auto opening of dust flaps during use, same is incorporated in the inspection checklist.

19 Confined space identification signage improvement done,

20 Unit had incorporated Safe tag system for scaffolding and unit have now 4 certified and trained scaffolding inspectors at site.

Figure : Snaps of implementation post EHS Audits





All MHE marking with reflective take and SWL



SWP labelling of all pressure vessels



SCABA Training by OEM to Core Emergency Team



All eyewash station provided with dust flaps to prevent clogging of nozzles



All area with pipelines above floor covered with flat surface and hazard marking done.



All Emergency stop switch with proper labelling done



All pipelines provided with Directional arrows.



All confined spaces identified with proper signage displayed.



Day tank Dyke Volume increase to contain all spillage in case of failure



System of Inspection and tagging of Scaffolds for safe Use.



System of Inspection of all emergency handling, PPES portable equipment with QR code and tagging.

5. Special efforts and approaches to SHE and significant achievements (tangible and non-tangible);

ITD Ranjangaon has made significant investments in cutting-edge systems to ensure workplace safety and security, aligning with our Environmental, Health, and Safety (EHS) goals and the ongoing pursuit of excellence. These state-of-the-art measures reflect our commitment to fostering a protective environment for our employees while continuously enhancing our operational standards. Through these advancements, we demonstrate our dedication to not only meeting but exceeding industry benchmarks for safety and continuous improvement.





Work place Ergonomics Improvement- Ergonomic study based on ISO standard
Introduction of Drum Handling Trolley based on Ergonomic study report





Strengthening of Emergency Preparedness Response Provisions at Site



AED : designed to provide Immediate medical aid in Golden Hours till Victim reaches Hospital.



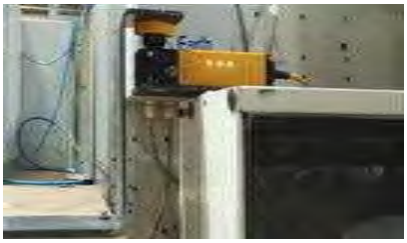
Scoop Stretcher: safely transferring an injured person without exacerbating the injury



Emergency Evacuation Chair: For safe stairway exit of the disabled, pregnant, or injured.



Safety mat for the strapping machine: seamless integration to operations | restrict access during operation





GDX6 : Dead man's Switch | RFID – Coded safety Interlocks *prevent override | control supervision are maintained during*

Working at Height Safety Improvement





CEHS Approved Standard Scaffolding with Safety Tags with Trained and certified Scaffolding erector (30) and Inspector (4)





Implemented lifeline system in Scrap Yard, WMS Scrap, LG Dock, and OCM Dock.

6. SHE management, its linkages with Key Result Areas and outcomes;

The Chief Executive Officer (CEO) of the company holds the responsibility for the creation, execution, maintenance, and continuous improvement of the Environmental, Health, and Safety (EHS) Management Systems, as well as the Health, Safety, and Environment (HSE) Policy within ITC Limited. This includes:

1. Delegating duties and responsibilities to the Factory Manager at the factory level.
2. The Factory Manager leads the Unit EHS Organization and is responsible for the creation, execution, maintenance, and continuous improvement of the EHS Management System and HSE Policy within their respective factory.
3. Subsequently, the Factory Manager distributes EHS responsibilities across all levels of the organization through a formal written document, which encompasses:
   a. Every department within the organization.
   b. Members of the Central EHS Committee.
   c. Members of the Emergency Response Team.

This structured approach ensures a clear chain of command and accountability within the company's EHS framework.

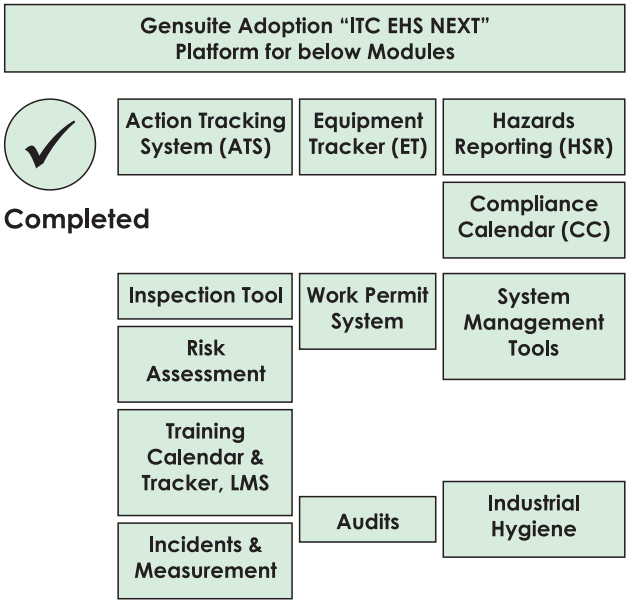
In ITC, Environmental Health and Safety (EHS) is integral to the Key Result Areas (KRA) for all Line Managers. The initiative is propelled by these managers while receiving support from the EHS

department. Adhering to the standards of QMS, EMS, OHSAS, SA8000, and ITC's own EHS protocols, each department has established comprehensive procedures to fulfil EHS goals. Specific EHS duties are designated to line managers, who, at the onset of every fiscal year, review and consent to these responsibilities. Subsequently, they devise a strategic plan to carry out EHS-related tasks, which includes:

- Encouraging employee engagement in proposing safety improvements,
- Conducting hazard identification tours,
- Participating in risk assessment and mitigation,
- Evaluating and addressing environmental impacts,
- Ensuring remedial measures for critical risks and environmental concerns,
- Disseminating EHS aims to the workforce,
- And regularly inspecting safety equipment and maintaining pertinent documentation.

ITD Ranjangaon is advancing on a digital trajectory in harmony with the ITC Chairman's blueprint for the ITC Next Strategy. The EHS sector has been fully integrated into this initiative. An all-encompassing digital platform has been established named as ITC EHS NEXT Platform, actively engaging all employees to pinpoint potential hazards and offer suggestions within the manufacturing zone. These identified risks or proposals are then forwarded to the designated supervisors for both corrective and preventive measures through the same digital system. Upon addressing the identified risks, updates are made on the platform, and the individual who reported the hazard receives a notification about the resolution.

Gensuite Adoption "ITC EHS NEXT" Platform for below Modules



- The Dashboard provides visibility for all logged hazards and recommendations, which are ultimately assessed by the EHS manager. The process of hazard identification and the status of subsequent actions are regular topics in senior review meetings, ensuring that corrective measures are implemented and validated. Apart from Hazard and Suggestion reporting on Digital Platform
- Incorporated Equipment EHS related Inspection by simply scanning the QR code on the equipment and doing Inspection.
- Started training of Employees through e-learning modules on this platform
- Started use of Digital tool for Trend analysis of data w.r.t EHS Inspections, Hazards and suggestion reported, Near miss incidents, Incident investigation and training plan accordingly.
- Incorporated Industrial Hygiene Inspections like – Ventilation survey, Illumination Survey, Work zone dust monitoring on Gensuite EHS Platform and follow up systems.
- Incorporated EHS Training Tracker and training calendar and logging of Training in EHS Gensuite application.
- Made Multi Gas Detector with motion sensors and real time emergency alert at Emergency control room.
- Work permit Issuing through online platform.
- Incorporated CCTV Video analytics for EHS related violation real time monitoring and alert generation to person doing violation w.r.t Height Safety, PPES usage, aisles blocking, Operating machine without guard, Fire detection etc.
- Evaluated MHE's for Increased safety, and Installed of Biometric sensors, Visual flashers for increased alert etc., Wireless Fork view camera for Rack placement of load for MHEs and AI based Pedestrian detection at the rear of MHE and generating alarm to the operator.

CCTV Safety Data Analytics





Highest User activity Among all factories in ITD-926023(2nd-19763)









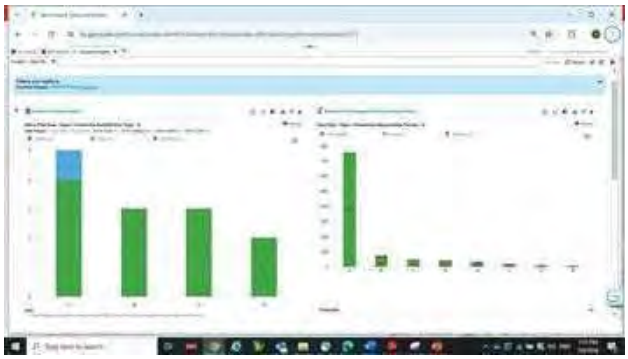
Biometric Access control and Wireless fork view cameras for MHEs



Use of IoT for Workplace activity – Confined Space Safety and Working at Height Safety, Lone working



Multi Gas Detector with Cellular network connected with real time monitoring



EHS Module yearly Dashboard on EHS system related Compliance

The ITD Ranjangaon facility has not only installed a 700KWp Solar Power Plant but is also in the process of adding an additional 2 MW rooftop solar installation to align with the ambitious goals of the Sustainability 2.0 framework by ITC. This framework aims for a complete transition to renewable electrical energy and a 50% cut in Greenhouse Gas emissions from the levels of 2018-19 by the mid-21st century.

The Ranjangaon facility is committed to generating value for all stakeholders, staying true to ITC's core principle of putting the Nation First. In line with ITC's Mission Sunehra Kal, the plant has initiated the scientific management of local waste, with community involvement, to significantly reduce landfill use, enhance cleanliness and hygiene in the surrounding areas, ensure thorough segregation at the source, and repurpose waste as a valuable resource.

The Ranjangaon facility of ITD has consistently been at the forefront of achieving the company's Environmental, Health, and Safety (EHS) goals, maintaining a dynamic approach. Our commitment is unwavering in our continuous endeavour to innovate customer-centric products, ensuring excellence in performance, and generating value for every stakeholder. This dedication aligns with our expansive vision of "SabSathBadhein."

***

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Tel.: 022 44002800 - Email: admin@nsc.org.in - Website: https:\\nsc.org.in

MCGM PAP Housing Project - Shapoorji Pallonji & Co. Pvt. Ltd. Client: East Pune Realty LLP, Mumbai

(Construction Sector - Group A – Sarvashreshtha Suraksha Puraskar – 2024 Award)



1.0 Shapoorji Pallonji and Company Private Limited

Building a Legacy of Excellence Since 1865

Shapoorji Pallonji and Company Private Limited (SPCPL) is one of India's most iconic and enduring construction and engineering firms. Established in 1865, the company has grown into a global conglomerate with operations in over 60 countries. As the flagship company of the Shapoorji Pallonji Group, SPCPL carries forward a legacy built on trust, quality, and a relentless pursuit of excellence.

Headquartered in Mumbai, SPCPL is renowned for delivering complex and large-scale projects across various sectors such as real estate, commercial buildings, infrastructure, industrial facilities, water treatment, energy, and oil & gas. The company has played a significant role in shaping India's urban landscape, with a portfolio that includes landmarks like the Reserve Bank of India building, the Bombay Stock Exchange, and the iconic Taj Mahal Palace Hotel extension.

Over the decades, SPCPL has also Established a strong global presence, undertaking projects in the Middle East, Africa, and South Asia. Its commitment to international quality standards, sustainability, and innovation has earned it a reputation for reliability and excellence. The company is known for integrating cutting-edge construction technology, meticulous project management, and sustainable building practices into its operations.

With a strong workforce of over 40,000 employees and a proven track record of delivering challenging projects on time and within budget, SPCPL continues to be a leader in the construction and engineering domain. It emphasizes values such as integrity, customer-centricity, and social responsibility, contributing actively to community development and environmental stewardship.

In recent years, the company has expanded its footprint in real estate through Shapoorji Pallonji Real Estate, delivering premium residential and commercial projects across major Indian cities. Its diversified business interests also include infrastructure development, EPC services, and facility management.

For over 150 years, Shapoorji Pallonji and Company Private Limited has stood as a symbol of trust, engineering brilliance, and visionary leadership—building not just structures, but lasting relationships and sustainable futures.

1.1 Certifications:

- **ISO 9001:2015:** This certification ensures that SPCL's quality management system meets international standards, focusing on consistent quality and customer satisfaction.
- **ISO 14001:2015:** This certification demonstrates SPCL's commitment to environmental management, ensuring that their operations are environmentally responsible.
- **ISO 45001:2018:** This certification focuses on occupational health and safety, ensuring a safe and healthy work environment for employees.

1.2 Background of site



SN	Clause	Description
A	Project Name	Mass Housing Residential MCGM-PAP Project, Mulund (E), Mumbai
B	Client	East Pune Realty
C	Structural Consultant	Dr. Kelkar Designs Pvt. Ltd
D	Architect	The Design Studio
E	MEP Consultant	ARKK Consulting Pvt. Ltd
F	Location of Work	Mulund (E), Mumbai
G	Type of Contract	Cost Plus Project
H	Scope of works	➢ Civil: Shell & Core ➢ MEP ➢ Finishing
I	Activity at Project site	➢ Civil activity, MEP & Finishing activity.
G	Total Build up	**4.2 Million Sq. Feet**
H	No Of Tower	05
I	No of Floors	Tower 1 to Tower 4 :-G+22 Tower 5:-G+36
J	Total Staff	SPCL-125
		NMR-96
K	HSE Staff	Total-12

"The EPR Mulund Mass Housing Project is a transformative initiative to provide sustainable and quality housing under MCGM-PAP scheme."

The Mass Housing Residential MCGM-PAP Project, located in Mulund (E), Mumbai, represents a significant initiative in urban development, focusing on delivering quality housing solutions. The project is managed by East Pune Realty LLP with project management consultancy provided by Tata Consulting Engineers (TCE). The main contractor responsible for executing the project is Shapoorji Pallonji and Company Private Limited (SPCPL).

This ambitious project operates under a cost-plus model, with a total contract value of ₹1258 core (excluding tax). The project commenced on 1st June 2023 and is scheduled for completion by 30th September 2025 for Towers 1 to 4 (G+22 floors) and by 31st May 2026 for Tower 5 (G+33 floors), which is yet to start. The total built-up area of the project is 42.65 lakh square feet.

Project Background

The MCGM mass housing project in Mulund East aims to provide tenements for Project Affected People (PAPs) due to public purpose projects, specifically those affected by infrastructure developments in the area. This project, implemented through the Slum Rehabilitation Authority (SRA), involves constructing new tenements with a standard size of 300 sq ft (27.88 sq. mt) to rehabilitate PAPs. The project also includes the construction of society office and welfare center as per SRA norms.

2. Commitment of the top management to HSE

At Shapoorji Pallonji and Company Private Limited (SPCPL), Health, Safety, and Environment (HSE) is a core organizational value, deeply embedded in the company's culture and strategic decision-making. The top management demonstrates a strong and visible commitment to ensuring the safety and well-being of all employees, contractors, stakeholders, and the communities where the company operates.

Leadership at SPCPL believes that every incident is preventable, and thus promotes a "Zero Harm" philosophy across all its project sites and operations. Senior management actively drives HSE initiatives by setting clear policies, allocating necessary resources, and continuously monitoring performance against global safety standards.

Key aspects of their HSE commitment include:

- **Leadership-Driven Safety Culture:** Senior executives lead by example, conducting regular site visits, safety audits, and reviews to reinforce safety protocols and encourage a proactive safety mindset at all levels.
- **Robust HSE Policy & Framework:** The company has implemented a comprehensive HSE management system aligned with international standards such as ISO 45001 (Occupational Health and Safety) and ISO 14001 (Environmental Management). This ensures consistency and continuous improvement in safety performance.
- **Training & Capacity Building:** SPCPL emphasizes regular safety training, toolbox talks, and awareness programs to empower its workforce with the knowledge and tools required to work safely and responsibly.

- **Monitoring, Auditing & Reporting:** HSE performance is tracked through regular internal audits, incident investigations, and safety KPIs. Lessons learned are shared across projects to prevent recurrence and promote a learning culture.
- **Sustainability & Environmental Responsibility:** The company is committed to minimizing environmental impact through efficient resource utilization, pollution control measures, and green construction practices.





By placing HSE at the forefront of its operations, SPCPL ensures a safe, healthy, and sustainable working environment, reflecting its unwavering commitment to people, performance, and the planet.

3. Employees' participation and involvement in HSE matters

At **Shapoorji Pallonji and Company Private Limited** (SPCPL), employee participation in **Safety, Health, and Environment** (HSE) matters is a fundamental pillar of the company's safety culture. SPCPL strongly believes that the active involvement of employees at all levels is essential to achieving its vision of a safe and sustainable work environment.



The company promotes a **collaborative safety culture** where every individual—from top management to site workers—is empowered to take ownership of HSE responsibilities. This inclusive approach enhances awareness, encourages proactive behavior, and helps in identifying and mitigating risks more effectively.

Key Initiatives Supporting Employee Involvement in HSE:

- **Safety Committees and Toolbox Talks:** Regular safety meetings and toolbox talks are conducted at project sites, where employees are encouraged to share feedback, discuss safety observations, and suggest improvements.
- **Behavior-Based Safety Programs:** Employees participate in programs that focus on identifying unsafe behaviors and promoting safe work practices through peer-to-peer observation and positive reinforcement.
- **Training and Awareness Campaigns:** Continuous HSE training, induction sessions for new workers, and refresher HSE courses are provided to ensure all employees understand their roles in maintaining safety and environmental standards.
- **Recognition and Reward Systems:** SPCPL motivates its workforce by recognizing individuals and teams who demonstrate exceptional commitment to safety. Awards, certifications, and public appreciation help foster a strong safety-first attitude.
- **Incident Reporting and Learning Culture:** Employees are encouraged to report near-misses, unsafe conditions, and incidents without fear of retribution. This open communication fosters a learning environment where continuous improvement is prioritized.
- **Suggestion Schemes and Feedback Loops:** The company has mechanisms for employees to contribute ideas related to HSE improvements. Constructive suggestions are reviewed and, when feasible, implemented across sites.

Through these efforts, SPCPL ensures that HSE is not just a management responsibility but a **shared commitment** across the organization. Employees become active partners in building a safe, healthy, and environmentally responsible workplace.















PTW SYSTEMS = 2843 Nos issued & closed

- General work Permit - 642 nos.
- Hot Work - 536 nos.
- Excavation permit - 30 nos.
- Lifting Permit - 538 nos.
- Night work permit - 532 nos.
- Piling work permit - 00 nos.
- Work at Height - 565 nos.
- Confined Space - 00 nos.

Active work permit at site

Standard work Procedure

Preparation of WMS & Risk Assessment by contractor Task Engineer/Safety Personnel

↓

First initiator of PTW by subcontractor Area In-charge

↓

Final approval by subcontractor Construction Manager

↓

Evaluation by Contractor EHSM, [Ensuring : Risk assessment, TBT, Trainings, safety facility system]

↓

Permit issuing

↓

Work completion

↓

Closing of the work permit by construction manager/EHS Manager









4. Implementation of Recommendations from Studies, Audits, and Committees

At **Shapoorji Pallonji and Company Private Limited (SPCPL)**, the implementation of recommendations arising from safety studies, internal and external audits, and HSE committees is a key element in strengthening the company's Safety, Health, and Environmental (HSE) performance.

SPCPL adopts a systematic and action-oriented approach to ensure that all observations and recommendations are effectively addressed and translated into measurable improvements at the ground level.

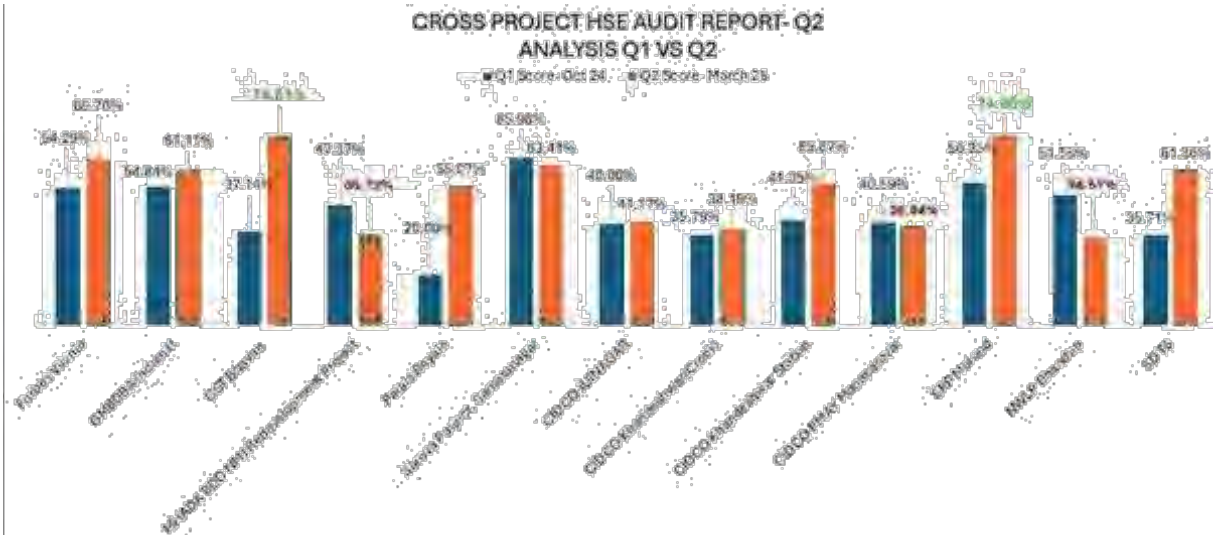
Key Features of the Implementation Process:

- **Structured Follow-up Mechanism:** After every audit or committee review, findings are categorized based on severity and impact. Action plans are developed with clear timelines and responsibilities assigned to relevant personnel.
- **Management Oversight:** Senior management regularly reviews the status of recommendations to ensure timely and effective implementation. This top-level oversight reinforces accountability across all functions and project sites.
- **Cross-functional Coordination:** HSE teams work in close coordination with project management, engineering, and operations teams to integrate recommended changes into daily workflows, systems, and procedures.
- **Use of Technology:** SPCPL utilizes digital tools and dashboards to track progress, document compliance, and generate real-time reports on the implementation status of recommendations.
- **Feedback and Continuous Improvement:** Once actions are taken, the effectiveness of the implementation is assessed. Lessons learned are shared across departments and projects, contributing to an organizational culture of continuous improvement.
- **Training and Awareness:** If recommendations involve procedural or behavioral changes, employees are retrained to ensure they understand and adhere to the new safety standards or operational practices.

By consistently acting on recommendations from audits, studies, and committees, SPCPL ensures that gaps are closed proactively, risks are mitigated, and HSE performance is elevated across all levels of the organization. This commitment to learning and improvement is central to SPCPL's pursuit of operational excellence and sustainability.







5.0 Special efforts and approaches to HSE and significant achievement

At **Shapoorji Pallonji and Company Private Limited (SPCPL)**, Safety, Health, and Environment (HSE) is more than a compliance requirement—it is a deeply ingrained organizational priority. The company has adopted several innovative and proactive approaches to elevate its HSE standards and create a culture of prevention, accountability, and continuous improvement.

Special Efforts and Unique Approaches:

- **"Zero Harm" Vision:** SPCPL promotes a strong safety culture guided by its "Zero Harm" vision, focusing on injury-free workplaces, environmental sustainability, and the well-being of all personnel.
- **Behavior-Based Safety (BBS):** This approach emphasizes positive behavior reinforcement, encouraging workers to take personal responsibility for their own safety and that of others.
- **Rigorous Training Programs:** Regular and customized training modules, mock drills, and scenario-based exercises are conducted to improve awareness and emergency preparedness at all levels.
- **Green Construction Practices:** Environmental protection is addressed through eco-friendly construction methods, efficient waste management systems, water recycling, and energy-efficient building designs.













Significant HSE Achievements:

- **Millions of Safe Man-Hours:** SPCPL has successfully completed 7 million safe man hours at Mass housing projects, Mulund, Mumbai.
- **HSE Awards and Recognition:** The company has received multiple national and international safety awards, including recognitions from organizations such as the British Safety Council and National Safety Council of India.
- **ISO Certifications:** SPCPL holds certifications such as **ISO 45001** (Occupational Health & Safety Management) and **ISO 14001** (Environmental Management), affirming its commitment to global standards.
- **Sustainability and Green Building Ratings:** Many SPCPL projects have earned **LEED and IGBC certifications**, highlighting the company's commitment to environmental sustainability.

Through these special initiatives and achievements, SPCPL continues to set industry benchmarks in HSE performance—delivering not just structures, but safe and sustainable environments.

6.0 HSE management, its linkages with Key Result Areas and outcomes

At **Shapoorji Pallonji and Company Private Limited (SPCPL), Safety, Health, and Environment (HSE) Management** is an integral part of the company's operational and strategic framework. The organization is committed to maintaining world-class HSE standards and has adopted a structured, proactive approach to embed HSE responsibilities across all functions and levels of the workforce.

HSE Management Framework:

SPCPL's HSE Management System is aligned with international standards such as **ISO 45001** and **ISO 14001**, and is built on key pillars like hazard identification, risk assessment, training, legal compliance, performance monitoring, and continuous improvement. The company implements a clear **"Zero Harm" vision** that reflects its commitment to protecting people, property, and the environment.

Linkages with Key Result Areas (KRAs):

To drive accountability and build a safety-driven culture, SPCPL effectively integrates HSE goals into the **Key Result Areas (KRAs)** of employees. This includes:

- **Project Managers & Engineers:** KRAs include achieving safety milestones, reducing incidents, ensuring timely closure of audit observations, and conducting regular safety walks and toolbox talks.
- **Supervisors & Site Staff:** Focused on compliance with safety procedures, reporting near-misses, participating in safety drills, and engaging in HSE awareness programs.
- **Senior Management:** Responsible for strategic HSE leadership, review of HSE performance metrics, and ensuring policy implementation across all projects.

HSE metrics such as **incident rates, audit scores, training completion, waste reduction,** and **resource efficiency** are tracked and factored into performance appraisals and reward systems.

7.0 Use of Advanced Digital Technologies to Enhance Safety

Shapoorji Pallonji and Company Private Limited (SPCPL) is at the forefront of adopting **advanced digital technologies** to elevate safety standards across its construction, infrastructure, and industrial projects. Recognizing the transformative potential of technology in reducing risks and enhancing real-time visibility, the company has integrated a wide range of digital tools into its **Safety, Health, and Environment (HSE)** management systems.

- SPCPL uses **VR-based training modules** to simulate high-risk construction scenarios (e.g., scaffold collapse, fire evacuation, crane operation)
- This allows workers to experience and learn safe responses in a **controlled, risk-free environment**
- CCTV cameras are deployed to capture live aerial footage of large project sites, helping safety officers monitor **difficult-to-reach or hazardous zones**.

In its ongoing pursuit of excellence in **Safety, Health, and Environment (HSE), Shapoorji Pallonji and Company Private Limited (SPCPL)** has developed and implemented the **SPACE App**—a cutting-edge digital platform designed to revolutionize on-site safety management.

SPACE stands for **Shapoorji Pallonji's Application for Construction Excellence**, and it represents a major technological stride toward real-time, data-driven safety operations across the company's project sites.

Key Features of the SPACE App:

- **Digital Safety Inspections & Audits:** The app enables supervisors and safety officers to conduct paperless inspections and audits, capturing observations, uploading photos, and assigning corrective actions instantly.
- **Real-Time Incident & Near-Miss Reporting:** Workers can report incidents, unsafe conditions, or near-misses through the app, ensuring swift response and immediate escalation to concerned authorities.













- **Action Tracking & Closure:** Corrective actions are digitally tracked until closure, improving accountability and ensuring that no safety recommendation is overlooked.
- **Data Analytics & Dashboards:** The app provides interactive dashboards for analyzing safety trends, high-risk areas, compliance levels, and KPI performance, supporting better decision-making.
- **Geo-Tagged Reporting:** With geo-tagging and timestamp features, the app ensures transparency and accuracy in site-based safety reports and audits.
- **Integration with Safety KPIs:** The SPACE app is linked to HSE KPIs and employee KRAs, reinforcing individual responsibility and contributing to overall safety goals.

Impact and Benefits:

- **Enhanced Safety Culture:** The SPACE app promotes a proactive safety mindset and strengthens the "safety-first" culture across all levels of the organization.
- **Faster Communication & Response:** Instant data sharing and alerts improve communication and reduce the time taken to address safety issues.
- **Improved Compliance:** Automated reminders, checklists, and reporting tools ensure higher adherence to HSE protocols and statutory requirements.
- **Reduced Paperwork:** Going digital helps eliminate manual reporting, reduces errors, and streamlines safety documentation.

By launching the **SPACE App**, SPCPL has taken a significant **digital leap in safety management**, leveraging innovation to build smarter, safer, and more efficient project sites. It is a testament to the company's forward-thinking approach and its unwavering commitment to operational safety and excellence.





QR CODES OF IMPORTANT DOC –

By incorporating QR codes for site related important topics & SOP access, construction sites create a more efficient, accessible, and streamlined way for workers to engage with safety protocols, improving overall safety, compliance, and communication.

1. Easy Access to Critical Information
2. Promotes Continuous Learning
3. Reduces Paper Waste
4. Improves Safety Compliance
5. Enhanced Training and Onboarding

HSE Team



* * *

BARC Tarapur Project - L&T Ltd., HCI IC, Palghar, Maharashtra

(Construction section Group B – Sarvashreshtha Suraksha Puraskar – 2024 Award)

Background

The project for the construction of vitrified storage and control buildings at BARC Tarapur was awarded to M/s Larsen and Toubro Ltd, Heavy Civil Infrastructure IC by M/s Bhabha Atomic Research Center (BARC), DAE, Government of India and the project was incepted on September 01, 2021. Larsen and Toubro Ltd, Heavy Civil Infrastructure IC is a subsidiary of Larsen & Toubro which is an Indian multinational engaged in EPC Projects, Hi-Tech Manufacturing and Services. It operates in over 50 countries worldwide. A strong, customer-focused approach and the constant quest for top-class quality have enabled L&T to attain and sustain leadership in its major lines of business for over eight decades. We are engaged in core; high impact sectors of the economy and our integrated capabilities span the entire spectrum of 'design to delivery'. Every aspect of L&T's business is characterized by professionalism and high standards of corporate governance. Sustainability is embedded into our long-term strategy for growth. The Company's manufacturing footprint extends across eight countries in addition to India. L&T has several international offices and a supply chain that extends around the globe.

Project Details

The scope of the project centers on the construction of critical infrastructure at BARC Tarapur. The project, which began on September 1, 2021, involves high-impact infrastructure construction, including the Construction of two 100-meter-tall ventilation stacks and a 44-meter-high overhead tank. Since its inception, the project has adhered to the highest standards of safety, sustainability, and operational excellence.

Integrated Management System & Certifications

Standard	Initial Certification	Latest External Audit	Certificate Validity
ISO 45001:2018 OH&SMS	26 Mar 2010	04–05 Mar 2024 (on-site)	25 Mar 2028
ISO 14001:2015 EMS	26 Mar 2010	04–05 Mar 2024	25 Mar 2028

All recommendations from the 2024 re-certification audit were closed within 30 days and verified by follow-up review.

The audit was conducted by an internationally accredited agency and included a comprehensive evaluation of our OHS management practices. We maintain a continuous cycle of improvement through regular reviews, audits, and engagement with stakeholders. All supporting documentation is systematically maintained at project sites and remains readily available for inspection and verification.

Continual conformance is ensured through:

- Quarterly internal IMS audits (IM-24)
- Annual HQ EHS compliance audits
- Corrective-action tracking in the EHS Action Register (100% closure status published monthly).

Commitment of Top Management to EHS

At L&T Heavy Civil Infrastructure IC, our senior leadership is deeply committed to ensuring Safety, Health, and Environmental (EHS) excellence. This commitment is anchored in our "Zero Harm" mission, which envisions that every person involved in our projects should go home safe and healthy every day. The top management regularly conducts EHS strategy meetings, safety walkthroughs, and performance reviews. Safety KPIs are integrated into managerial performance assessments, and EHS goals are embedded within our organizational vision. Dedicated EHS leadership teams directly report to top executives, ensuring swift decision-making and resource allocation. Our leadership's active role reinforces a culture of safety that cascades throughout the organization.

We believe that safety is a collective responsibility, where every employee, manager, and subcontractor play a key role in fostering a culture of EHS excellence.

Involvement of Workforce

The active involvement of our workforce in EHS matters is the backbone of our safety culture. Workers are continuously engaged through structured programs like daily toolbox talks, monthly mass safety meetings, and training workshops on site-specific hazards. We promote a bottom-up safety culture through worker-led safety committees, open forums for reporting hazards, and the "Voice of Workman-Safety Marshal" initiative, allowing employees to freely express safety-related suggestions.

In addition, our monthly reward and recognition system celebrates proactive safety behaviors, encouraging peer-to-peer learning and boosting morale. Behavioral-Based Safety (BBS) programs are

in place to observe, analyze, and correct unsafe behaviors in real time, further embedding a participative safety culture on site.

Safety Audits and Implementation of Recommendations

A robust auditing mechanism forms the foundation of our safety assurance process. Internal audits are conducted periodically as per IMS Procedure IM-24 to assess compliance with applicable standards and identify improvement opportunities. These are supplemented by third-party audits from accredited ISO auditors. During the latest recertification audit conducted on 4th and 5th March 2024 at BARC Tarapur, all audit points were complied with, and recertification was achieved without any non-conformance. Post-audit action plans are developed collaboratively with site teams, and closure is ensured with documented evidence. Lessons learned from audits are shared across project sites through internal bulletins to prevent recurrence and foster continual improvement.

In addition to audit recommendations, suggestions and observations raised during Site Safety Committee meetings are diligently tracked and implemented. These meetings are chaired by the Project Manager, ensuring leadership focus and accountability. Each recommendation is assigned a deadline for implementation, and progress is reviewed in subsequent meetings. This structured approach ensures continuous engagement of committee members, enhances ownership of safety goals at all levels, and reinforces a transparent and action-driven EHS culture.

Key Result Areas (KRAs), Performance Indicators (KPIs) & Proactive Safety Achievements

Our safety performance framework is governed by IMS Procedure IM-01 – EHS Objectives, Targets & KPIs. This procedure defines both leading and lagging indicators for every L&T Heavy Civil Infrastructure IC project and links each indicator to personal FAIR appraisals. At the BARC Tarapur site, the requirements of IM-01 are visualised through a live dashboard on Shield-Web, giving real-time insight for weekly EHS Committee reviews and monthly Management Review Meetings.

- **Specific KPIs for EHS personnel** are defined annually at the **start of the financial year**.
- These include **training manhours** which are categorized under **proactive (leading) KPIs**.
- The **targets** are based on role-specific requirements and are aligned with the **EHS Strategy Plan** and **project-specific risk profiles**.

The core metrics we monitor are:

- Lost Time Injury Frequency Rate (LTIFR)
- Zero-Fatality KPI (maintained continuously)
- Near Misses reported
- Unsafe Acts / Unsafe Conditions (UA/UC) logged in Shield-Web
- Audit non-conformance closure percentage
- EHS Training man-hours
- Environmental initiatives implemented
- PPE compliance percentage

Proactive Hazard-Closure Performance (for the FY-24-25)

As part of our commitment to proactive safety management, we have consistently tracked and acted upon key leading indicators to enhance workplace safety and build a robust EHS culture. Notably, we have maintained zero fatalities, aligning with our core KPI of "Zero Harm." Over the reporting period, 10 EHS audits were conducted to assess compliance and identify improvement areas. We conducted 32 emergency mock drills to test and strengthen our site's emergency preparedness. A total of 73 executive-level EHS inspections and 36 EHS committee meetings were held to ensure thorough oversight and engagement across functions. In our efforts to promote hazard reporting and risk elimination, we successfully reported 73 near misses and documented 7,400 Unsafe Acts/Unsafe Conditions (UA/UC) through the SHIELD web platform, driving continuous hazard rectification. Additionally, a significant 60,000 EHS training man-hours were delivered, demonstrating our focus on capacity building, behavioural reinforcement, and awareness among the workforce at all levels.

All actions arising from these proactive activities are captured in the IM01-A KPI Tracking sheets and summarised monthly in the EHS Performance Report. Trend analytics generated by Shield-Web enable early identification of emerging hazards, allowing the team to deploy targeted interventions and sustain our Zero Harm Vision.

Use of Advanced Technologies

Operating inside a high-security nuclear environment required us to tailor our digital roadmap to technologies that deliver maximum safety benefit while fully respecting information-security protocols. Key deployments included:

- **Virtual Reality (VR) Induction & Task-Specific Training:** Immersive VR modules simulate high-risk scenarios such as work at height, hot work, and confined space entry. More than 12,000 trainee-hours have been completed, resulting in a documented 25□ % reduction in first-week at-risk behaviours.
- **QR-Based TPI & Asset Tracking System:** Every crane, lifting accessory, pressure vessel and electrical panel carries a unique QR tag that links to a cloud database. Supervisors can instantly verify third-party inspection (TPI) certificates, load-test data, and next-due dates, eliminating paper records and preventing the use of out-of-date equipment.
- **Shield-Web Safety Management Portal:** A secure

intranet application used to capture and analyse Unsafe Acts/Unsafe Conditions (UA/UC), near-misses, first-aid cases, environmental deviations, and weekly EHS statistics. Automated dashboards plot real-time trends and trigger email escalations whenever leading indicators exceed threshold limits.

- **Online Training-Manhour Ledger:** All classroom, VR, and on-job coaching sessions are logged digitally. The system provides a live competency matrix, ensuring that only certified personnel are assigned to specialised tasks, and simplifies evidence retrieval during audits.
- **Tower-Crane Anti-Collision & Zoning System:** Each tower crane is equipped with an anti-collision device that provides audible and visual alarms to prevent boom overlap and prohibited-zone entry.
- **Dynamometer-Based Load Tension Monitoring:** Dynamometers installed on crane hoist lines give real-time load feedback, ensuring lifts remain within rated capacities and preventing structural over-stress.

Because the facility's security directives prohibit aerial drones and AI-enabled CCTV, these technology selections give the project near-real-time visibility of critical safety information without compromising nuclear-sector confidentiality.

EHS Excellence

Our Zero Harm Mission has been successfully implemented on the BARC Tarapur project, achieving over 10 million safe man-hours without any fatalities or reportable lost-time injuries (RLTI). This achievement is the result of continuous innovation and proactive EHS measures.

Below are some of the initiatives that contributed to our exceptional EHS performance:

a) Development of a Positive Safety Culture

A positive safety culture had been developed by conducting extensive training programs, counselling sessions, EHS meetings with subcontractors and staff, workmen & staff appreciation programs, supervision, inspections, strict actions for repeated violations, etc.





b) Installation of Anti-Collision Devices on Tower Cranes.



A key safety measure on the project was the installation of anti-collision devices on tower cranes. For the anti-collision system to function effectively, it requires the installation of these devices on all tower cranes operating within the same area. Initially, we installed the devices on our own tower cranes. However, recognizing that other agencies were operating cranes in the same zone, we engaged in discussions with both the client and the other agencies to ensure that anti-collision devices were also installed on their cranes. This collaborative effort was critical to achieving a fully integrated and effective safety system, preventing potential crane collisions and ensuring safe operations across the site.

c) Rebar Scrap Utilization for Fall Prevention

Over five hundred circular openings of Diameter 1.1m were present on one of the intermediate slabs. So, for providing fall prevention arrangement we had utilized rebar scraps for making mesh arrangements. This also helped to reduce the raw material consumption at our site.



d) Anti-Vibration Hand Gloves for Worker Safety



For prevention of health hazards related to the continuous exposure of vibration by using power tools such as chipping machine, concrete vibrator machine, etc., we had provided the respective workmen with Anti-Vibration Hand gloves.

e) Biometric Vehicle Authentication System



To ensure security and prevent unauthorized vehicle operations, we introduced a biometric authentication system, enhancing site safety.

f) Cable Routing with S-Hooks and Cable Hangers



As the site is spread over a 2.5Km radius span, we needed to lay many cables to provide power to nearby blocks. Also, we found that while routing the cables, workers used to tie the same using binding wire, which damaged the outer insulation of the cables. So, we implemented 'S' hooks and cable hanger arrangements for safe routing of power cables.

g) Self-activating fire extinguisher balls



Self-activating fire extinguisher balls were provided at store and other fire prone areas.

h) Introduction of Electric Vehicle (EV) Trolleys



The implementation of electric vehicle (EV) trolleys for material handling at our site, a significant step towards improving both safety and sustainability. This new system reduces the need for manual labour, minimizing the risk of workplace injuries associated with lifting and moving heavy materials. Environmentally, the switch to EV trolleys significantly lowers our carbon footprint, as these vehicles produce zero emissions. This initiative not only supports our commitment to sustainability but also enhances the overall safety and productivity of our operations, marking a positive milestone in our ongoing efforts to create a cleaner, safer workplace.

i) Staircase System for Safe Access



We discovered that workers are uneasy while climbing the ladder, and the time it takes to reach the working platform is much longer when a ladder is used, because one worker can only use a ladder at a time, and other team members must wait until he reaches the working platform. Therefore for improving the safety of workmen we provided staircase system instead of ladder arrangement

These initiatives are only a part of the whole system that we had implemented at our project. Many other initiatives and innovations were also taken at our site for EHS excellence.

Safety Awards and Recognition

For our excellence in EHS performance we had received many internal and external awards and recognitions from the starting of our project. Few are listed below:

- **Gold Award (Sarvashreshtha Suraksha Puraskar) – National Safety Council of India (NSCI), 2024**

- **Gold Award – World Safety Organization (WSO) India, 2023**
- **Gold Award – CII Southern Region EHS Excellence Award, 2023**
- **Bronze Award – WSO India, 2022**
- **Bronze Award – CII SR-EHS Awards, 2024**
- **Appreciation Certificates from BARC for key initiatives**
- **Appreciation Certificates from BARC for achieving 5 million Safe Manhours**
- **Appreciation Certificates from BARC for achieving 10 million Safe Manhours**
- **Best Housekeeping & EHS Practices Recognition by BARC Client Leadership**

These recognitions reinforce our unwavering dedication to safety and motivate us to continue raising the bar in occupational health, Safety and environmental sustainability.

* * *

UPCOMING NSCI TRAINING PROGRAMMES SCHEDULED FROM JULY TO AUGUST 2025

Sr. No.	Programme Title	Date	Duration	Venue	Fees Per participants (Rs.) plus 18% GST
1	Occupational Health & Hygiene at Workplace	3-4 July, 2025	2 days	NSC Hqs. Navi Mumbai	• NSC Member: ₹14,300/- • Non- member: ₹16,500/-
2	Leadership Development for Safety and Health	10-11 July, 2025	2 days	Ankleshwar	• NSC Member: ₹14,300/- • Non- member: ₹16,500/-
3	Safety of Gas Cylinders in Factories and Plants	17 July, 2025	4 hrs.	Virtual	• ₹4,000/-
4	NSCI Certified Scaffold Supervisor	24-25 July, 2025	2 days	Mumbai	• NSC Member: ₹14,300/- • Non- member: ₹16,500/-
5	Workshop on Effective Accident Reporting, Investigation and Analysis	4-5 August, 2025	2 days	Mumbai	• NSC Member: ₹14,300/- • Non- member: ₹16,500/-
6	Electrical Safety - Regulations and Standards	12 August, 2025	4 hrs.	Virtual	• ₹4,000/-
7	Techniques of Hazard Identification and Risk Assessment in Industries	21-22 August, 2025	2 days	Mumbai	• NSC Member: ₹14,300/- • Non- member: ₹16,500/-
8	Safety Culture and Behavior Based Safety Management - An overview	12 August, 2025	4 hrs.	Virtual	• ₹4,000/-

For online registration visit https://nsc.org.in. Also new programmes will be posted at NSC's website from time to time



GODREJ & BOYCE MANUFACTURING COMPANY LIMITED PU01-Dhayari RMC Plant, Pune – Godrej Construction

(MSME Sector – Group A – Sarvashreshta Suraksha Puraskar – 2024 Award Winner)

1.0 Company Profile

Founded by Mr. Ardeshir Burjorji Godrej in 1897, Godrej & Boyce Mfg. Co. Ltd. (Godrej Enterprises Group) is today the flagship company of the Godrej Enterprises Group, one of India's largest privately held industrial corporations. Godrej Enterprises Group is a role model in corporate citizenship and has always upheld highest ethical standards with a clear focus on sustainable business practices. This has helped in making it one of the most trusted brands in India in the minds of customers.

Construction Business of Godrej Enterprises Group operates in three lines of businesses, a) Real-Estate Leasing, b) Construction Materials and c) Real-Estate Development.

Our all-RMC units are falls under the business, Construction Materials. RMC units are operating in Mumbai, MMR, Pune Regions with various business modules, like company operated units, asset light models, outsourcing, etc.

Construction Business is IMS Certified in accordance with ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO 5001:2018. Our concrete products are Certified Green Product from CII-Green Product & Services Council.

2.0 Process Description

To management at HPCL - MDPL is very much committed to adopt and implement best SHE practices. At MDPL, we have a well-defined, written HSE policy; reviewed and adopted every year or after any change in Process or change in Top management of the factory. It clearly states that as an integral part of our' business, we strongly believe that no work, service, or activity is so important or urgent that safety be overlooked or compromised. Safety of employees and Public protection as well as corporation assets is paramount and a way of life at HPCL-MDPL. MDPL considers that safety is one of the most important tools that enhances productivity and helps reducing national loss.

Flow of the Ready-Mix Concrete Manufacturing

A ready-mixed concrete plant (Batching Plant) wherein various materials are mixed such as crush sand, water, aggregate, fly ash and cement. The proportionate materials are automatically taken as per the batch size. The batching operator commands and controls over the entire process of batching.



Apart from the batching plant, many other essential machinery and accessories are required in the entire process like;

- Stockyard
- Loader (Material Loading Equipment)
- Conveyors
- Mixers
- Cement Silos
- Fly-ash Silos
- Screw Conveyors
- Aggregate bins/hoppers
- Admixture tank
- Weighing Plant
- Compressors
- Batch Plant Control (Operator's Cabin)
- Dust collectors (to suppress dust generation)
- Ice-crushing machine

The final concrete product prepared in the batching mixer, collected into the transit mixer (vehicle transporting the finished product) through the discharge chute and delivered to the customer. Within 3 hours, the finished product shall be delivered to the customer and transit mixer shall be emptied.

The stepwise description of the entire manufacturing process shall be as follows;

- Raw materials receipt
- Quality checks of the materials
- Storage of raw materials at stockyard
- Processing the mix design as per M10/M15/M20/M30/M40/M70, etc.
- Batching the recipe as per mix design with PLC based plant
- Collection into the transit mixer (TM)
- Transportation & delivery of finished product by TM
- Placing concrete through pumps / direct



Use of full body Safety harness for sample collection



Platform with all fall protection measures



Covered storage bins for dust controlling



Water mist system to control dust emission



Metal Tanks for Admixture storage



U/G tank for storage and control of water temp.



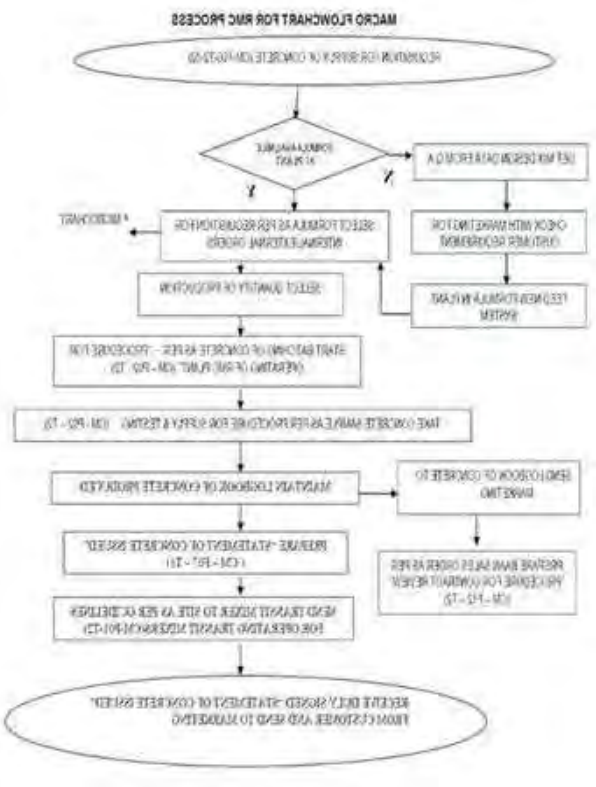
Earth moving equipment used for material shifting at Plant

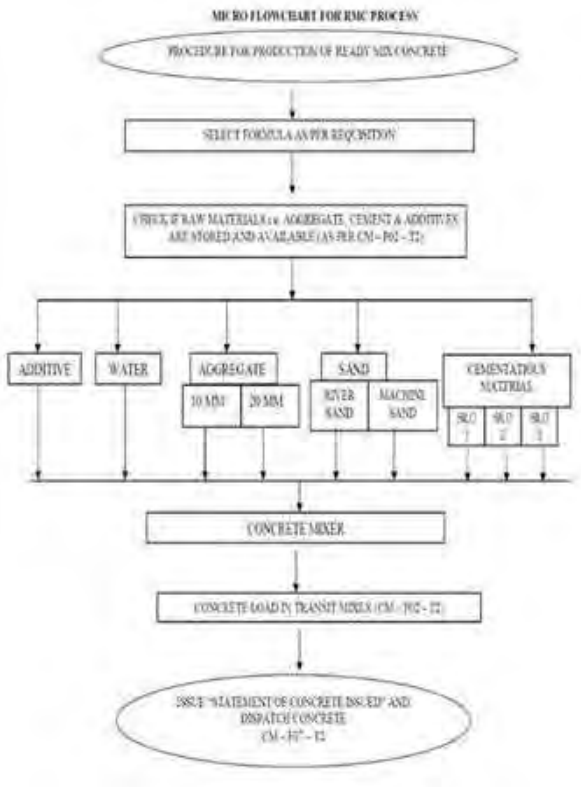


Conveyor to shift the materials at batching plant



Overall, plant operations





3.0 Safety Management System

3.1 OHS Policy

OHS goals / objective is defined as, ***"To achieve the milestone of Zero incident in the Organization."***

- Our OHS Policy is very comprehensive and clearly defining roles and responsibilities of every individual, i.e. from Business Head to Contract labour. OHS Policy directing us to manage health & safety at workplaces in a proper manner to prevent incidents and to achieve our aim of ZERO INCIDENT PERFORMANCE.
- Everyone must have one Safety - KRA or GOAL, respective department heads are ensuring the achievement of these goals and targets.
- We believe on the Concept – Safety is a line management responsibility. On this basis we have set authorities and accountabilities for every individual.
- OHS Department monitoring the OHS Performance of departments / project sites / plants on monthly basis.
- We maintained Monthly Safety Report which includes data of key safety measures. (The sample report is attached).
- Key measuring parametersdentification: 5 hazards Per Capita Per Year

Hazard identification	:	5 hazards Per Capita Per Year
Safety Meeting	:	1 Meeting Per Month Per Location
Safety Training	:	5 training hours Per Capita Per Year
Safety Kaizen	:	1 Safety kaizen Per Capita Per Year
Safety Audits	:	1 Safety Audit Per Month Per Location
B-Safe Observation	:	2 B-Safe Observations Per Capita Per Month
B-Safe Observation	:	100% Participation

- Abovementioned key parameters are monitored on monthly basis through monthly OHS Dashboard which shared with Business Head for monitoring at top level.
- Weekly safety updates are shared with DMC (Divisional Management Committee) by Safety Team.
- We have constituted safety committee wherein equal participation of management and workers & contractor representatives wherein participation of every member is must and 90% participation is acceptable.

- We have developed safety program for effective implementation and monitoring safety measures to be practices in the Plant.
- OHS targets are explained and shared with each Department Head during stakeholder expectation exercise wherein OHS team shares Safety expectations from respective departments.
- Safety performance of each department and individual is monitored and evaluated by Business Head.
- Monthly OHS Dashboard is digitized on PowerBi application which is reviewed by Business Head every month.
- Contractor deployment is carrying through stringent safety filters and awarding the contract after pre-qualification process. We are carrying out contractor's performance evaluation half-yearly to evaluate their safety.
- Best safety performing teams are recognised annually with well-structured selection criteria. Best Safety Performing RMC Plant, Best Safety Performing Project Site and Best Safety Conscious Team are the categories especially for safety performance evaluation.



3.2 Safe Operating Procedures

We have adopted the IMS (Integrated Management System) system, and apart from it, we have implemented Business Excellence EFQM Model. All our projects are IGBC approved Green Certified building.

Our i-3 RMC Plant, Ambernath RMC Plants are QCI and Green-pro Certified Plants.

- **Safety Procedures and documents**

  Based on the Business Excellence Model (EFQM) we have prepared the processes as L1, L2, L3, L4 & L5 (L – Level). Owner of the L1 and L2 processes is Business Head. These processes are related to Strategy development and deployment, Mission-Vision-Value, leadership processes, innovation and technology processes, people practice like learning & development, care & welfare, society processes include CSR (Corporate Social Responsibility), partnership and resource management process, etc.

- **Our Key L3 OHS Processes are;**

  OHS Planning (PPL_C&W_OHS_P10_R1)

  OHS Training & Awareness (PPL_C&W _OHS_P10_R1)

  OHS Monitoring and Auditing (PP&S_OF_ OHS_P67_R1)

  OHS Data Analysis (P&R_I&KM_ OHS_P14_R1)

- **Further, L4 and L5 process are;**

L4 – Operational Control Procedures, Safe Operating Procedures

L5 – Checklists and formats

- Safety processes and procedures are well identified and structurally defined in an appropriate manner. All the SOPs are part of Safety Manual uploaded in the Company Server.
- On a sample basis if we refer to the safety procedure for start-up and shut-down procedure, we have developed pre-commissioning procedure checklist for start-up the RMC plant. This checklist covers all OHS legal requirements, best practices for horizontal implementation, welfare facilities, learnings of previous experience, etc.
- Safety officers carry out the safety inspection as per this checklist, plant team to take actions and submit compliance report, safety officer validates the compliance and grant the go-ahead. The same is followed in the case of shut-down process. The checklist is developed to ensure safe shut-down of the plant.

- The preventive maintenance of the plant is being carried out by the CMM (Construction Machinery Maintenance) team. Trained and experienced people engaged to perform the preventive maintenance. A dedicated person is deployed by CMM team at each plant, a person will audit the plant and submit the report to the CMM head, the actions are taken every Sunday by efficient planning.
- **Approving Authority**

  All the safety procedures, processes, manuals, and booklets are uploaded on the Godrej INTRANET portal called Process Management which is accessible to company employees.

  The procedures and processes are approved by department heads and Management Appointee (MA) jointly and uploaded onto the portal.
- **Frequency of Review**

  All these documents are reviewed through internal and external audits. Apart from audits, the frequency of reviewing the documents is six months and as when required (when accident / incident / near-miss occurred)
- Safe Operating Procedures (SOP) are developed for the activities which are carried out in the company. These SOPs are reviewed when any process changes, equipment installed, raw material introduced, change in the layouts, etc.
- SOPs are validated by the EDMC (Extended Divisional Management Committee) member of that respective cluster and then uploaded onto the IMS Portal, which is accessible to all employees.

Key points of the SOPs are displayed in the plant at prominent and suitable locations in HINDI language for the better understanding by majority of the workers.



List of SOPs / Guidelines are given in the table below;

Working at Height	Grinding works	Sampling of Raw Materials
Transit mixer chipping	Concrete pump	Quality lab – inspections
Material handling	Curing tanks	Plant & Machineries
Welding and gas cutting	Testing of cubes	Unloading by loader
Work permit system	Vehicular Traffic Control	Ice-crushing and placement
Unloading of cement	5 S and Housekeeping	Silo checking
Unloading of metals	Benton Wash Operations	Fall arrestor system
Visitors Safety	Personal Protective Equi.	Office Safety
Admixture Handling	Central mixer chipping	Washing of Transit Mixers

3.3 Permit to Work System

Safe operating procedures are prepared to ensure its adequacy and made known & available to all and understood by everyone for all routine work. Hazard identification and risk assessment (HIRA) register (PPL_C&W_OHS _P10_REG02_R1) is prepared for all routine as well as non-routine activities. Work permit system is effectively implemented in the company. Since the system is well implemented and known to all the concerned engineers, contractors and their supervisors are trained in the compliance of it. We have implemented an online work permit system due to which accountability and responsibility is set and lies with initiator, those who have company email ids can generate online work permit system.

Work permits are written and authentic documents in which advanced precautionary checklists are enlisted for hazardous jobs.

Non-routine work like maintenance, civil and electrical work, work permits shall be issued or obtained by the initiator who wants to get the work done from the contractor who executes the work. In case such works being performed in the other divisional premises, the maintenance engineer or plant head of the respective division will be informed by initiator and intimation sign off from maintenance engineer on work permit.

In such non-routine work, the respective engineers and contractors shall have to visit work location jointly, identify the hazards and risk present over the area and correct the unsafe conditions and acts and then issue the work permit to start the work. Initiator and contractor should ensure appropriate PPEs are provided to workers and briefing of hazards and risks involved in the work and workplace where work to be carried out.

The work shall be carried out under close supervision with prior inspection of tools and electrical equipment.

Work permits with authorized sign offs shall be kept available all the time at the workplace.

In Godrej, the following nine activities are identified as most hazardous in nature and out of these activities, work permits shall be obtained or issued.

1. Working at height
2. Safety Excavation
3. Confined space entry
4. Electrical works
5. Working on fragile roof
6. Loading & unloading of hazardous materials
7. Hot work (welding, gas-cutting, tar melting, etc.)
8. Pressure vessel testing
9. Radiography

3.4 LOTOTO (Lock-out-Tag-out-Try-out)

LOTOTO is a critical procedure that involves isolation of energy / equipment / sources by applying locks and tags to prevent accidental startup during maintenance or repairs. This ensures workers are protected from hazardous energy sources, such as electrical, mechanical, or thermal energy.

By following LOTOTO procedures, we can prevent injuries and ensure a safe working environment.

- Identification of possible energy to be isolated
- Install locks and tag it out
- Verify the locking and tagging arrangements
- Validation by trying out that energy isolation
- Re-connect / Re-energize the sources
- Maintain registers

3.5 Personal Protective Equipment

- Selection of the PPE will be done based on hazards identification and assessment of the activities carried out by line managers in consultation with Divisional OHS Head.
- There is a standardization of type / specification / brand / make of PPE to the extent possible, across the Divisions, based on the hazards associated with the activities of the employees.
- Assistance of Corporate Procurement Dept. will be taken empanel 2 to 3 suppliers of the PPE.
- Corporate Procurement Dept. will leverage on consolidated 'buy' volumes to negotiate competitive prices. Corporate Safety Department will work closely with Corporate Procurement Department in working out the empaneled panel list.
- The empaneled supplier will be responsible for the supply as well as service, if required, of the PPE.

Selection of PPEs:

- Once the hazards of workplace have been identified, the Line Manager and OHS Heads will have to determine whether the hazards can first be eliminated or reduced by methods other than just using PPE i.e. engineering control, substitution of process.
- If such methods are not adequate or feasible, then Line Manager and OHS Head shall collectively determine the suitability of PPE most suitable and meaning adequate to be provided to the employees. Please note that the provision of PPE is not a substitute for engineering controls / substitution of hazardous process / administrative control.
- All PPE purchased must be conformed to BIS and / or other prescribed standards.

Role of the OHS Head will be as under:

- Assist the HOSs / Supervisors in conducting hazard assessments to determine the presence of hazards which the necessitate the use of PPE.
- Advise and Coordinate with HODs, Divisional Purchase etc.in selection of the appropriate PPEs.
- Provide training, guidance and assistance to supervisors and employees for proper use, care and maintenance of PPEs.
- Conduct, review and update hazard assessments and PPE effectiveness into the Division in case of;
  - Modification in process
  - New equipment/machine put into use
  - An accident
  - Specific request(s) from employee(s)

Issue of PPEs:

PPEs will be issued by Store Department on the receipt of requisition duly signed by department engineer and OHS Officer. PPEs issuing register shall have to maintained.

PPEs matrix as per the work activities are prepared and circulated to all concerns.

Activity	Safety Goggle	Ear Protection	Safety Nose Mask	Apron	Face/ Welding shield	Cotton Hand gloves	Leather Hand gloves	PVC Hand gloves	Shoulder Pad	Safety Belt	Respiratory System
Working At Height										✓	
Material Handling						✓			✓		
Welding Work			✓	✓	✓		✓				
Grinding Work		✓			✓	✓					
Gas Cutting	✓			✓	✓		✓				
Confined Space Entry											✓
Carpentry Work	✓		✓							✓	
Painting Work	✓		✓					✓			
Bar Bending & Cutting	✓					✓					
Plumbing Work			✓					✓		✓	
Masonry Work								✓		✓	

Safety helmet and safety shoes are Mandatory PPEs at site
Double lanyard full body harness is mandatory to work at height above 2m and risk of person falling is observed.

3.6 Electrical Safety

Electrical hazards are unseen and sever if ignored. All RMC units are provided with the electrically safe solutions. Electrical installations are established by our competent electrical division. All devices are provided with RCCB with the tripping rating 30mA and 100mA and effectively earthed. Electrical audits are conducted through electrical division. Electrical maintenance and repairs are attended by electrical engineers. Lightening arrestors, continued earthing system, rubber mats, warning signages, etc. are checked and maintained. Electrical Safety training is conducted periodically. All electrical boards are labelled, provided with fire extinguishers, LOTO followed, SLD displayed.







3.7 Safety Behavior Observations reporting

To reinforce positive behaviors, more emphasis on the behavior-based safety helped us in many ways. The reduction in the unsafe acts, reporting of hazards by supervisors and workers, involvement of contractors in the safety committee meeting, suggestions from the stakeholders, idea generations for OHS improvements, etc. are the results achieved from the BBS drive. Safety campaigns on various topics such as PPEs, Working @ height, Driver's Safety, Material handling, etc. facilitated to increase awareness levels amongst all.

B-Safe Software developed inhouse by the Company to record the observations. Engineers are trained in the B-Safe methodology by corporate in 2 days classroom and plant visit. The six steps are followed as below;

Step 1 : Observe and stop.
Step 2 : Make a positive comment on a safe behavior
Step 3 : Discuss the consequences of the unsafe act
Step 4 : Any other safety concern
Step 5 : Taking Commitment
Step 6 : Thank you







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3.9 Hazard Identification & Risk Assessment (HIRA)

We believe that hazards shall be identified, assessed for the risk and develop control measures which helped to early determination of the risks associated with the operations, facilities, equipment, etc. HIRA of the activities are prepared by the teams and maintained in the comprehensive format. Stepwise approach to prepare HIRA are as per the attached steps.

Prepared HIRA for all activities and ensuring that the significant activities are integrated with relevant SOPs and guidelines. Frequent awareness sessions are organized for all employees.

3.10 Safety Inspection

To foster a culture of safety and continuous improvement, our organization conducts regular Gemba-Walk rounds. Led by safety teams, plant teams, and senior management, these inspections aim to identify potential hazards and areas for improvement. A structured schedule is prepared and shared by the safety team, with automated reminders sent to participants every Friday at 10 am. Observations are documented using the i-Report mobile application, enabling prompt action by plant administrators to address reported concerns.

Safety inspections of machines, equipment, vehicles, illumination survey, working at height, PPEs, electrical installations, fire extinguishers, ladders, etc. are carried out through inspection checklists.













3.11 Safety Committee Meeting

Safety Committee constitutes at central level in which plant heads are included as members of the committee. The central safety committee chaired by Business Head of the Construction Business. Committee meets every month and discussing on the safety and health improvements, concerns, planning and incidents. Every meeting one of the plant head shall present safety improvements and challenges of their plants. Also, the plant level safety committee meetings are conducted every month and chaired by respective plant heads. The points and information discussed in the central committee meetings are shared in the plant level meetings. Minutes of the meeting are shared to all members.

3.12 Safety Training

Safety training matrix and calendar prepared and in accordance with it, training is imparted. Safety induction program conducted at divisional level for the new management employees. Workers are safety inducted at plant levels. Correct way of wearing safety belt is taught and checked in the safety induction program. The safety trainings are conducted at customers locations for our as well as customers people. Very appreciating feedback received from the customers for support provided by us.




Safety trainings are conducted by our internal as well as external faculties. Trainings on first aid, working at height, plant operations, concrete pump, electrical safety, defensive driving safety, etc. imparting regularly.

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Training at Customers locations













3.13 Promotional Activities

We believe that more you create awareness – more you strengthen the safety culture and achieve enhanced positive safety behavior and knowledge among all at each level.

OHS Promotional program is a key aspect of our OHS Policy and play an important role in implementing of it.

We celebrate all safety events, observance throughout the year.

- National Safety Week (4th to 11th March)
- Road Safety Week (as per NHAI announcement)
- Fire Service Day (14th April)
- World Environment Day (5th Jun)
- National Electrical Safety Week (26th Jun)
- Godrej OHS Foundation Day (12th April)
- World No Tobacco Day (31st May)

Various safety competitions, quiz, skits, training program, external training program, online quiz & competitions, recreational program, screening of training videos, concepts of teamwork through competitions, reward and recognition for all winners and participants, etc.















Road Safety Awareness Drive





Road Safety Awareness Drive – 2025 @ Pune RMC

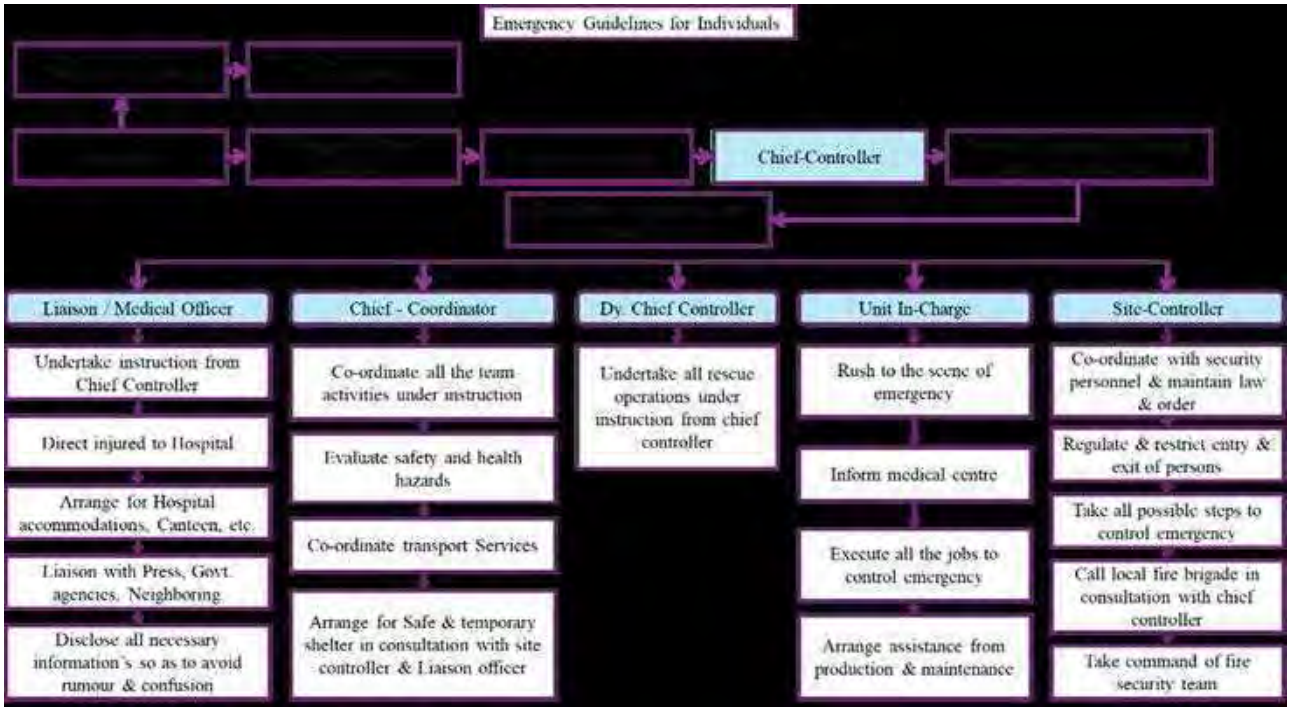


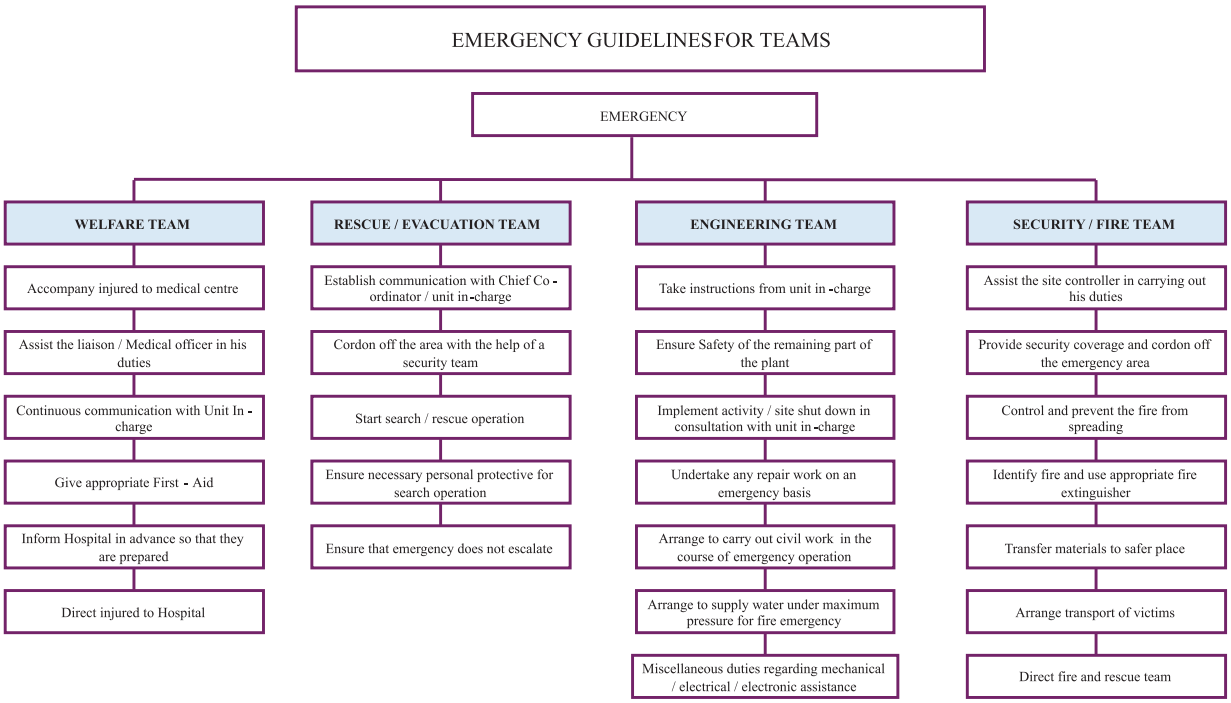
Road Safety Awareness Drive – 2025 @ Mumbai RMC



3.14 Emergency Preparedness

We have established On-Site Emergency Preparedness and Response Plan to abatement and control of emergency situations arising in our plant. Addition to the OEP, other facilities are made available. The regular trainings are conducted in the accordance of the OEP requirements. Mock-drill plan developed, and response team is trained and developed to tackle any type of emergency situation.





3.15 Significant Achievements

We are thrilled to note that Godrej Construction is winning the various prestigious awards for safety performances of the RMC Units.

2013 – NSCI Award	2014 – NSCI Award	2015 – NSCI Award	2016 – NSCI Award	2017 – NSCI Award	2018 – NSCI Award	2019 – NSCI Award	2020 – NSCI Safety Award	2021 – NSCI Safety Award	2022 – NSCI Safety Award	2023 – NSCI Safety Award	2024-NSCI Safety Award
Shreshtha Suraksha Puraskar Silver Trophy & Certificate i 3 RMC Plant	Prashansa Patra Certificate i 3 RMC Plant	Shreshtha Suraksha Puraskar Silver Trophy & Certificate i 3 RMC Plant	Suraksha Puraskar Bronze Trophy & Certificate i 3 RMC Plant	Suraksha Puraskar Bronze Trophy & Certificate i 3 RMC Plant	Shreshtha Suraksha Puraskar Silver Trophy & Certificate i 3 RMC Plant	Shreshtha Suraksha Puraskar Silver Trophy & Certificate i 3 RMC Plant	Shreshtha Suraksha Puraskar Silver Trophy & Certificate Godrej IT Park	Suraksha Puraskar Bronze Trophy & Certificate i 3 RMC Plant	Shreshtha Suraksha Puraskar Silver Trophy & Certificate i-3 RMC Plant	Shreshtha Suraksha Puraskar Silver Trophy & Certificate i-3 RMC Plant	Sarvashreshtha Suraksha Puraskar Golden Trophy & Certificate Dhayari RMC
Suraksha Puraskar Bronze Trophy & Certificate Dhayari RMC Plant	Certificate of Appreciation Dahisar RMC Plant	Suraksha Puraskar Bronze Trophy & Certificate Wagholi RMC Plant	Suraksha Puraskar Bronze Trophy & Certificate Ambernath RMC Plant	Certificate of Appreciation Wagholi RMC Plant	Certificate of Appreciation Wagholi RMC Plant	Prashansa Patra Certificate Ambernath RMC Plant	Shreshtha Suraksha Puraskar Silver Trophy & Certificate i 3 RMC Plant	Prashansa Patra Certificate Ambernath RMC Plant	Shreshtha Suraksha Puraskar Silver Trophy & Certificate Khalapur RMC	Prashansa Patra Certificate Dhayari RMC Plant	Shreshtha Suraksha Puraskar Silver Trophy & Certificate i 3 RMC Plant
Suraksha Puraskar Bronze Trophy & Certificate Wagholi RMC Plant	Certificate of Appreciation Wagholi RMC Plant	Prashansa Patra Certificate Dahisar RMC Plant	Prashansa Patra Certificate Dahisar RMC Plant	Certificate of Appreciation GIL RMC Plant	Certificate of Appreciation GIL RMC Plant	Certificate of Appreciation Wagholi RMC Plant	Prashansa Patra Certificate Wagholi RMC	Prashansa Patra Certificate Wagholi RMC	Prashansa Patra Certificate Dhayari RMC Plant	Prashansa Patra Certificate Wagholi RMC	Suraksha Puraskar Bronze Trophy & Certificate Ambernath RMC
	Certificate of Appreciation Dhayari RMC Plant	Prashansa Patra Certificate Dhayari RMC Plant	Prashansa Patra Certificate Dhayari RMC Plant	Certificate of Appreciation Ambernath RMC Plant	Certificate of Appreciation Ambernath RMC Plant	Certificate of Appreciation Dhayari RMC Plant	Prashansa Patra Certificate Khalapur RMC	Prashansa Patra Certificate Khalapur RMC	Prashansa Patra Certificate Wagholi RMC	Prashansa Patra Certificate Ambernath RMC Plant	Suraksha Puraskar Bronze Trophy & Certificate Wagholi RMC
12th Consecutive years of winning NSCI Safety Awards			Prashansa Patra Certificate GIL RMC Plant	Certificate of Appreciation Dhayari RMC Plant	Certificate of Appreciation Dhayari RMC Plant	Certificate of Appreciation Khalapur RMC Plant	Certificate of Appreciation Dhayari RMC Plant	Prashansa Patra Certificate Dhayari RMC Plant	Prashansa Patra Certificate Ambernath RMC Plant	Prashansa Patra Certificate Khalapur RMC Plant	Prashansa Patra Certificate Khalapur RMC Plant
			Certificate of Appreciation Wagholi RMC				Certificate of Appreciation Ambernath RMC Plant	Certificate of Appreciation Khalapur Mega Project			



NSCI-Safety Awards 2024: Golden Trophy, Silver Trophy, Bronze Trophy, Prashansha Patra

Conclusion

We as Construction Business of Godrej Enterprises Group, committed to safeguard people associated with us and passionate to keep our environment safe and clean. **We respect human life**, working safely is a condition of employment for us. We believe that **robust safety procedures** will help us to maintain the safety and healthy working conditions irrespective of changes work forces. We are aiming to achieve the milestone of **Zero Incident Performance**. Our PU01-Dhayari RMC Plant has achieved Zero Reportable Incident Performance from its inception. Health, Safety & Well-being is core focus areas for us.

* * *

Godrej Energy Solution, Busbar Mfg. Plant, Bengaluru, Karnataka

(MSME Sector – Group B – Sarvashreshtha Suraksha Puraskar – 2024 Award)

A Landmark of Safety and Excellence

Company Profile

Godrej Energy Solution, Busbar Mfg. Plant has expertise & proven track record of High, Medium & Low voltage power distribution solutions.

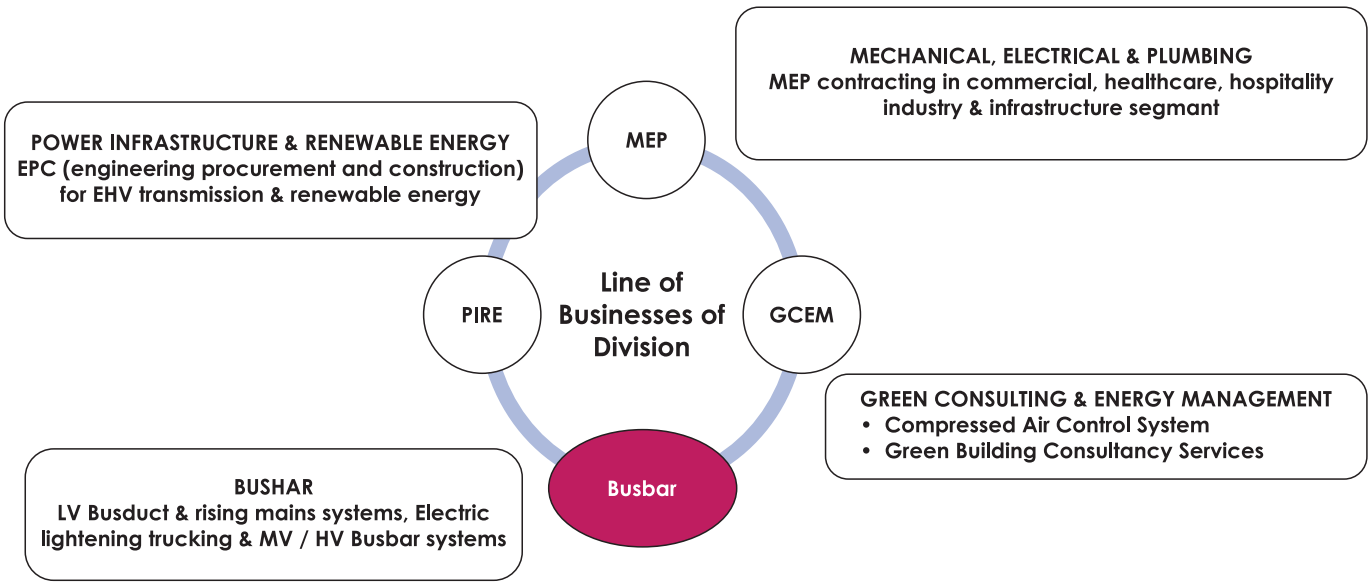
This plant, awarded with the prestigious Sarvashreshtha Suraksha Puraskar (Golden Trophy) in NSCI Safety awards 2024, demonstrating the unwavering commitment to safety and excellence in our plant.

We undertake the design, manufacture, testing, installation & commissioning of power distribution solutions up to 36kV & up to 30kA. We have a state-of-the-art manufacturing facility at Dabaspet about 40KM from Bangalore City.

The Factory comes under the umbrella of Godrej Energy Solution Division. We employ approximately 245 employees & are dealing with critical engineering manufacturing activities like Metal shearing, Bending Operation, Press operation, Metal Joining, Drilling, Surface finishing, Painting and High voltage testing etc.

We are manufacturer of Isolated phase busduct, Segregated phase busduct, Sandwich busways, non-segregated phase busduct etc.

An overview of our Businesses:



Manufacturing Facility at Dabaspet, Bengaluru, Karnataka:



Product Portfolio:



NSPBD



SANDWICH



IPBD



SPBD

Leading Manufacturer of Busducts in India:

We are the leading solution providers of customised HV, MV & LV Busducts Design, Manufacture and installation all under one roof.

Safety Excellence:

Our mission to achieve Zero Incident is at the forefront of our operations. This commitment is led by our dedicated leadership and embraced by every individual involved in the manufacturing process.

Integrated OHSE Approach:

Our Occupational Health, Safety & Environment approach is integrated into every aspect of our business process. From detailed risk assessments, SOP's/OCP's to continuous monitoring and evaluation of the processes. We ensure compliances with all safety standards and applicable statues/regulations. Meticulous planning is done to ensure that all the safety aspects are considered before starting any operation at our plant.

Safety aspects are integrated with individual functions such as,

- **Procurement** – OHSE consideration in subcontractor management and procurement of any materials/equipment's.
- **Operation** – Simplified assessment with pre-job checks, hazard communication integrated with pre-briefing, monitoring and reporting of safety achievements along with progress monitoring, Pictorial SOP, Preventive Maintenance etc.
- **Design** - To ensure design safety aspects of product at design stage.

Commitment to Excellence:

Leadership and commitment to safety are demonstrated through various initiatives, including safety awareness campaigns, competitions, and recognition programs. Our top management's dedication to OHSE is evident in their active involvement and the implementation of rigorous safety protocols.

Everyone is bound to follow the company's OHS & Environment policies, which are well communicated during safety Induction & classroom trainings to all stakeholders. Our Top Management's demonstrated commitment & involvement led various initiatives, which paved the path to a safe & healthy culture at our plant.

Commitment of the Top Management to SHE:

LEADERSHIP DRIVES A SAFETY CULTURE



Jamshyd Godrej
Chairman and Managing Director, (CMD)
Godrej Enterprises Group

- Safety is non-negotiable
- Respect for Humanity is our Core Value
- Health & Safety of all is an overarching priority

Safety message in OHS Policy

At Godrej, we have a responsibility to **provide a safe place to work for our employees** – a natural manifestation of our Corporate Value, **Respect**.

In today's globally connected environment, a culture of **Safety is essential in the context of improving both productivity & competitiveness.** In fact, as we strive to win business against global competitors, we find that customers are increasingly, considering the Safety Processes and Safety Track Record of their potential vendors.

Let us **Occupational Health and Safety** an **Overarching priority** so that all Godrejites are assured of their safety and, in turn, contribute to the safety of their colleagues.

I look forward to your **commitment and contribution** in making Godrej a Safe and Productive place to work in.

Safety message in Company Business Magazine

In these **unpredictable** and chaotic business conditions, what remains unchanged is an urgent **need to strengthen and deepen our improvement efforts that will enable our business to achieve the goals set.**

Let me share five priorities that are vital to help us focus and align our efforts

1. **Health and Safety : -**
   The first is Health & Safety of **our employees , our channel and supplier partners as well as those associated with us in the conduct of our business.** We must establish processes and protocols and ensure their compliance for the well being of all involved
2. Customer-Centricity
3. Ongoing Innovations
4. Operational Excellence
5. Deeper Commitment

SAFETY MESSAGE FROM BUSINESS HEAD



Raghavendra Mirji
(Executive Vice President & Business Head)

Energy Solutions

- Safety, Top Driven approach
- Follow Safety Code of Conduct
- Alignment to Safety Vision

Our OHS philosophy is based on holistic thought of respecting human life. We have framed our OHS policy covering ten guiding principles based on this philosophy.

E&E has come a long way in building the Safety culture across the Division. We have learnt our lessons from the past incidents & have adopted learnings quickly. When it comes to safety, we have adopted a 'Zero' tolerance to any short cuts, wrong doings & non-compliances & constantly seeking new & innovative ideas to reduce Safety incidents & proactively avoiding incidences before they happen. The approach of "Safety first & everything else can wait" is practiced at all Project sites & Manufacturing locations in true spirit & this has earned many appreciations from our customers. We have received many States level & National level awards as well for our Safety practices & such recognition motivates all of us to do better further.

Going forward, it is important for us not only to sustain this achievement, but to enhance it further. We need to further strengthen our processes, SOPs, structured training and should spread Safety awareness across all project sites, factory & office environment. We must understand that keeping our workplace 'Safe' is a responsibility of every individuals & not restricted to only Safety Department. Hence, I encourage all of you to actively participate in identifying the Hazards, contributing to Safety Kaizens, digital initiatives, benchmarking best practices & proactively sharing the learnings. I am confident that with your support, we will achieve our goal of "Zero incident" & will sustain this for years to come.

SAFETY MESSAGE FROM CORPORATE OHS HEAD



Yashpal Singh
Head-Corporate OHS

A healthy workforce is vital for sustainable social and economic development on global national and local level.

The classic approach to ensuring Health and Safety in the workplace has depend mainly on the enactment of legislation and inspection of workplaces to ensure compliances with Health and Safety standards. This approach has been effective in controlling many specific occupational hazards since the Industrial Revolution.

Accidents in occupation are generally regarded as the index of dysfunctions in Industries. They cause not only human tragedies, as well tremendous amount of economic losses. Lot of technological breakthrough has come out in recent years with a view to protect the employees and equipment. It is of great importance that safety devices, programme and diagnostic techniques are continuously used and updated so that Safe and Healthy industrial environment is assured.

The safety requires an understanding of a wide variety of physiological, psychological, social, economical as well as engineering factors related to the work place, the machines and the operators. Accidents are caused by system failure, rather than failure of any single factor.

We have implemented several special features and initiatives in the areas of Occupational Health and Safety (OHS), Environment, Sustainability, and Welfare management at our plant.

Here are some of the key features mentioned below:

1. **Integrated Approach:** Our management system integrates OHS, Environment, Sustainability, and Welfare practices into a cohesive framework, demonstrating our holistic approach to managing workplace health, safety, and well-being alongside environmental stewardship.
2. **Policy Driven Organization:** All policies are to be stringently adhered by all employees and all work is done by following established policies only.
3. **Proactive Risk Management:** We have established robust risk assessment processes and proactive measures to identify, assess, and

mitigate potential hazards in the workplace, thereby demonstrating our commitment to preventing incidents and ensuring the safety of our employees.

4. **Stakeholder Engagement:** Our organization actively engages with internal and external stakeholders, including employees, suppliers, community groups, and regulatory authorities, to foster collaboration and promote sustainable practices that benefit all stakeholders.
5. **Continuous Improvement Culture:** We have initiated a culture of continuous improvement, with regular performance monitoring, audits, and feedback mechanisms in place to drive ongoing enhancements in OHS, Environmental sustainability, and Welfare practices.
6. **Innovation and Technology Adoption:** We leverage innovative technologies and best-in-class tools to enhance Safety measures, monitor Environmental impact, and optimize resource use, showcasing our commitment to leveraging cutting-edge solutions for sustainable operations.
7. **Employee Well-Being Programs:** Our comprehensive employee welfare programs go beyond regulatory requirements, encompassing mental health support, wellness initiatives, flexible work arrangements, and a supportive work environment that prioritizes employee well-being.
8. **Environmental Stewardship:** Our organization has demonstrated a strong commitment to Environmental stewardship through initiatives such as waste reduction programs, energy-efficient upgrades, water conservation, sustainable sourcing practices, and reductions in our environmental footprint.
9. **Demonstrated Results:** We can provide tangible evidence of the positive impact of our initiatives, including measurable improvements in safety performance, reductions in environmental impact, and enhanced employee satisfaction and well-being.
10. **Leadership Commitment:** Our Top management (leadership team) is actively involved in championing OHS, Environmental sustainability, and Welfare initiatives, setting a clear vision and providing the necessary resources to drive meaningful change across the organization.
11. **Industry Collaboration and Recognition:** We actively collaborate with industry associations, participate in relevant forums, and have received recognition or certifications from reputable organizations for our exemplary performance in OHS, Sustainability, and Welfare management.

These special features collectively demonstrate our organization's strong commitment to excellence in OHS, Environment, Sustainability, and welfare management.

Senior Managements positive approach towards OHSE:

Senior management actively and regularly promotes a positive attitude towards Occupational Health and Safety (OHS) during their interactions with Employees through various means. Here are some ways in which they do so:

1. **Leading by Example:**
   Senior management sets the tone for OHS, Environmental sustainability, and Welfare by adhering to all relevant policies and procedures themselves. This includes wearing personal protective equipment (PPE), following safety protocols, participating in OHS and environmental initiatives, and supporting employee welfare programs, Frequent plant visits and rounds, and involvement in OHS CSI.
2. **Communication and Engagement:**
   Senior management communicates the importance of OHS, Environmental sustainability, and Welfare through regular meetings, town halls, and other forums. They use these opportunities to discuss the organization's commitment to these areas and to reinforce the message that they are a priority for the company. Examples of communication are Safety Committee Meeting, Safety Council Meeting, Multiple levels review meetings, Mail communications, Use of social media Platforms.
3. **Reward & Recognition:**
   Senior management recognizes and felicitates employees who demonstrate exceptional commitment to OHS, Environmental & Sustainability.



4. **Training, Environmental & Sustainability development:**

Senior management supports training and development initiatives related to OHS, participates in training sessions themselves and encourages employees to take part in relevant programs to enhance their knowledge and skills in these areas.





5. **Involvement in Initiatives:**

Senior management actively participates in OHS, Environmental sustainability, and Welfare initiatives. This involvement includes leading by example in sustainability practices, participating in safety audits or inspections, or engaging in activities that promote employee welfare.

6. **Open Communication:**

Senior management maintains open communication to encourage staff to raise concerns or suggestions related to OHS, Environmental Sustainability, and Welfare. By being accessible and approachable, they create an Environment where employees feel comfortable discussing these important topics.

7. **Setting Clear Expectations:**

Senior management sets clear expectations for staff regarding their responsibilities related to OHS, Environmental Sustainability, and Welfare. By outlining these expectations and holding employees accountable, they emphasize the importance of these areas within the organization.

By consistently demonstrating their commitment to OHS, Environmental, Sustainability, and Welfare through these actions, senior management plays a crucial role in promoting a positive attitude towards these critical aspects of the workplace among employees.

Implementation of the recommendation of studies, OHSE Audits, etc.

At our organization, we have IMS (Integrated Management System – ISO 9001, ISO 14001, ISO 45001, ISO 50001). We have established a comprehensive auditing process to assess the effectiveness of our Occupational Health and Safety (OHS), Environment, Sustainability, and Welfare policies and procedures. This auditing process involves regular inspections, reviews, and assessments to ensure compliance with relevant regulations and standards. Here are the arrangements we have in place for auditing at our plant:

1. **Internal Audits:** We conduct regular internal audits of our OHS, Environment, Sustainability, and Welfare policies and procedures to identify any gaps or areas for improvement. These audits are typically scheduled at predetermined intervals and involve a thorough examination of our practices and processes. Frequency for Internal Audit is once in a quarter. Also, at the plant level there are weekly Safety Audits to ensure plant compliances.

We regularly conduct Safety audits/inspections by safety officers and line managers at our plant, Monthly / Frequently Safety Audits by Top Managements, Half yearly Internal IMS (Integrated Management System) Audit by Internal Auditors conducted at our plant.





2. **External Audits:** In addition to internal audits, we also engage external auditors to conduct independent assessments of our OHS, Environment, Sustainability, and Welfare practices. These external audits provide an objective perspective on our performance and help us benchmark against industry best practices. Frequency for External Audit is one year. Apart from this we are conducting External Housekeeping audit, IMS Audit, Customer audit, assessments through CII, WSO & NSCI.





3. **Audit Action Plans:** Following each audit, we develop action plans to address any findings or recommendations identified during the audit process. These action plans outline specific steps, timelines, and responsibilities for implementing changes to improve our OHS, Environment & Sustainability performance.

Examples of implementing audit outcomes and recommendations:

Enhancement in Engineering & Admin Controls:

i Implementation of see through guarding system in old machines.

ii Biometric, Load sensor, seat belt sensor & moon light fixing in Forklift.

iii Use of Modern welding helmet with auto darkening filter (shade) implemented in welding activity.

iv Modern dual filter with fully covered paint mask with glass for painting activity.

v Pull chord system in rolling machine.

vi Use of Safe Cutter in wrapping and packing area

vii Display of Pictorial SOPs in local language & in Hindi language for different activities & operations.

viii Modular Firefighting arrangements in Paint Booth.

ix Fume Extractor in welding area.

x Photo electric sensor & Lidar sensor (360 degree auto cut off provision) implementation in old machines.

xi Safe Load Indicator & Auto cut off provision in EOT Crane.

xii Wire technology implementation to Save water.



Fixing of load cell sensor & Biometric in Forklift.



Fume extractor implementation in welding area



See through guarding implementation in Band Saw M/c



Modular Fire fighting arrangements in Paint Booth



Moon light fixed in forklift



LIDAR Sensor & see through guarding implementation



Modern Paint booth installation with sufficient space & proper suction.



See through guarding in Bench drill m/c



See through guarding implementation Punchin Press



Shearing Machine equipped with; See through Guard and Sensors



Seat belt sensor & load cell sensor for forklift



Additional See through Guard for Copper Cutting Machine



Modern welding helmet with auto darkening filter (shade) implemented in welding activity



Pull chord system in rolling machine.



Acrylic Guard to Bench Drill machine



Modern dual filter with fully covered paint mask with glass for painting activity.

4. Environmental Sustainability Initiatives:

An audit report recommended implementing more sustainable practices in our operations to reduce our environmental impact. In response, we launched initiatives such as waste reduction programs, energy-efficient upgrades, and recycling campaigns. Plantation on the eve of Environmental Day. These efforts not only improved our environmental performance but also fostered a culture of sustainability among employees.

Implementation of V Wire Technology to Save Water:

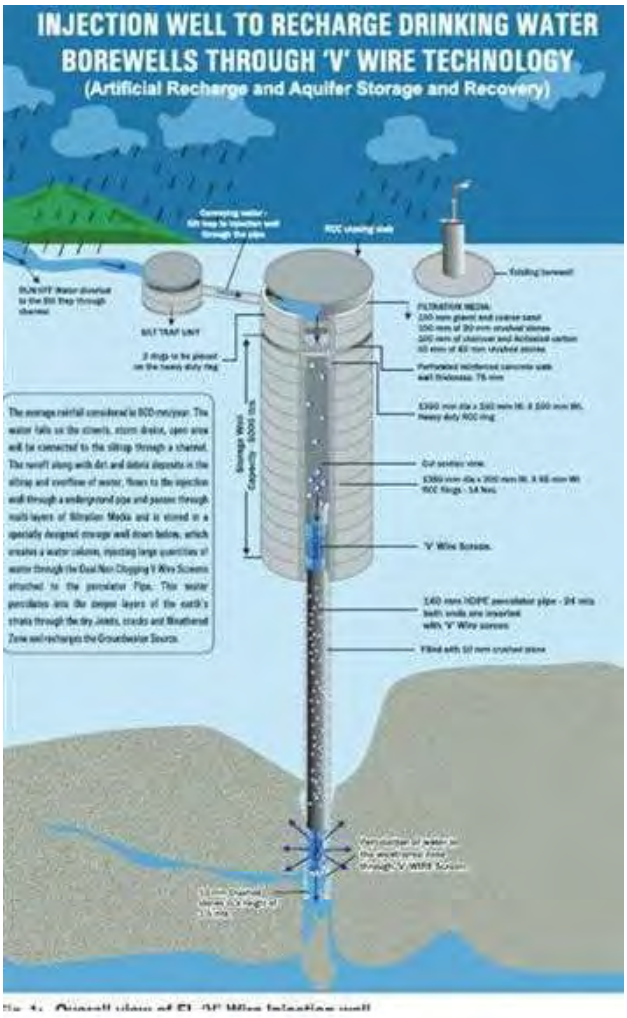




Fig. 2: Front view of 'V' Wire Screen

- The V wire screen is of stainless steel material, grade SS-304, Cage type trapezoidal wire wound screen.
- Screen is evenly distributed continuous slot opening of 0.75 MM, so that it has more open area for minimum turbulence and loss of energy.
- The trapezoidal V shape inwardly widening slots are non clogging, so that sediments have only point contact.
- The diameter of the V wire screen is 150 mm, length 0.5 Metre.

In this process we have saved around 23Lakhs of Liter during FY 24-25.

Estimation of Quantum of runoff available through Rain water harvesting (within premises) sheet					
S.No.	**Particulars**	**Area (Sqm) (To be filled)**	**Rain fall (m) (To be filled)**	**Runoff Coefficient***	**Quantum of Run off available (Cum/Year)**
	1	**2**	**3**	**4**	**5 (2*3*4)**
1	Roof Top of building/Shed/	2933	0.959	0.85	2390.83
2	Road/Paved area	0	0	0.65	0
3	Open Land	0	0	0.20	0
4	Green Belt	0	0	0.15	0
5	Total (sqm)	2933		Total Quantum of available runoff (cum/y)	2390.83

* Ref: Manual of Artificial Recharge of Ground Water, (CGWB,2007)

Sapling Plantation at our Plant:

Every year we are doing sapling plantation around our plant on the eve of Environmental day.





5. Employee Welfare Enhancements:

An audit identified opportunities to enhance employee welfare programs and support mechanisms within the organization. As a result, we implemented new initiatives such as mental health awareness campaigns, flexible work arrangements, and employee assistance programs. These changes contributed to a more supportive and inclusive work environment for our staff.

By proactively addressing audit outcomes and recommendations in these ways, we continuously strive to strengthen our OHS, Environment, Sustainability, and welfare practices and ensure the well-being of our employees and the environment.

Processes & Procedures of our Plant:

At our plant, we have established clear procedures and processes to address concerns raised by employees about their Occupational Health and Safety (OHS) & Environment. Here are some examples of how these concerns have been addressed:

1. **Reporting and Investigation Process:**

   When an employee raises concern about OHS, Environmental impact, Sustainability, or Welfare, we have a formal reporting process in place. Employees are encouraged to report their concerns to their immediate supervisor, OHS representative, or designated contact person.

   Once a concern is reported, we initiate an investigation to assess the situation. This may involve conducting interviews, plant inspections, or reviewing relevant documentation to understand the nature and scope of the concern.

2. **Consultation and Collaboration:**

   We believe in involving employees in the resolution of concerns related to OHS, Environmental impact, Sustainability, and Welfare. Depending on the nature of the concern, we convene relevant committees, forums, or task forces to discuss the issue and develop solutions collaboratively.

3. **Continuous Improvement and Feedback Loop:**

   After addressing a specific concern, we follow up with employees to ensure that the solutions implemented are effective and sustainable. We also encourage ongoing feedback from employees to identify any further issues or areas for improvement.

Consultation with Employees on OHSE Aspects:

We have several arrangements in place for consulting with employees on issues relating to Occupational Health and Safety (OHS) & Environment. These arrangements are designed to ensure that employees have a voice in matters that affect their health, safety, and well-being, as well as the environmental impact of our operations. Here are some of the key mechanisms we use for staff consultation:

1. **Safety Committee Meeting:** We have established health and safety committees that include representatives from different departments and levels within the organization. These committees meet regularly to discuss OHS issues, review incident reports, and make recommendations for improvements. They also serve as a forum for employees to raise concerns and suggest solutions. Plant Head is a CHAIRMAN and Plant Safety Officer is SECRETARY of this safety committee, and it conducted once in month for all respective project locations and MOM of the same will circulate to team.
2. **Environmental and Sustainability Forums:** Like health and safety committees, we have forums or working groups dedicated to environmental and sustainability matters. These forums provide a platform for employees to contribute ideas, share best practices, and provide feedback on initiatives related to environmental impact and sustainability efforts.
3. **Safety Review Meetings:** In addition to Health and Safety Committee Meetings, we have Safety review meetings at multi levels, like Quarterly Review meeting with Business Head, Fortnightly with Plant Head and Weekly with dept heads. Agenda of the same is mentioned below.
   - Sharing Good Practice
   - Accident sharing if any
   - Safety Performance
   - Plant Concerns i.e. Safety Observations of during round and their compliance status
   - Status of Lead Indicators reporting i.e. by Mobile Safety App and Company's Portal
   - Safety Events and initiatives
   - PPE Buffer stock
   - BBS data update





4. **Employee Surveys and Feedback Mechanisms:** We regularly conduct employee surveys to gather feedback on OHS, Environmental sustainability, and Welfare-related topics. This input helps us understand the concerns and priorities of our staff and informs us about our decision-making processes.
5. **Open communication:** We maintain an open communication that encourages employees to approach their managers or designated representatives with any OHS, Environmental, sustainability, or Welfare-related concerns. This ensures that employees have direct access to decision-makers and can raise issues in a timely manner.

Training, IMS & Management Review:

Training and Awareness Programs: We conduct training sessions and awareness programs to educate employees about OHS, Environmental impact, Sustainability practices, and Welfare initiatives. These sessions often include opportunities for interactive discussions and feedback gathering.







IMS & Management Review (ISO 45001): Management reviews the Safety management systems effectiveness & resource requirements for achieving OHS related goals.

By implementing these arrangements for employee's consultation, we fostered a culture of collaboration, transparency, and continuous improvement in managing OHS, Environmental impact, Sustainability efforts, and employee welfare. This approach helps us address concerns proactively, engage employees in decision-making processes, and ultimately create a safer, more sustainable, and supportive work environment.

Procedure & Objectives for Business Partners: We have several arrangements in place to ensure that any Business partner providing services at our plant complies with our Occupational Health, Safety, Environment, Sustainability, and welfare policies, procedures, and objectives.

1. **Prequalification Process:** Before hiring any Business partner, we have a rigorous prequalification process in place. This process includes evaluating the Business partner's Safety record, Environmental practices, and Sustainability initiatives to ensure they align with our organization's standards.
2. **Contractual Obligations:** Our contracts with Business partners include specific clauses related to compliance with our organization's policies and procedures. This includes requirements for safety training, reporting procedures, and adherence to Safety and Environmental regulations. We have Safety Pact system which is signed by our business partners along with their contractual agreement (PO – Purchase Order) for their concurrence on Health, Safety and Environment Rules & Regulation and company's Policies.
3. **Plant Safety Induction:** All Business partners are required to undergo a comprehensive induction before starting work on our premises. This induction covers our safety protocols, emergency procedures, environmental expectations, and sustainability goals. This is mandatory for all.





4. **Permit To Work System:** We have a well-established work permit system for all plants including all major activities like Hot Work, Height work, Electrical Work, confined space work, Shaft work, Material Loading and unloading, etc. It is mandatory to all Business partners to issue the work permits on a daily basis as per the activities conducted and involved.
5. **Regular Audits and Inspections:** We conduct regular audits and inspections of Business partner works to ensure compliance with our policies. This includes plant visits, safety checks, and environmental assessments. We are also conducting Safety training at Vendor places to develop Safety culture.
6. **Trainings and Support:** We provide training and support to Business partners to help them understand and meet our organization's expectations. This may include safety training sessions, environmental awareness programs, and sustainability workshops.

Flowchart for Safety Trainings:



7. **Reporting and Communication:** Business partners are encouraged to report any incidents, near misses, or environmental concerns to our organization promptly. We maintain open communication channels with Business partners to address any issues and ensure continuous improvement.

8. **Safety Conscious Business Partner's employees Felicitation:** Energy Solutions initiated a new practice of Business partner employees' evaluation for work by taking all precautions, their involvement and improvement in safety at the plant. Respective Line manager and Safety Officer jointly do the evaluation as per given checklist and felicitate winning Business partner employees by giving awards to enhance OHSE culture of plant.





By implementing these arrangements, we created a safe, sustainable, and compliant work environment for all Business partners working at our plant.

Digital Initiatives for reporting Lead Indicators in system:

We leverage digital tools for managing EHS, including QR-enabled asset tracking, mobile app-based safety inspections, and predictive analytics on safety risk profiling to enhance safety performance.

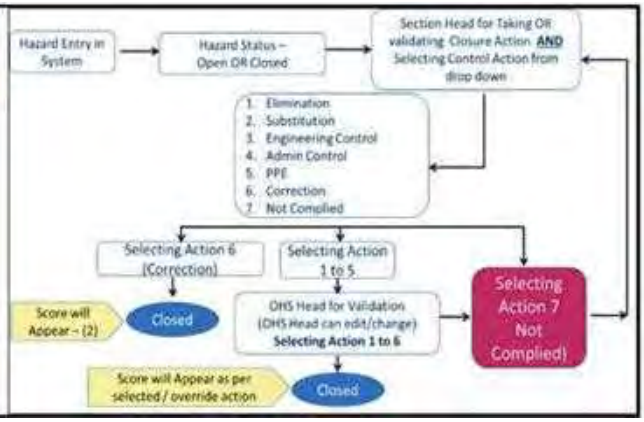
As far as Busbar plant operations are concerned, hazards are identified through a combination of leading and lagging indicators to ensure a comprehensive approach to risk management. Here are some common methods used to identify hazards in Busbar Plant:

1. **Hazard Identification Tools:** Using hazard identification tools such as Hazard Identification, Assessment of Risk & Opportunities (HIRA – As per ISO 45001 standards). Which help us systematically identify potential hazards associated with specific tasks, equipment, or materials used in Busbar plant operations.

2. **Use of Mobile App and Company's portal system:** For Hazard reporting we have Mobile Safety App (i-Report) and Company's portal system (Speed flow) from where employees can proactively report the hazards with corrective actions.



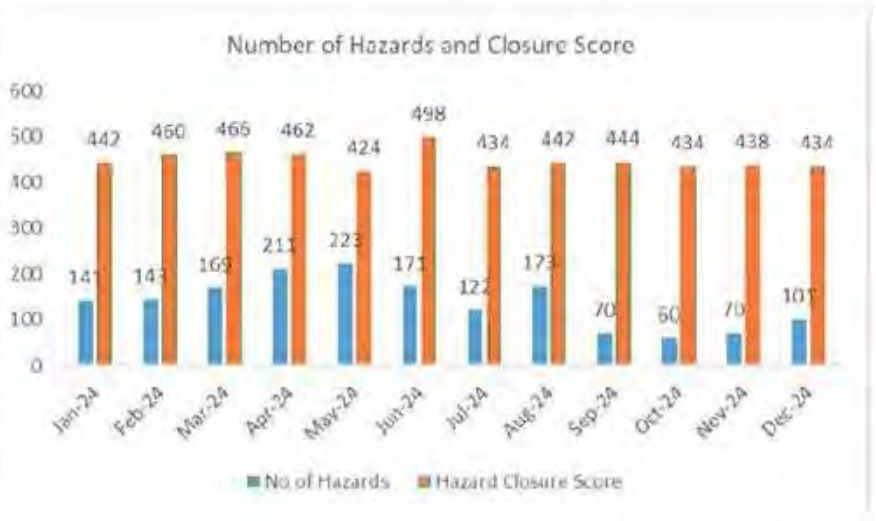






Hazards identified & closed in system during 2024 Calendar Year:

Month	No of Hazards	Hazard Closure Score
Jan-24	141	442
Feb-24	143	460
Mar-24	169	466
Apr-24	211	462
May-24	223	424
Jun-24	171	498
Jul-24	122	434
Aug-24	173	442
Sep-24	70	444
Oct-24	60	434
Nov-24	70	438
Dec-24	101	434
Total	**1654**	**5378**



"SAFETY FIRST": OHS Performance Contest Methodology in our Organization

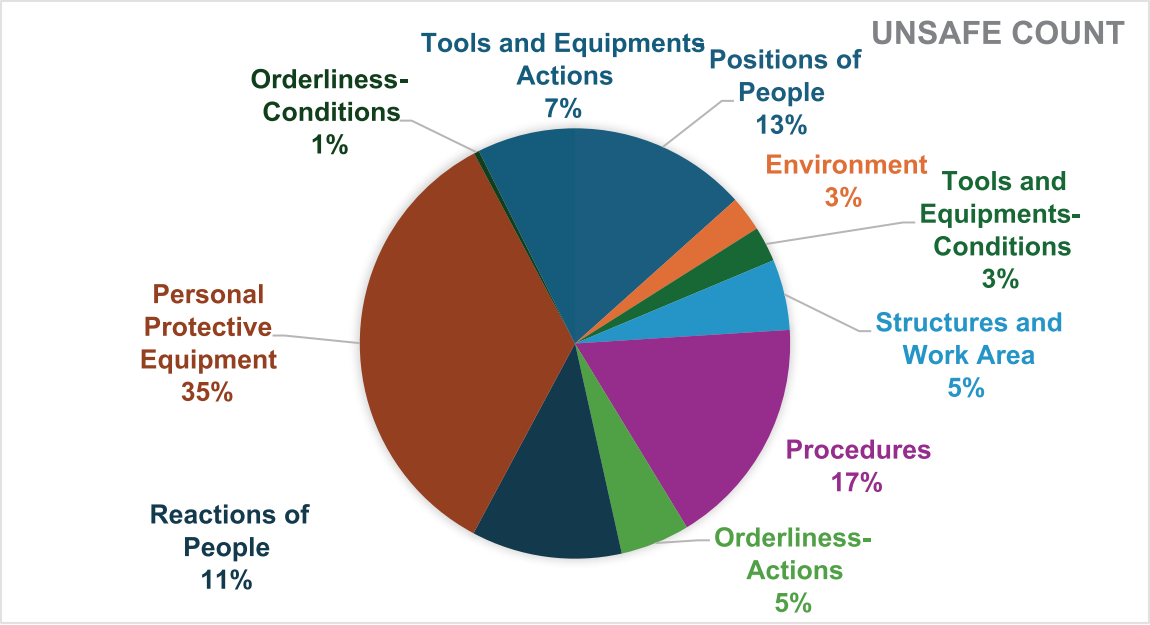
This contest is based on the concept of "Lead" & "Lag" indicators, and Behavior Based Safety.

The Safety First – OHS Performance Contest ensures proactive participation at all levels, helping us bring down the number of incidences across the organization.

The contest will be applicable to all the Manufacturing Divisions / Plants / Units of Godrej & Boyce Mfg. Co. Ltd.

BBS (Behavioral Based safety observation) reported in System during 2024:

We are observing BBS in routine basis. We have trained our team leaders, supervisors & line managers on BBS. Emerging area is coming out PPE, Procedures for which corrective actions are planned & we are working on it. Details of Unsafe count observations mentioned below.



3. **Safety Inspections:** Regular safety inspections of shop floor, store area, offices help us to identify hazards such as electrical hazards, fall risks, electrical risk, risk during material loading, unloading, moving parts, exposure to sharp edges risk etc. Inspections provide real-time data on potential risks and allow for immediate corrective actions. Safety teams as well as line managers are doing joint safety inspections on regular basis during these inspections proactively hazards are identified, and suitable corrective actions are immediately implemented.

We are preparing the inspection & audit planning of next month & taking approval from Mfg. Head for conducting the same by circulating to all & displaying in notice board.

4. **Audit/Assessment:** Conducting regular audits and assessments of shop floor activities, which help us to identify potential hazards and their noncompliance of regulations. These proactive assessments serve as leading indicators to prevent incidents before they occur. Top Management, Safety team as well as line managers are conducting safety Audits / Assessment on regular basis (Monthly & Quarterly) during these Audits observations are recorded and proactively hazards are identified, and suitable corrective actions are recommended, and plant team implemented on the same.

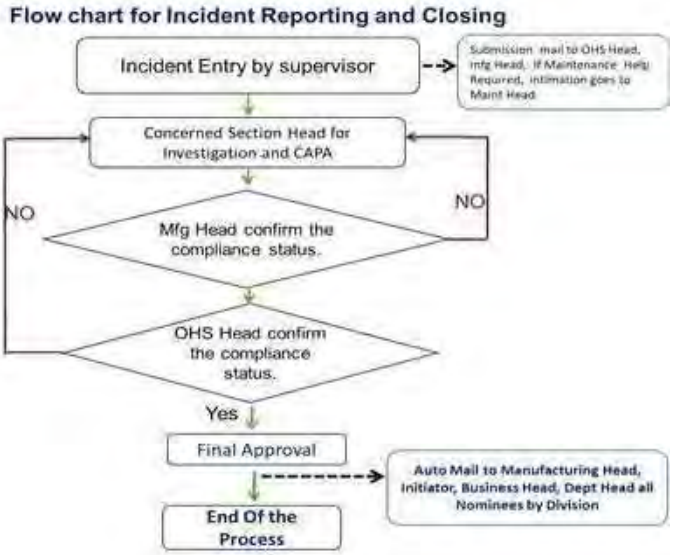






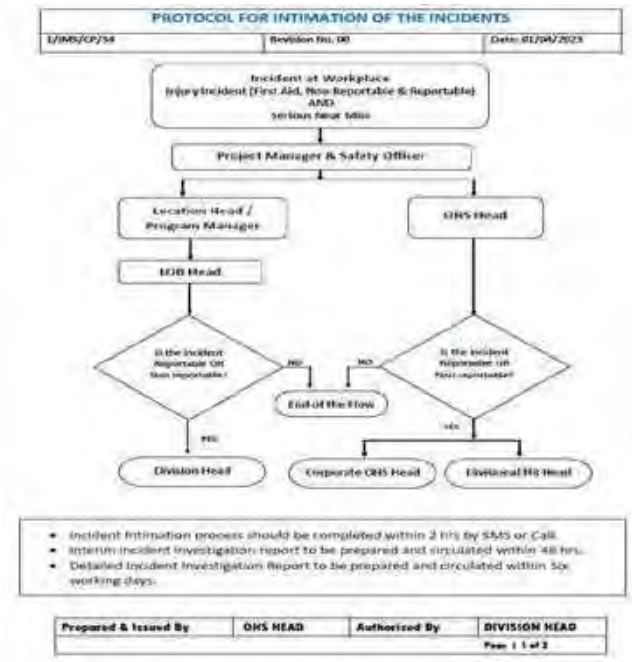
5. **Near Miss Reporting:** Encouraging employees to report near misses, incidents that could have resulted in harm but did not, can provide valuable insights into potential hazards. Analyzing near misses helps identify underlying issues and allows for corrective actions to be taken to prevent future incidents. For Near Miss reporting we have Mobile Safety App (I-Report) and Company's portal system (Speed flow) from where employee can proactively report the Near miss, concerned engineers are acting on the same and further it will be approved by Project Manager and Safety team consequently after verifying the corrective actions.

6. **Incident Reporting:** Tracking and analyzing incidents, injuries that occur in our plant can help identify hazards and root causes that need to be addressed. Incident reporting serves as a lagging indicator to learn from past events and implement preventive measures to mitigate risks. We have well established Protocol for intimation of the incident and all incidents are proactively reported as per the protocol only.

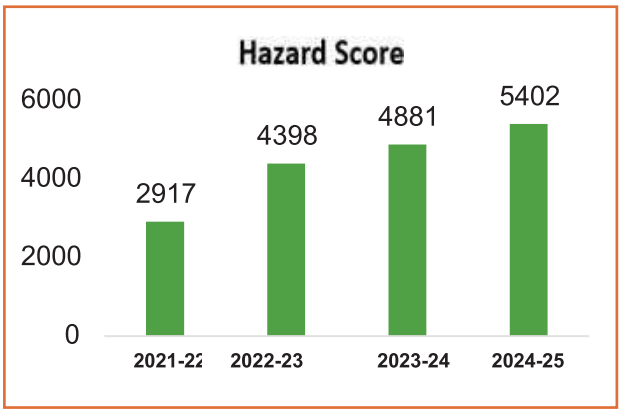


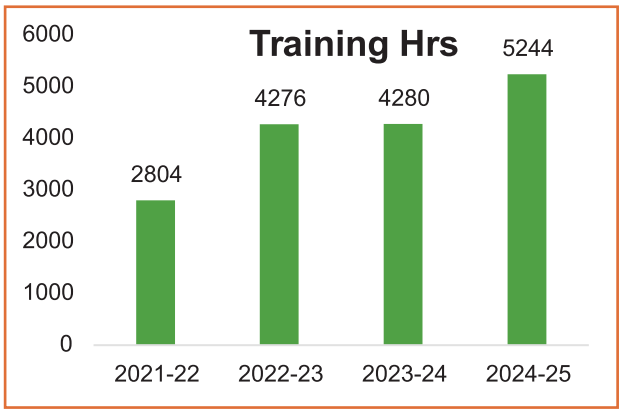
Incident Reporting Protocol:

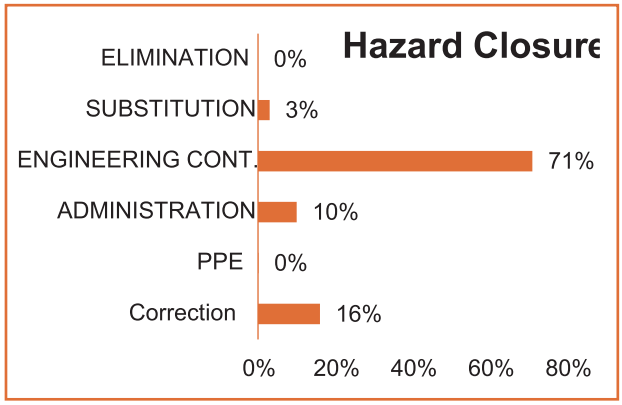
By utilizing a combination of leading indicators (such as audits, near miss reporting, and safety inspections) and lagging indicators (such as incident reporting), our organization proactively identify hazards in our plant operations, implement corrective actions, and continuously improve their safety performance. This holistic approach to hazard identification helps us to create a safer work environment for our employees and reduces the likelihood of incidents and injuries in our plant operations.



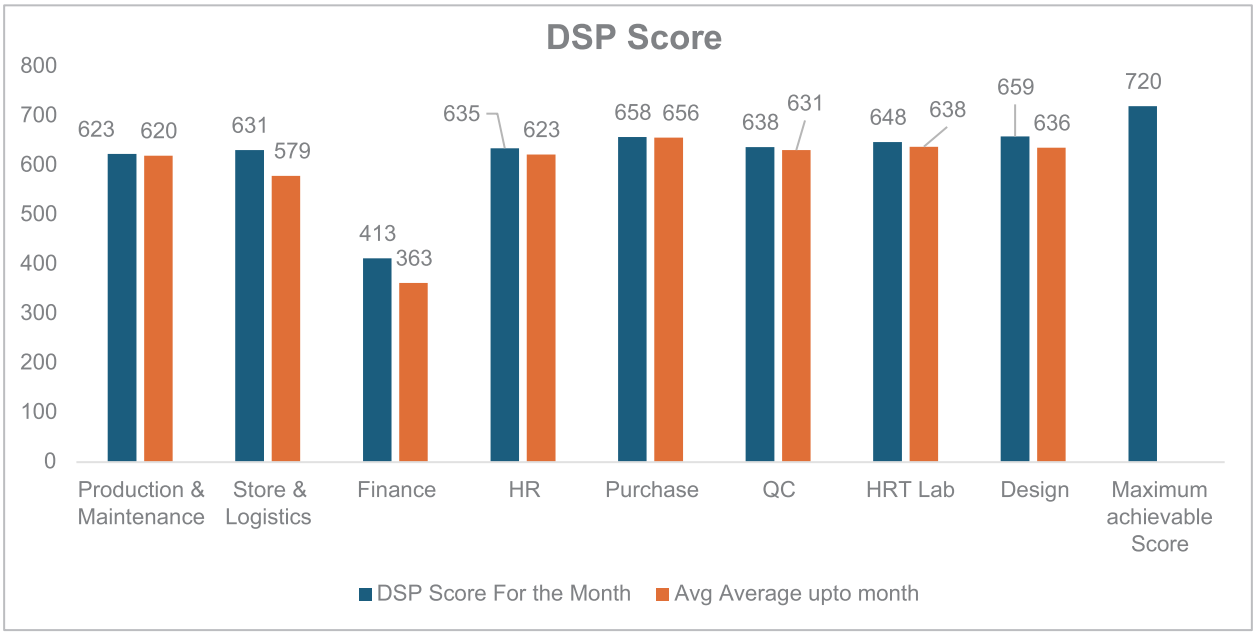
Continuous improvement in Lead Indicators reporting:







Departmental Safety Performance (DSP) Data for the Month of May 2025:



Conclusion:

The recognition by the National Safety Council with the Sarvashreshtha Suraksha Puraskar – 2024 Award is a testament to our relentless pursuit of creating a Safer and sustainable future.

Workplace safety is not just a regulatory requirement, but a fundamental aspect of a healthy and productive work environment. By understanding the risks, implementing preventative measures, and fostering a culture of safety, organizations can protect their employees and ensure their long-term success. Remember, prioritizing safety is not just a responsibility; it's an investment in the well-being of your workforce and the future of your organization.

Let's all strive to create a safer environment, one step at a time."

* * *

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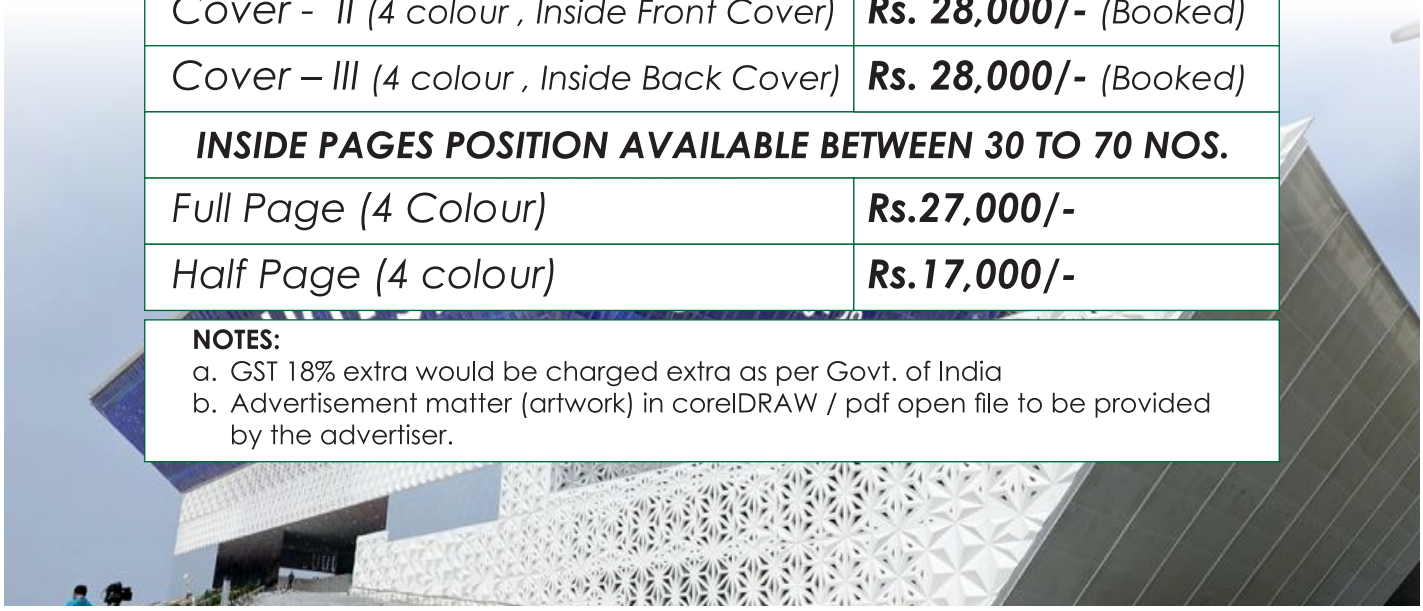
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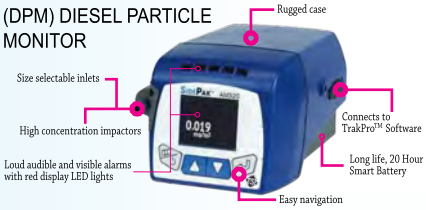


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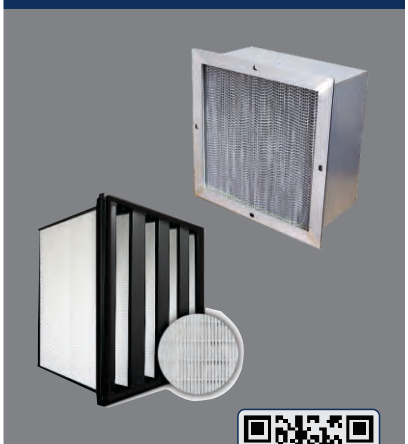
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