

9<sup>TH</sup>

Handbook for  
**FICCI Quality Systems  
Excellence Awards for Industry 2022  
& Conference on  
Systems Shaping Quality Trends**

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Conference Partners

Platinum Partner



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Associate Partners









# Contents

- About the Awards ..... 1
- Award Process ..... 3
- Last two Edition's Awardees ..... 4
- Jury Profile ..... 6
- List of Auditors/Assessors for the 2022 Awards ..... 10
- Awardees for 2022 and their Best Practices ..... 11
- Certificate of Appreciation Recipients ..... 42







# About the Awards

FICCI Quality Systems Excellence Award completes the journey of its ninth edition with an expanded scope and in an era where new digital and other technologies are shaping the future of industry. Enhancing the scope from "Manufacturing Awards" to "Awards for Industry", the Award now covers sectors including Construction, Manufacturing, Mining and Power (including Generation, Transmission and Distribution).

The Awards, institutionalized for excellence in quality systems in industry, assess the robustness of 'Quality Systems' in organizations unlike most other awards that focus on product quality. Good quality systems lead to systematic improvement in organization's performance. The Award is an initiative of FICCI Manufacturing Committee which works with an agenda of improving Industry's competitiveness that would enable the domestic industry to stand up to the new and emerging challenges of the global market. Given the importance of these aspects, FICCI constituted Manufacturing Excellence Taskforce. The taskforce is currently chaired by Mr Shyam Bang, Former Chairman NABCB and Former Executive Director, Jubilant Life Science Limited and the taskforce is now leading this initiative.

The awards are presented to factories/projects for the recognition of their commitment to quality systems at workplace. The purpose of this award scheme is to recognize organizations that have high performance quality system leading to a systematic improvement in organizational performance thereby making them globally competitive. The Awards provide a benchmark for the industry as the best practices of awardees are shared with other applicants and also with the wider industry. This motivates and acts as a catalyst to encourage the industry to adopt robust quality systems and thereby making them face global competition. Many experts from some of the world's best companies have volunteered to assist us in the process of awards.

The awards are given in three categories as follows:

- Large size organization (organization having either turnover or investment excluding working capital of more than Rs 500 crore)
- Medium size organization (organization having either turnover or investment excluding working capital between Rs 100 crore to Rs 500 crore. If any one of the parameters crosses the limit of Rs 500 crore then the organization goes into large size organization)
- Small size organization (organization having turnover & investment excluding working capital both less than Rs 100 crore)



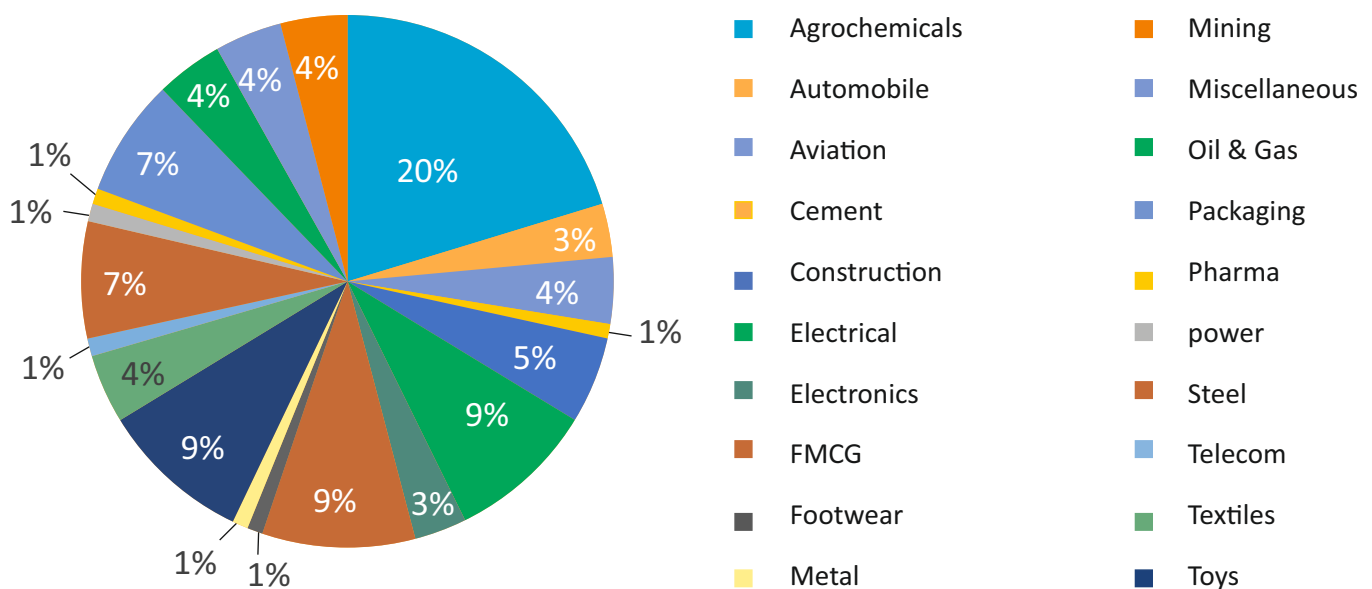


## Comparative picture of nine editions of the Awards:

Parameters	Awards 2012	Awards 2013	Awards 2014	Awards 2015	Awards 2016	Awards 2017	Awards 2019	Awards 2020	Awards 2022
Total Applications received	63	79	93	102	76	98	93	85	75
Total Applications in Large category	35	30	35	80	61	73	70	53	58
Total Applications in Medium category	18	38	38	11	10	11	16	23	8
Total Applications in Small category	10	11	20	11	5	14	7	9	9

In terms of sectoral composition, this year's Awards spanned across 20 sectors with automotive, electronic/electrical, power, textile and FMCG dominating half of the total applicants. We would strive to continue our efforts so that more and more companies from varied sectors participate in this benchmarking exercise incorporate good quality systems on shopfloors.

## Sectoral Composition of Applicants: 9th Edition





# Award Process

The award process started in October 2021. FICCI Quality Systems Excellence Award process has 3 qualifying stages:

- Document Assessment of all applicant units
- Site Audit for short listed units based on document assessment
- Jury to finalize the Awardees

Details of this process are as follows:

- Design and finalisation of questionnaire and assessment matrix for the awards with the support of industry
- Circulation of Application amongst the industry
- Empanelment of auditors/assessors for the evaluation from the industry based on prescribed eligibility criteria formed by the Quality Working Group under FICCI Manufacturing Excellence Taskforce
- Applications evaluated by the assessors and marks allotted along with feedback for each application
- Presentation of document evaluation results to the FICCI Working Group on Quality
- Site audit for shortlisted units
- Presentation of site audit results to FICCI Working Group on Quality
- Presentation of further shortlisted units to the Hon'ble Jury of the Awards
- Selection of Awardees by Hon'ble Jury
- Announcement of Awards in the Conference
- Feedback to be shared with the applicants



# Last Two Edition's Awardees

## 8th FICCI Quality Systems Excellence Awards for Industry

### Construction:

#### Large Size Category

- Platinum (First) Prize: Larsen & Toubro Limited - Power IC

#### Medium Size Category

- Platinum (First) Prize: EDAC Engineering Limited, Chennai, India

### Manufacturing:

#### Large Size Category

- Platinum (First) Prize: Unilever India Exports Limited, Kandla
- Gold (Second) Prize: TLT Manufacturing Unit - Kanchipuram, Power Transmission & Distribution IC, Larsen & Toubro Limited
- Silver (Third) Prize: Raymond UCO Denim Pvt. Ltd. Yavatmal, Maharashtra

#### Medium Size Category

- Platinum (First) Prize: EOS POWER INDIA PRIVATE LIMITED
- Gold (Second) Prize: Shriram Rayons, Kota; a Unit of DCM Shriram Industries Limited
- Silver (Third) Prize: TE CONNECTIVITY - AD&M INDIA

#### Small Size Category

- Platinum (First) Prize: Oerlikon Balzers Coating India Pvt Ltd - Bengaluru
- Gold (Second) Prize: Insmart Systems

### Mining:

- Platinum (First) Prize: NMDC Ltd, BIOM - Bachel Complex, Dantewada District

### Power Large:

- Platinum (First) Prize: CESC Ltd. Budge Budge Generating Station, Kolkata



## 7th FICCI Quality Systems Excellence Awards for Industry

### Construction:

- L&T Construction (SK Mines, Dariba)

### Manufacturing:

#### Large Size Category

- Platinum (First) Prize: Aditya Aluminium (Hindalco Industries, Odisha)
- Gold (Second) Prize: Gabriel India Limited (Dewas)
- Silver (Third) Prize: Reliance India Limited (Dahej)

#### Medium Size Category

- Platinum (First) Prize: Cyient DLM Private Limited (Mysuru)
- Gold (Second) Prize: SkipperSeil Limited

#### Small Size Category

- Platinum (First) Prize: TE Connectivity -ADM India (Bengaluru)
- Gold (Second) Prize: Stork Rubber Products Private Limited (Gurugram)

### Mining:

- Platinum (First) Prize: NMDC Limited, BIOM Bacheli Complex (Bacheli)

### Power Large:

- Platinum (First) Prize: Haldia Energy Limited (Haldia)

### Power Medium:

- Platinum (First) Prize: Adani Electricity Mumbai Limited (Mumbai)





# Jury Profile



## Mr. Shyam Bang

Former Chairman, NABCB and Former Executive Director  
Jubilant Life Sciences Limited

Mr Shyam Bang is a post graduate chemical engineer and has been associated with chemical and pharmaceutical industries in India and other countries for forty five years. He was executive director and member of board of Jubilant Life Sciences Ltd, a company recognized globally in the speciality chemicals and pharmaceuticals business segment. After superannuation he continues to support manufacturing industry through various initiatives.

### Mr Bang is:

- Chairman of FICCI Task Force for Manufacturing Excellence
- Secretary of Lovraj Kumar Memorial Trust
- Former Chairman of NABCB
- Past President of Indian Institute of Chemical Engineers
- Former member of Governing Council of National Safety Council
- Member of Governing Council of Indian national Academy of Engineering



## Mr Ajay Shankar

Former Secretary, Department for Promotion of Industry and  
Internal Trade

Ajay Shankar has had rich and varied experience in public service for over forty years.

He has served as Secretary, Department of Industrial Policy and Promotion in the Government of India where his key responsibilities included FDI policy, investment promotion and the IPR regime in the country. The plan for the ambitious Delhi- Mumbai Industrial Corridor Project was developed under his stewardship. He was the Chairman of the National Productivity Council and of the Quality Council of India. He initiated the setting up of Invest India to facilitate enhanced inflow of FDI.

After superannuation, he served as the Member Secretary of the National Manufacturing Competitiveness Council (NMCC), an advisory body comprising leading Captains of Industry, key Secretaries of Government and eminent Academics.

He has been a member of the Committees set up by Government of India on: (i) Reform of Public Sector Enterprises, (ii) Restructuring of HAL and (iii) Electricity Distribution Reforms. He has recently served as the Chairman of (a) PPP Review Committee of the Railways and (b) Expert Committee for Replacing Multiple Prior Permissions with a Regulatory Mechanism for improving Ease of Doing Business. He has served on the Boards of major public sector companies and is now non-executive Independent Director in a few companies. He has been a Public Policy Scholar at the Woodrow Wilson Center in Washington DC. He is a Distinguished Fellow at TERI, a Senior Fellow at the Delhi Policy Group (DPG) and a Senior Adviser at IRADe.





## Smt. Surina Rajan

Director General, Haryana Institute of Public Administration, Gurugram

Smt. Surina Rajan is currently serving as Director General of Haryana Institute of Public Administration, Gurugram which is the Apex Training Institute of Haryana. She was the CEO of Bureau of Indian Standards (BIS) - the National Standards Body (NSB) in the rank of Secretary to Govt. of India. Before that for 5 years she served as Civil Servant in Ministry of Defence, Government of India. Between the year 2009-2014 she was the Chief Inspector of Factories, Labour Commissioner, Director of Employment, Director of Science & Technology and Education Departments in Haryana as HoD/Administrative Secretary.

She is a gold medallist in BA Hons (Economics), distinctive holder in M.A./M.Phil (Economics) and All India Topper in Indian Economics Services and Indian Administrative Services.

### Awards & Achievements

Recognition for excellent work in programs of Swachh Bharat Abhiyan, Solar Power Installations, National Apprenticeship Schemes, Skill-Training, Start-up Promotion work, e-introduction of e-governance, Literacy Mission, Blood Bank, Scout & Guide work, Self-Help Groups, Energy Conservation etc. Have coordinated nearly 30 publications relating to Public Policy and Project Management.



## Mr. Rajeev Sharma

Scientist-F & DDG (DDG Standardization-I), BIS

More than 33 years of experience in standardization, conformity assessment and their related governance, strategic and operational aspects. Presently working as Deputy Director General at Bureau of Indian Standards (BIS), the National Standards Body of India which is engaged in formulation of Indian Standards and the activities of Certification of Products and Management systems through various Conformity Assessment Schemes, Compulsory Registration of Electronics & IT Goods, Hallmark Gold & Silver, QMS, EMS Certification etc.

### CAREER

Joined Bureau of Indian Standards (The National Standards Body of India) in 1989 and for the last more than 33 years associated with Conformity Assessment Schemes, Management System Certification Activities, Laboratory Management and Standards Development Activities.

Involved in auditing and management of operation of product certification licensees for wide range of products like electrical motors, transformers, lamps and related equipment, switchgears, wiring accessories, electrical appliances, cables and conductors, electrical apparatus for explosive atmospheres,

Actively involved in Management Systems Certification Audits of organizations as per ISO 9001 (Quality Management Systems), ISO 50001 (Energy Management Systems), IS 15700 (QMS-Requirements for Service Quality for Public Service Organizations) as Lead Auditor/ Team Leader. Also undergone Lead Auditors Training course as per ISO 14001 (Environmental management systems), ISO 37001 (Anti Bribery management systems) and ISO 45001 (Occupational health and safety management systems).

Registered Technical Assessor for ISO/IEC 17025 and carried out assessments of various International Conformity Assessment Bodies under the IECEE-CB Scheme.

Presently he is the Deputy Director General – Head Standardization activity in BIS. He has been deeply involved in shaping the policies of BIS.

Received the IEC 1906 Award as expert of the IEC System Committee LVDC in recognition for leadership of the IEC SyC LVDC/WG1 in development of a consensus document for enabling electricity access to the ESMAP Multi-tier Framework.

### Education

Bachelor's in Electrical Engineering of 1987 batch from Punjab Engineering College, Chandigarh, India







## Dr DK Hota

Former Chairman and Managing Director, Bharat Earth Movers Limited

Dr Deepak Kumar Hota is the former Chairman and Managing Director of BEML, a Schedule "A" Defence Public Sector Undertaking, under the Ministry of Defence. He was on the Board of BEML for over seven and a half years. Prior to that he was in HPCL for a little over thirty years. Dr Hota also chaired the FICCI Public Procurement Committee.

As CMD BEML he established partnerships with TATRA, Hitachi, Hyundai Rotem, MELCO, Bombardier, Irkut, Caterpillar, Ricardo, amongst others.

Established personal connect with PMO, CEO NITI Aayog, CDS, Army Chief, Secretary DPIIT/MohUA/Defence, Chairman Railway Board as also with Hon'ble Ministers to further BEML business and exploit Make in India opportunities. Engaged McKinsey to identify growth opportunities & exploit "Atma Nirbharta"

### Notable achievements as CMD were:

1. Increase in Competition mode business
2. Sales from own R&D developed products increased by 14%
3. Highest Order Book
4. Number of R&D developed products launched under "Make in India"

### Awards / Recognitions:

- The Machinist Hall of Fame Award
- XLRI Distinguished Alumnus Award
- PSU Leadership Award by Governance Now
- CEO with HR Orientation Award by World HRD Congress
- FORE-TOP Rankers Exemplary Leadership
- Top Challengers Award at Construction World Global Awards and Outstanding contribution to Indian Manufacturing Industry.
- NHRD Award for Most Seasoned HR Professional of the year
- Honorary Degree of PhD by Manav Rachna Educational Institutions (MREI)
- Most admired leader Award 2020 from IIPM & FEIL
- PSE Excellence Award 2017 from Indian Chamber of Commerce
- World HRD Congress Award with CEO HR Orientation Award from ET Now
- CEPM Fellowship Award from Centre of Excellence, Project Management
- Elected as Vice Chairman SCOPE

### PRESENT:

1. Board member XUV University Bhubaneshwar
2. Member i2P2M governing body
3. Member of Board of IOD (Institute of Directors) at Bengaluru
4. Was invited as Advisor for UPSC Interviews in April 2022 to assist the Interview Board





## Mr M M Singh

Executive Advisor, Maruti Suzuki India Limited (MSIL)

Mr. M M Singh is currently in the role of Executive Advisor in Maruti Suzuki India Limited (MSIL). In the current role, he is heading the International Automobile Centre of Excellence (iACE), a Section-08 company, will be the apex center for skill development for the automotive sector in the state of Gujarat, utilizing modern technology & systems. The center caters to the entire value chain of the Automotive Industry encompassing both Manufacturing & Servicing. It offers training programs with an Industry Designed Curricula alongside State-of-the-art learning resources to ensure exposure to latest technologies and methods thereby provide Integrated Internship Opportunities and a Globally Recognized Certification. All OEMs, Component suppliers of Gujarat are also going to be benefitted through this center.

Mr. Singh held the position of Executive Director of Production for over a decade. He has built Maruti's unique and sustainable edge in low-cost, high quality and high volume manufacturing. Singh has led a team of over 15,000 people which manufacture every second car running on Indian roads, leading operations comprising of 114 departments and 8 divisions across vehicle and engine manufacturing, production engineering, supplier quality, projects & infrastructure, power plants, and materials & logistics etc.

Singh is associated with Maruti since inception in 1983. He is a Pioneer of “Low cost, High quality, High volume & Flexible manufacturing way” in India, with a focus on people involvement and empowerment. He introduced innovative ways for enhancing capacity and productivity by introducing flexi-lines for assembly to take care of demand volatility. He gave high trust on low cost in-house automations resulting in large productivity improvement at low cost.

He is adept at mentoring and building large teams. In 2005, he conceptualized an innovative program named as “Production Management System” or PMS. PMS is a system based program evolved with the involvement of people at all levels. PMS focuses on involvement, empowerment and integration of the human capital of the organization with linkage to focus areas and challenges prevailing from time to time.

Singh has brought a paradigm shift in auto logistics in India with the development of railway logistics. He has spearheaded various infrastructure projects such as, development of a world-class export car terminal at Mundra Port; development of railway wagons; regional stockyards and warehouses.

He is also active in several forums related to Manufacturing of CII & FICCI.

### **Educational Background:**

He graduated in B.E. (Electronics) from BIT Mesra. He had an initial stint of 5 years in TELCO (now Tata Motors) and TISCO as Design and Maintenance Engineer





# List of Auditors/Assessors for the Awards



1. Mr. Abhayraj S Kute, Director Quality, GE Aerospace
2. Dr. Amit Ravindra Patil, Health and Safety leader - India and Indian subcontinent, Philips India Limited
3. Mr. Amit Tiwari, Director Operations, Flextronics Technologies India Private Limited
4. Mr. Anand Mistry, Sr DGM - QA QC NDE and TQM, Head Quality, Larsen & Toubro - Defence
5. Mr. Anirban Ghosh, Chief Quality Officer - Cairn Oil & Gas, Vedanta Limited
6. Mr. Ankan Mitra, Head Regulatory Affairs (Mining & Steel), Tata Steel Ltd
7. Mr. Devender Kumar Dewan, Advisor, Maruti Suzuki India Limited
8. Mr. Javed Khan, Global leader of Manufacturing Quality, IT Security & Performance Management, Nokia Solutions and Networks India Private Limited
9. Mr. K Mamallan, Senior Manager (Safety, Health, Environment, Quality), Chennai Petroleum Corporation Ltd
10. Mr. Manojkumar Belgaonkar, Head - Regulations, Standards and QM, Siemens Limited India
11. Mr. M. Balasubramanian, GM - QHSE, Bearys Group
12. Mr. M.P Jain, Former Executive Director, Engineers India Ltd
13. Mr. Mihir Vaidya, Assistant General Manager-QA & Outsourcing QC, L&T-MHI Power Boilers Private Limited
14. Ms Mohini Hanwate, Head of Quality Management, Siemens Limited
15. Mr Nirmal Rajappa, Supply Chain Quality Manger, Nokia Solutions and Networks India Pvt Ltd
16. Ms Padma S, Product Group Quality Manager for Ice-Cream and Foods SA, Hindustan Unilever Limited
17. Mr. Pardeep Parhar, Manager - EHS, Signify Innovations India Limited
18. Dr. Pramod Pandey, Global Safety Engineering Leader, Royal Philips
19. Mr S. Sivakumar, Deputy General Manager - Quality, L&T Heavy Engineering
20. Mr V Chinnasamy, Head QA/QC/NDE, L&T Heavy Engineering

# Awardees for the 9th Edition and their Best Practices

## MANUFACTURING SECTOR Large Category

### PLATINUM (FIRST) PRIZE

**Name of Organization- L&T Heavy Engineering**

**Location - Surat, Gujarat**

#### **Organization Overview:**

L&T Heavy Engineering business is global leader in supply of the Engineered to order hi-tech equipment needs of Refinery, Oil & Gas, Fertilizer, Petrochemicals and Nuclear plants. The business has been at the forefront of introducing digital Industry 4.0 techniques, products, and materials into manufacturing sector for over eight decades. Dedicated engineering procurement, project management and construction teams of our Modification, Revamp and Upgrade (MRU) business offer technology-driven, quick turnaround solutions for process plants. A.M. Naik Heavy Engineering complex at Hazira is globally benchmarked state-of-the-art fully integrated, digitally enabled manufacturing complex. Our capability spectrum not only covers in-house engineering, R&D centres, and world class fabrication facilities, but also includes a highly talented team, committed to a safe and sustainable work culture. The business achieved international recognition through an impeccable track record of executing large complex projects and constantly creating new international benchmarks.

Our state-of-the-art manufacturing facilities are located at:

- Hazira (Surat) - A. M. Naik Heavy Engineering complex with its own waterfront 'Load on' and 'Ro Ro' jetties
- Ranoli (Vadodara) - Vadodara Heavy Engineering Works, a facility that handles stainless steels, non-ferrous, exotic materials, and process plant internals
- Powai (Mumbai) - Supports Modification, Revamp and Upgrade Business



## Key Features of Quality Systems:

Robust Quality management System for Technologically Complex & Diverse Heavy engineering products and services (Process plant, Nuclear, Internals & MRU-Site Services). Quality management Systems like ISO, ASME, ASME Nuclear, CE marking and SELO are certified through various agencies across globe and have demonstrated sustainable performance in all processes for so many decades.

Vision and mission statements from leadership team, demonstrates that the company is driving towards "Be the Best ". Strong Cultural Values i.e Safety, Quality, Customer centricity, Trust, Transparency, Action Orientation, Boundaryless Working are established, communicated, and demonstrated across all levels. Strong Leadership Commitment on Quality, Safety as Core values and actively focuses on Strategic initiatives, Business/Operational risks, Digital transformation, Root cause analysis, People Development and Rewards/Recognition.

Company is a Trend Setter in Industry 4.0 on Digital Transformation like IIoT Welding station, QR code systems, Smart officer, Digital inspection, IEQMS, Real time Data processing across Manufacturing locations (FICCI Award on Digital). Functional Heads & Working level team have in depth understanding of quality processes and demonstrates First Time Right Every Time Culture.

Supplier Quality System is very well established, and materials are procured across the world like Europe, Japan, China, US, etc. and proactively promotes Atmanirbhar Bharat by partnering with Indian material suppliers to upgrade their products to international level.

More than 60 years of association with Domestic nuclear program and Created Global Benchmark while supplying Steam generator (700Mwe) through its quality system and nuclear safety culture Only Company in India exported 150+ nuclear components /items to International Nuclear community like US (10CFR Part 51) through USNRC regulations and ITER Organization (IO) France.

HR/IR processes are well established through Systematic training, Employee feedback, Mentoring /Coaching, Talent retention, TQM processes. Labor engagement, industrial regulations compliance etc.

## GOLD (SECOND) PRIZE

**Name of Organization: Cipla Goa - Unit 2**

**Location: Goa**

### Organization Overview:

- CIPLA Ltd. is one of the India's largest pharmaceutical company, with a heritage of over 85 years.
- "Caring For Life" has always been guiding purpose of Cipla.



- Cipla is committed to deliver consistently high-quality pharmaceuticals, medical device products and solutions that meet the medical needs of our patients
- Cipla has extended the presence to 80+ countries providing over 1,500 products across various therapeutic categories in 50+ dosage forms.
- To make healthcare more affordable globally, Cipla has expanded the presence in the key markets of India, South Africa, UK, Europe, USA and emerging world.
- Cipla manufactures and markets a wide range of Pharmaceutical Formulations, APIs & Medical devices.

### **CIPLA Limited UNIT - II, Goa.**

- The Cipla Goa, Unit - II is engaged in manufacturing of **Respiratory Drug Product - Metered Dose Inhaler.**
- Unit manufacture 20+ SKU's catering to various regulatory countries like Europe, United Kingdom, South Africa, India, Australia and rest of world.
- Products are manufactured using state-of-art, qualified, well-maintained equipment that have adequate electronic controls and back-ups for review.
- Processes are validated at commercial manufacturing unit with defined objectives and a control strategy. Process capability is studied to understand the variations in process and their impact on the quality attributes.
- Unit is periodically assessed for compliance with CGMP and CGLP by National and Foreign Competent Regulatory Authorities.
- Kaizen Quality Circle (Performance Management System) is an initiative under the umbrella of "Lean Management". In kaizen Quality Circle, Cross-functional team (at lab and shop floor) enabled / supported to own and drive patient outcomes through self-governance and continuous improvement.

### **KEY FEATURES OF QUALITY SYSTEM:**

Cipla ensure that Quality is embedded in life cycle of each product right from product development, procurement of input materials, manufacturing and distribution till it reaches to the patient / end user.

Cipla emphasizes on culture that "Quality is responsibility of everyone in the organization".





- **Quality Policy:** Cipla has developed Quality Policy by considering Patient and Customer requirements as the prime requisite. Quality Objectives are developed in line with the Quality Policy.
- **Product development:** Product Development is based on the application of QBD Concept which define the critical process parameters and critical material attributes to consistently meet the final product quality attributes.
- **Vendor Qualification and Engagement Program:** Well defined process for Qualification of each vendor, which ensure that vendor has capability to supply consistent quality material. Vendor engagement program in place which helps to maintain transparency with the vendors and ensures highest level of Quality for the input material received.
- **Robust Quality Management Systems:** Quality oversight is done through a harmonized QM, implemented across Cipla sites. The QMS is periodically reviewed for continuous improvements, in line with current GMP guidance. The effectiveness of QMS is verified through regular audit process.
- **Equipment controls:** Sophisticated equipment and instruments are in place for manufacturing and testing of products.
- **Product Manufacturing and testing Records:** The product manufacturing and testing records maintained for each product lot with complete traceability of the activities throughout the process.
- **Product Release:** Quality Assurance is responsible for release of each lot of finished products, based on the review of manufacturing ; testing and other relevant records.
- **Risk Management process:** The procedures are in place to perform the risk assessment at various stages of product life cycle. This helps to protect the continuity of product supply and ensure that end-users receive products that are fit for purpose.
- **Robust Training Program:** Each employee engaged in the operations is trained on the applicable process/procedures. Various Quality academies in place to enhance their skills.
- **Periodic Product quality review:** This periodic review is done with an objective of verifying the consistency of existing process, the appropriateness of current specifications for both starting materials and finished product to highlight any trends and to identify product and process improvements.

#### Quality Governance:

- **Quality Metrics:** Quality metrics focus on KPI's like Lot acceptance rate, QMS closure rate, % RFT,OOS rate, Product complaints rate etc.). This is monitored at three levels by the management i.e., Quality Management Review at Site level (monthly), Quality Council at corporate level (Monthly) and Quarterly basis with CEO.



- **Stringent Internal Audit Program:** Cipla's audit program includes Risk based audit approach and focusses on Quality system efficiency and organizational efficiency.
- **Regulatory Surveillance:** Cipla has a thorough Regulatory Surveillance program which keeps the sites aware and compliant of the latest regulatory updates, guidelines, and regulatory requirement.

#### Quality Road Map and key Focus Areas:

- **QUALITY CULTURE**

- Embedding a quality culture across the organisation through the TRUST initiative
- TRUST- (Towards a Robust, Unified and Sustainable (quality) Transformation) is a program that promotes culture-led quality transformation

- **PRODUCT DEVELOPMENT**

- Development of robust product by application of QBD Concept.

- **PROCESS OPTIMISATION/ SIMPLIFICATION**

- Processes are optimized to be efficient and improve compliance
- Procedures simplified to make them consistent with operations

- **DIGITAL TRANSFORMATION**

- Deploying Industry 4.0 technologies to enable near real time data transparency and embed data-led decision making
- Touchless factories of future by upgrading technology
- Use of Sophisticated equipment and instruments at manufacturing sites including QC laboratory which minimises the manual intervention in the manufacturing and testing of products.

- **DATA ANALYTICS**

- Enhance data analytical capability to identify significant trends or underlying issues.
- Use of AI and advanced analytics to improve efficiency.



## SILVER (THIRD) PRIZE

**Name of Organization: MAHINDRA AEROSTRUCTURES PVT. LTD.**

**Location: Bengaluru, Karnataka**

### **About the Organization:**

The Aerostructures business of Mahindra Aerospace is based in India and produces sheet metal parts and assemblies for leading global Aerospace and Defence majors. The business is operated by a wholly-owned subsidiary of Mahindra Aerospace - Mahindra Aerostructures Pvt. Ltd (MASPL).

A greenfield development, the MASPL facility at Bengaluru was inaugurated in 2013. It is located east of Bengaluru and commenced serial deliveries in 2015. The facility holds AS9100 Rev D, ISO 14001, ISO 45001, ISO 27001 and NADCAP accreditations, along with approvals from several OEMs (Airbus, Boeing, Dassault & GEA) and Tier 1s. It now delivers more than 100,000 parts and assemblies every month to America, Europe, Australia and on domestic front player HAL.

The facility is equipped with comprehensive capabilities to produce wide variety of sheet metal components and assemblies, as well as for special processing of metal parts up to 4 meters in length. Current production emphasis is on soft alloys - aluminium and hard metals - titanium, Inconel, and steel.

The operating team in MASPL brings decades of industry experience honed through on-the-job training at Aernnova facilities in Europe and America before the factory went live. Today, these trained professionals form the nucleus of operations at MASPL, with the overall headcount of 600 and is spread over 82500 Sq. m. The site has adequate space for expansion to meet new business requirements.

### **Key features of Quality System**

We are committed to the objective of continually improving the performance of

- Meeting the needs and expectations of interested parties.
- Achieving customer satisfaction by providing quality products on time every time.
- Reliability of our processes and Supplier performance.
- Prevention of human error in the workplace by identifying & reporting of Human factors

### **Quality Philosophy**

- i. Customer Focus
- ii. Leadership Commitment
- iii. Employee involvement and engagement
- iv. Process Approach



- v. Systematic Approach to Management
- vi. Continual Improvement
- vii. Decision Making
- viii. Supplier Relationships for mutual Beneficial

Some of the Best Practices which is practiced across the organisation are as follows:

- I. APQP Deployment
- ii. Daily work Management (Safety, Quality, Delivery, Cost, Productivity, Morale)
- iii. Quality Clinic and Internal Quality Gates
- iv. Digitization and Automation
- v. Continual Improvement
- vi. Lean 3P's Production Preparation Process

MASPL approach to product and process development in concurrently with the operation that will produce it

- vii. Digital Factory

**MASPL deploy APQP** process that happens during the product development lifecycle to facilitate transparent communication and feedback throughout the supply chain. This process allows us to detect errors early on, incorporate customer feedback, and deliver high quality products.

5 Phases of APQP which run concurrently

1. **Planning** - identify project scope with consideration of time, budget, quality, and technical requirements.
2. **Product Design & Development** - design products in accordance with requirements.
3. **Process Design & Development** - design manufacturing processes in accordance with identified requirements and risks.
4. **Product & Process Validation** - verify the ability of the processes to produce products at a given rate in conformance with the quality requirements.
5. **On-Going Production, Use & Post-Delivery Service Production** - reduce variation with regular control checks, continuous improvement, and lessons learned to ensure ongoing customer satisfaction.





### **Continuous Improvement:**

MASPL Strive to achieve incremental and breakthrough improvements through policy driven strategy applicable across the organisation. Some of the initiative work standardization through MOST, SMED, Poka-yoke, Kaizen, VSM, Six Sigma etc.,

### **Skill Development and Training:**

MASPL has dedicated personnel qualification & Certificate programme, will undergo on job training through dexterity centres, digital training, and onsite training @Customer sites. All personnel are being trained by certified trainer and OEM's. Skills are reviewed and updated on periodically basis (once in 3 months). Qualifications controlled through barcode access @ each manufacturing stage.

### **Digitization and Automation:**

Enables us to create value for stake holders and ensuring sustainability with emphasis on process efficiency and defect free manufacturing. End to End SAP integration, QR coded workflow & material movement, Laser, and Vision Inspection system to ensure strong inspection system. Part Marking Digitization, Oil application automation, Training through Virtual reality for painters, Digital PO & Invoicing etc.,

The unit has an exceptional integrated Quality, environment, Health & Safety management implemented and assessed by all customers and independent organisations (Certification body, CII, FICCI, NSC, QCFI & Group Councils) that's helps us to provide the benchmarking performance (Quality, Delivery & Overall).

## Awardees in Medium Size Category

### PLATINUM (FIRST) PRIZE

**Name of Organization: Xpro India Limited, Biax Division-Barjora Unit II**

**Location: West Bengal**

#### **About the Organization:**

Xpro India Limited is a multi-divisional, multi-locational public limited Company and part of a well-known conglomerate "the Birla Group". Early in the 1940s, the S.K. Birla group of companies forayed into plastics when Indian Plastics Limited was acquired by Sri L.N. Birla and ever since 1983 its growth into modern plastic/polymer products was driven by Chairman Sri Sidharth Birla. The Company operates Units located at Barjora (W.B.), Greater Noida (U.P.) and Ranjangaon (Maharashtra), as independent profit centers.

With a vision to be the clear favourite and premium contender in its principal markets and the industry leader in its chosen segments, Xpro brand commands great respect and is the preferred choice of reputed companies like LG, Samsung, Godrej, Whirlpool, Johnson & Johnson, Procter & Gamble, Steinerfilm, TDK, Tibcon, Globe Capacitors etc. bench marking themselves with global supply standards of quality and cost. The company has the leading and significant market share for their core products - Dielectric BOPP Films, Refrigerator Liners, Coextruded Sheets, and Release & Hygiene Films.

At Barjora, West Bengal, Dielectric BOPP Films for use in the capacitor industry (for varied applications in the automotive, power and electronics sector) are produced on a state-of-art manufacturing unit under controlled environment and ultra clean room conditions. Indigenously developed, as a direct import substitute, Xpro Dielectric films already meet nearly 40% of the Indian market, earlier dominated by films imported from Japan and Germany. Barjora plant is IATF 16949:2016, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 & ISO 50001:2018 certified and recipient of multiple excellence awards from QCI-DL Shah, FICCI, ELCINA, IEEMA and Economic Times Polymer.

Global competitiveness is achieved through a robust well-designed quality system analysing and mitigating issues at micro level, through qualified and committed R&D and technical staff. With a wide portfolio of standard, high temperature, semi rough, hazy capacitor grade films, Xpro is now a top brand in Dielectric films globally.

#### **Key Feature of Quality System**

The Quality System at Xpro Barjora focusses on continual improvement and organizational development towards meeting Quality Objectives & Continual Improvement plans arising out of KRA of organizational goal



& KPIs. The system emphasizes on the analysis and review capabilities of its people through proper training and documented procedures and extensive use of SQC & SPC at all levels.

With a clear focus on customer needs and cost effectiveness, systems for process and product quality control and end to end quality initiative are in place and reviewed at regular intervals with the help of online process capability studies. Changes in 4M are verified for adequacy & compliance before implementation, validated and documented. System also focusses on involvement and development of suppliers and sub-suppliers towards meeting quality and cost goals.

Customer feedback (through visits, meetings, complaints processing, satisfaction survey), for analysis towards product & process development and subsequent review of Customer specifications and capability assessment and drawing up new specifications' agreement are an important part of the system. Awareness regarding Customer needs is emphasized throughout the organization. Customer satisfaction survey is conducted once in a year. Assessment of competitors' activities and product is carried out and benchmarking done. Applicable regulatory, legal & statutory requirements are met (e.g., RoHS, REACH compliance of product). Product life cycle is informed to customer for disposal.

Quality Risk Assessment is done keeping in view interest of all the stake holders (including neighbours). QbD is deployed in design/development of product and manufacturing process. CTP & CTQs are identified and standardized. Cpk for critical attributes enable checking of central tendency and variability. Design of experiments used wherever applicable. FMEA for Process & Product, New Product & Raw material Validation & Product Audit are carried out. SQC & SPC used for determining trends of CTP & CTQs of product & process including incoming materials, internal failures, and root cause analysis. (8D methodology, Why-why analysis, Gauge R&R, online Cpk study, Dynamic calibration, CAPA report, OEE, Defect analysis). HODs conduct daily meetings to ensure information & action plans are percolated down the level.

Product inspection & release are carried out through Quality Plan. Customer complaints and CAPA report is generated with target and responsibility. Unique identification of product, bar coded roll label and sound to-and-fro traceability system support quick product recall whenever necessary.

Plant and machinery are fully automated and display real time data and historical process variable data are auto stored for verification & analysis. Condition based preventive maintenance is done and MTTR, MTBF, are determined for critical equipment. Repetitive failures are analyzed and CAPA for repetitive failures is generated, and actions taken and reviewed.

Employee training and skill development using skill matrix. Employee Suggestion Scheme, with recognition & reward, involves people at all levels for promotion & improvement in Quality through SGA, QC, Kaizen, Poka Yoke.

Management Systems certified by TUV Nord Germany for IATF, QMS, EMS, OH&S and EnMS upgraded to latest versions. Unit is recipient of multiple Quality System & Project related Awards from QCI-DL Shah, FICCI, ELCINA, IEEMA and Economic Times Polymer.



## GOLD (SECOND) PRIZE

**Name of Organization: Roop Automotives Ltd.**

**Location: Gurugram**

**About the Organization:**

- ROOP AUTOMOTIVES LTD. was established in year 1992. Roop is an International Supplier for Automotive Steering system parts & assemblies. The product range includes Machined Steering column Yokes (forged & stamped), I-shafts, Universal Joint Assembly, Axle Drive shafts, Steering columns for both commercial & passenger vehicles. The company caters to OEMS and Steering system manufacturers in both Domestic as well as international market.
- With a machining capability of more than 42 million yokes per annum in more than 200 variants, the company is world's largest manufacturer of Hot Forged Steering yokes & stamped yokes & their assemblies.
- More than 70% of cars on Indian roads have a Roop product in them. The company is one of the largest exporters of Yokes and steering sub assemblies with almost 75% of volumes exported to USA, Brazil, China, Mexico, Germany, Sweden, Japan, Poland & other European countries.
- Major International Customers are Global Steering Systems, ZF Friedrichshafen Drive Systems, Fuji Koyo Autotech, NSK steering system USA, Douglas Autotech, Nexteer USA etc.
- Major Domestic Customers are JTEKT India, Mando India, Rane NSK, Nexteer India, SML Isuzu, Taeyang Metals etc.
- Major End Customers are Suzuki Motors, Toyota, GM, Ford, Hyundai, KIA Motors, Tata Motors, Mahindra, VW, Volvo, Renault, DAF etc.
- The applying unit was established in year 2010 & caters primarily to export customers with 95% SOB. Other than above product range, the plant manufactures specific products like Input & Output shafts for Driveline systems.
- All plants of Roop Auto are certified for IATF-16949:2016, ISO-14001:2015, ISO-45001:2018 & ISO-27001:2013 & has sophisticated In-house R&D testing & Measuring facilities.
- With five state-of-the-art manufacturing facilities in India (4 plants in Haryana & 1 plant in Chennai, TN) focused to Steering system parts and assemblies, all units are equipped with latest machinery that can fulfil the requirements of clients with precision. By adopting new and high-end machining, automatized & robotic facilities, Roop is in the process of moving towards leaner manufacturing setup, an optimized process for enhanced Quality, Productivity & reduced resource requirement. All plants follow and adhere "Integrated



Management Systems" & TQM philosophy and our Organization Philosophy is 'Comprehensive Excellence Through Zero Defect in entire value chain.'

- The company employees 15% of female workforce & 5% Specially abled/Marginal community.
- Roop adheres to - No to First use Plastic and reduction in carbon footprint.
- The zeal to take care of community has always been very close to the company's value system and everyone at Roop Auto takes immense pride in the same.

### Key Feature of Quality System

Quality is a way of life at Roop. The company believes Quality is an ongoing process and is essentially achieved through a concoction of continual improvement efforts & manufacturing excellence. Sustainable Growth will happen Only with Quality. Driving Quality throughout Organization is the Motto.

The Quality Philosophy is "Comprehensive Excellence Through Zero Defect" in entire Value Chain.

### Key features

- **Customer focused approach:** 0 ppm Quality level for last 3 years and are continuously sustaining at 0 ppm level. Zero Warranty claim across all international customers. No Delivery failure. Customer Specific Requirement implementation across all plants. Multi customers, multi quality systems adherence
- **Latest Inspection Equipment:** 3D CMM, Contour Tracer, Cylindricity & Roundness Tester, Vision Measuring Machine, Spline checking machine, Roughness Tester, Spectro Element Analyser (Chemical analysis equipment), Hardness tester, Metallurgical microscope, Salt Spray chamber etc.
- **Manpower skill enhancement & development** through Skill Development Centre for new as well as existing employees based on their Training need Identification and gap analysis
- **Integrated management system** (IATF-16949, ISO-14001, ISO-45001, ISO-27001 system certification)
- **Small Group Activities for continual improvement** with involvement of grass root level in Quality Circles, Focussed Groups, Ideas, Kaizens, SMED, 3M, 5-S etc.
- **Interplant Knowledge Sharing & Best Practices sharing Session** once in six months across plants for QC Circle, Kaizens, Small group activities, Poka-Yoke, SMED, Productivity, Safety, Environment etc.
- Yearly SWOT Analysis for QA Department & driving action plan for identified weaknesses & Opportunities.
- Stringent Control for Critical to Quality Parameters by Capability Monitoring & 100% inspection.
- Practice of Master Ishikawa for PFMEA Creation.
- Employee Satisfaction Survey.
- Rewards & Recognitions for Improvements.
- End to end Traceability of Products.



Element	Best Practices
<b>Supplier Management</b>	<ul style="list-style-type: none"> <li>o Robust Supplier Evaluation &amp; Selection</li> <li>o Supplier Upgradation through Cluster Program</li> <li>o Capability development &amp; Enhancement</li> </ul>
<b>System Sustenance by Robust Audits-Quality System, Process</b>	<ul style="list-style-type: none"> <li>o Certifications: IATF 16949(QMS), ISO 45001(OHS), ISO 14001(EMS), ISO 27001(ISMS)</li> <li>o Internal Audit /Interplant Audit /Process &amp; Product Audit</li> <li>o Customer System Audit /Process &amp; Product audit</li> <li>o Walk through Audit by Leadership Team</li> <li>o Layered Process Audit</li> <li>o Standardization</li> </ul>
<b>Revalidation Of Process and Products</b>	<ul style="list-style-type: none"> <li>o Process &amp; Product Audit</li> <li>o CQI-9, CQI-15, VDA 6.3</li> <li>o Special Process Audit</li> </ul>
<b>Control for Critical to Quality (CTQ) Parameters</b>	<ul style="list-style-type: none"> <li>o Detection control &amp; Occurrence Control</li> <li>o CTQ Parameter 100 % inspection &amp; Poka-Yoke</li> <li>o Process Capability Analysis for CTQ Parameters/Poka-Yoke/ Auto Correction Provision</li> <li>o Improvement plan where Process capability less than 1.33</li> </ul>
<b>Risk Assessment</b>	<ul style="list-style-type: none"> <li>o Risk assessment Related to System for Every Process following Turtle Diagram approach</li> <li>o Risk assessment of Process related Product Parameters</li> <li>o PFMEA &amp; Control plan</li> <li>o Customer Concern</li> <li>o Risk Based Audit</li> <li>o Internal Rejection</li> </ul>
<b>Adherence to Change management</b>	<ul style="list-style-type: none"> <li>o Recording of 4 M Changes</li> <li>o Interim &amp; Permanent Action</li> </ul>
<b>Tool &amp; Equipment Maintenance</b>	<ul style="list-style-type: none"> <li>o Fixture Validation</li> <li>o Machine Preventive Maintenance</li> <li>o Measuring Instrument / Receiving Gauge Calibration</li> </ul>
<b>New Product &amp; Process Development</b>	<ul style="list-style-type: none"> <li>o Latest technology equipment, automation, robots, machines etc. for process optimization</li> <li>o Adherence to 5 Phases of AIAG APQP Requirement</li> </ul>
<b>Total Employee involvement - Training &amp; Motivation</b>	<ul style="list-style-type: none"> <li>o Great Place to Work Yearly assessment</li> <li>o Ideas, Kaizen &amp; rewarding Best Kaizens &amp; Ideas/ QC Circles/ Safety circles etc.</li> <li>o Small Group Activity/ Focus Group/Quality Circle</li> <li>o Training &amp; Development of employees (new &amp; existing) in Training (DOJO) centre</li> <li>o Participate in external competitions both at National &amp; International level by ACMA, CII, ISQ, QCFI</li> </ul>

## Awardees in Small Size Category

### PLATINUM (FIRST) PRIZE

**Name of Organization: Oerlikon Balzers Coating India Pvt. Ltd.**

**Location: Manesar**

#### **About the Organization:**

Oerlikon Balzers is the leading global supplier of PVD coatings which decisively improve the performance and service lives of precision components as well as of metal-working and plastics processing tools.

The proprietary coatings developed by Oerlikon Balzers and marketed under the BALINIT® and BALIQ® brand are extremely thin and very hard. They significantly reduce wear and friction.

Oerlikon Balzers has started its operations in India in the year 1994 from Pune. Now having coating plants strategically located in Pune, Bangalore, Chennai, Ahmadabad, Jamshedpur, Manesar, Chandigarh and Aurangabad with a strength of 515 employees.

Advantages of PVD coatings are as given below:

- I. Improve product quality
- ii. Improve productivity
- iii. Reduce production costs
- iv. Increase process reliability
- v. Shorten delivery times
- vi. Reduce the environmental impact save resources

In short, BALINIT® and BALIQ® coated tools gives the performance needed to meet the increasing demands of modern manufacturing technologies. Customers make use of these advantages for cutting, punching, forming, metal die casting and plastics processing industries.

Manesar coating center is 2nd coating center in India and having strength of 85 employees. This center is certified for ISO 9001 standard valid till July 2024.

#### **Key Features of Quality System:**

##### **1. Certified quality system:**

- ISO 9001:2005



- Roadmap for IATF 16949 in 2023; Automotive components coating started in 2022.

## 2. Salient features of ISO certification:

- Online SharePoint portal for QMS - GATE for uniform globally system implementation
- Process Maps are well defined in GATE
- Stakeholder and Risk & Opportunities analysis and actions
- Process Metrics are defined on GATE for uniform monitoring across all centers
- Management reviews - senior management from HO participates in center review - shows management commitment, Use of standardized templates

## 3. Quality Strategy: Strategic Actions Elements:

- QMS, Improvement and Standardization
- Failure Prevention
- Robust Correction
- Quality Mindset
- Lessons learnt and cost reduction

## 4. Quality Structure:

- Effective strategy execution is facilitated through effective structure.
- Bottom-up approach is proposed to involve front-line team members.
- We believe that everyone can contribute for improvements and all ideas can be good ideas.
- Quality Manager directly reports to Regional Quality Head who directly reports to Managing Director and President, this structure ensure autonomy to Quality function.
- Competent people are appointed across organization as per the structure.
- Regular programs are taken to improve competency of people.

## 5. Quality System Evaluation:

- Internal System Audits
- Operations Audits by local and global auditors
- Audit from Global customers





## 6. Improvement initiatives:

- People Involvement in continual improvements
- program focused on small improvements
- 3 in1 program focused on bigger & strategic improvements
- Horizontal deployment using the outcome of both programs
- Q Complaints fast response- Shop Floorboard
- Reward & Recognition for contribution to improve quality
  - Structured and well design R & R program is implemented
  - Monthly recognition of team members by top management
- Q Communication & Competence: focus on sharing - learning - caring better for our customers
  - Q Moment: weekly sharing of Q points, Q lessons learned, Q alerts
  - Q Learning: monthly India level Q sharing to Q team at India level
  - Q Sharing platform: regional sharing of Q improvements - monthly for Asia SE
  - Q Information board on operational excellence review board - daily
  - Q Quiz & awareness campaigns
  - Q Competence Matric & Training Plan
- Leadership involvement & support
  - Plant Manager conducts Q observations: monthly
  - PQM: plant Q meeting - monthly: review - support
  - Management meeting: Q update to top management on monthly basis
- Customer experience management
  - CRM for opportunity management
  - Complaint management portal (CRM) and problem-solving team for the same
  - Customer visits on regular intervals, seminars
  - Customer satisfaction surveys and actions

- GPS enabled logistics service
- Information sharing platforms
  - Global Best / Practice & LL
  - SharePoint Site for Quality
  - QlikView - advanced tool for data analysis
  - My Balzers
  - Ideas - Progress App
  - GATE - online tool for process maps and documentation
  - SAP for data analysis along with Navigen as ERP
  - Online coating machines
- Quality monitoring: Early detection approach
  - Proactive Q monitoring process designed
  - Q Dashboard
  - Q monitoring by QM and plant managers
  - Call for action process to address high risk issues and initiate improvements
- Quality monitoring: Reactive approach
  - Monthly CONQ analysis and initiate problem solving
  - Problem solving through Q circles

#### **7. Cost of Non-Quality Reduction:**

- Q circles to for problem solving
- Reduce CONQ by 7.5% YOY as per global policy

#### **8. Process validation and control:**

- Use of globally validated coating machines, recipes and processes
- Globally standardized Process Control Charts to control processes

#### **9. Inspection and calibration:**

- Use of advanced inspection process and equipment's



#### 10. Preventive Maintenance:

- Implementation of world-class maintenance Program

#### 11. Competence and training:

- Skill matrix
- U-matter for performance management & development plans

#### 12. Change Management:

- System to identify and execute changes which affects products & Processes

#### 13. Employee Engagement:

- Employee Engagement survey to identify improvements and actions to improve
- HSE - Cultural change by SHIELD program
- YOGA - To keep Healthy body & Mind
- Project Manthan for leadership development

#### 14. High standard implementation of HSE and 5S:

- Use of monthly 5S audits and Kaizen tools
- One of the 5S objective is to reach '0" defect in the organization.

## GOLD (SECOND) PRIZE

**Name of Organization: M/s Stork Rubber Products (P) Pvt. Ltd.**

**Location: Haryana**

#### **About the Organization:**

Having a rich manufacturing experience that spans over 23 years, Stork caters to the automotive, industrial, power T&D and commercial equipment manufacturing industries as well as other manufacturers through its various products such as rubber parts, rubber bonded parts (engine mounts, rubber bushes etc.), high voltage polymer insulators, mechanical control cables, metal turned parts, sheet metal components, plastic injection moulded parts and rubber tooling.

Being a family run business, Stork values its relationships with customers, suppliers, and employees alike. With an average customer age of 20 years, employees who have been with Stork for up to 18 years (and counting!)



and suppliers who have built their business (and families) working with Stork for over 20 years all go a long way in establishing Stork as a reliable and trust-worthy business partner.

### Key Features of Quality System:

- **PROCESS MAPPING (IMSM/01/A1/L)**

Our QMS implements all the procedure and interaction of all the process made on the basis of PDCA methodology.

- **CUSTOMER FOCUS**

In Our QMS Customer's need and expectation has been addressed and mechanism made to implement these requirements through various QMS procedures like, Business development and order processing. For survey survey feedback and audit we implemented Customer satisfaction procedure and for complaint or concern handling we implemented complaint handling Procedure

- **EMPLOYEE ENGAGEMENT AND EMPOWERMENT**

We have engaged all the employee through various program Like MY Machine My Responsibility to keep 5 S and machine maintenance improved, Weekly shram dan activity to improve outer area of our premises for environmental improvement perspective.

- **CONTINUAL IMPROVEMENT**

QMS provides us to set quality objectives in each function area and we regularly try to achieve these objectives in defined target times, continual improvement in Our Process and procedure of working lead us to revise our objectives which are more challenging and beneficial to the organization and in its interested parties.

### 4M Change management and abnormality handling

Effective management of 4M change to minimize the risk of defect and process variation through retroactive and containment actions.

- **Operator Observance**

Monitoring of operator's working as per rule or work instruction has been done through supervisor and manager to check and improve there working effectiveness and efficiency.



- **Training Module Improvements**

Video Training Module are being made for on the Job training and continuously we improve our training methods

- **Inspector qualification through Poison cake test**

Periodic qualification of inspector through poison cake test to maintain their efficiency to detect defect to achieve zero defect at customer end.

- **Daily Red Bin analysis and Quality Circle activity**

Participation of Operators in Daily Red Bin analysis to improve their troubleshooting skill and abnormality handling skill set.

- **Tool Maintenance System**

Tool readiness check before tool loading to avoid any defect in Part and also breakdown. Also, Tool loading and Unloading has been improved to optimize the productivity

- **Internal and external complaint handling Tracker System**

We have implemented an online complaint tracker system which provide various benefit to our QMS we can access all the defect and complaint and actions taken against that for effectiveness monitoring and we can use the countermeasure taken for Process optimization in new projects.





# CONSTRUCTION SECTOR

## Awardees in Large Category

### PLATINUM (FIRST) PRIZE

**Name of Organization: L&T Energy - Hydrocarbon Construction Services**

**Location: Chennai, Tamil Nadu**

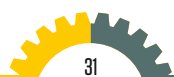
#### **About the Organization:**

**Larsen & Toubro Limited (L&T)** is an Indian multinational engaged in EPC Projects, Hi-Tech Manufacturing and Services. A strong, customer-focused approach and the constant quest for top-class quality have enabled us to attain and sustain leadership in its major lines of business for eight decades. Hydrocarbon Division under L&T's Energy portfolio undertakes engineering, procurement, fabrication, construction, and project management providing integrated 'design to build' solutions to large and complex offshore and onshore hydrocarbon projects globally.

More than three decades of rich experience in the hydrocarbon segment are backed by Division's extensive capabilities across the value chain and a range of offerings that ensure demonstrable value for customers. Employing digitalization and cutting-edge innovation, we deliver technologically superior solutions at every phase of project execution. Reliability and on-time delivery are ensured by adhering to global quality norms and the most stringent of HSE standards. The business is structured into the following verticals/business units:

- Onshore
- Offshore
- Construction Services
- Modular Fabrication
- AdVENT (Advanced Value Engineering & Technology)
- Asset Management

**About Construction Services:** Construction Services unit offers turnkey construction of refinery, petrochemical, chemical and fertilizer projects, gas gathering stations, crude oil & gas terminals, underground cavern storage systems for LPG covering civil, structural, piping, equipment, heavy lift, electrical & instrumentation works. LTEH-CS also undertakes construction of cross-country pipelines including OFC, horizontal direct drilling (HDD), testing, pre-commissioning, and commissioning. Expertise includes design, engineering, procurement & construction of civil, mechanical, electrical and instrumentation for composite station works, cathodic protection systems for pipelines / stations.



LTEH-CS is currently executing around 27 nos. of projects both in Domestic & International which are at different phases of project cycle. Meticulous Planning & Execution of these projects are done through an effective work force of around 2300 staff and 26,000+ workmen and with a wide base of in-house Plant & Machineries asset around 5358 nos.

LTEH-CS has executed various milestone projects which are of National & International significance & some key projects are:

- **World's Largest Refinery Complex** - RIL Jamnagar - Phase 3 (60 MMTPA)
- **India's Largest Gas Processing Terminal** - RIL Onshore Terminal, Kakinada (Capacity 80 MMSCMD)
- **World's Longest & India's 1st Heated & Insulated Pipeline** - Cairn Barmer - Salaya Pipeline (24" x 592 Kms)
- **World's Fastest LNG Tank** - RIL Cryogenic Ethane Storage Tank, Dahej (1.65 Lakh m<sup>3</sup>) in 29 months (EPC Basis)
- **Largest Dia. Gas Pipeline in Middle East** - Habshan - Ruwais Shuweihat Pipeline project (52" x 107 Kms) for ADNOC, UAE

#### Key features of Quality Systems:

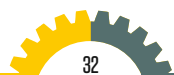
##### Quality Management System:

LTEH-CS has robust Quality Management System certified to **ISO 9001:2015** & other certifications viz. **ISO 14001, ISO 27001 & ISO 45001**. As a strong and continuous practitioner of management systems, we have adopted latest Process Approach model of **ISO 9001:2015** with **PDCA cycle**. Our Quality Management System is driven by **Vision, Mission & Quality Policy** set by our Leadership team. Subsequently, **LTEH-CS** has established its own Quality Policy at Business vertical level inline with Corporate Quality Policy addressing Long term relationship with Customers & Strategic Business Partners, Leveraging technologies for '**Execution Par Excellence**', Process Digitalization & effective implementation of Risk Management process. Based on these long-term strategies viz. Vision, Mission & Quality Policy, short term goals viz. Quality Strategic Plan & Quality Objectives are set each year with specific targets towards the Organization's Goal which are reviewed periodically for continual improvement of processes.

##### Automation:

The revolution in any Industries' growth is judged by the level of Latest Technology and Automation processes adoption in its operation. We at LTEH-CS has pioneered in adopting advanced technologies in all our domains of Constructions viz. Civil, Mechanical and Electrical & Instrumentation works. In Civil works, key automations done are Automatic Re-bar Cutting & Bending, Precast Pile Cap, Automatic Plastering, Prefabricated Re-bar cage, Electrical Airless spray application of Curing Compound & Robotic Painting for Building walls.

In Mechanical construction, various advanced technologies in Cutting & Bevelling viz. CNC Profile cutting, QSPT machines for Heavy thk. pipes & Handy machines for small bore pipes are inducted in our processes yielding higher productivity. Welding is the key activity of our Mechanical construction works & it has been



completely automated resulting in improved Product Quality & faster completion of projects. Various Welding automation initiatives are Semi-automatic GMAW for Pipe root welding in place of conventional GTAW, Automatic Orbital FCAW for pipe fill & Cap welding & Submerged Arc Welding for Heavy Wall thk. pipes.

Further, several Advanced Non-Destructive Technologies viz. Digital Radiography, PAUT including Cobra for Small bore pipe joints, Close Proximity Radiography etc. were inducted for quicker NDT results & reduced safety Hazards. Electrostatic Painting is implemented which is Eco friendly & yielding high productivity and reduced wastage w.r.t Conventional mode of Painting works. Also, several other initiatives viz. Modularization of Pipe racks, Critical Heavy Equipment Erections & In-house Scaffolding / Formwork competencies etc. are the key differentiators of us.

### **Digitalization:**

Digitization is playing an increasingly important role in the construction industry. Realizing that we developed various digital applications across all our functions to meet our critical needs viz. Data Repository & Analytics and Live monitoring etc. Some of the key digital applications are EPSILON for Integrated Project Management, Digital Dash boards for Project management and control, Digital Interface for Workmen viz. Facial Recognition, Workforce Induction & Skill Assessment (WISA) & Digital Health Screening Application (dHSA), Quality Applications viz. eAlps for Weld Management, Live Welder Data bank & WPS Digi-Lock, HSE Management application viz. Credibility application, Corrective Action Taken (CAT) & HSE Whistle-blower, SAP Ariba for Supplier & Subcontractor Management, IoT based application for Plant & Machinery control and Scaff 3.0 for Scaffolding Management.

### **Product & Process Quality:**

We have developed in-house scientific tools viz. **Civil Product Quality Rating (CPQR) & E&I Product Quality Rating (EIPQR)** for monitoring Civil & E&I works respectively. In order to avoid any subjectivity during evaluation, pre-defined parameters for assessment have been established in above modules against which samples are assessed and realistic scores are reported. For Mechanical works, NDT (RT/UT Repair%) status is the direct tool representing the Product Quality & is being monitored periodically. Continual improvement targets stringent than the global standards are set for all 3 works' Product Quality level & various technologies and process improvement measures are taken in order to ensure the Product Quality.

Apart from above, to measure Process Quality, we developed In-house **Project Quality Index (PQI)** system derived from various International Customer's model to assess the Project's overall Quality Performance including Engineering, Procurement & Construction.

### **Quality Promotional activities - Annual Quality Trophy:**

Quality Trophy is an annual award instituted to motivate Projects towards excellence in Quality which is developed from various Business Excellence models to suit our requirements. Eligible projects are assessed for various parameters viz. Product Quality, QMS Performance & Customer Satisfaction etc. by Independent Assessor trained / experienced in various Business Excellence models.



## GOLD (SECOND) PRIZE

**Name of Organization:** Larsen & Toubro Limited, Transportation Infrastructure, Railway SBG, EMP-4 project  
**Location:** Rajasthan

### **About the Organization:**

Larsen & Toubro 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 eight decades.

L&T Construction executes EPC projects in the infrastructure segment, with single-source responsibility, adopting innovative design engineering and a global supply chain. Digitalisation, mechanisation and the ability to mobilise large, highly trained crews enable it to meet stringent deadlines and rigorous standards. At every project site and establishment of L&T Construction, the highest priority is accorded to the environment, health, and safety.

L&T's Railway Business offers turnkey Design-Build / EPC for Railway and Urban Transit projects. For the JICA funded Western Dedicated Freight Corridor, L&T is executing mega projects on a Design-Build basis. This includes a continuous section of 2113 tkm of civil and track work, 3145 tkm of electrical and mechanical work, 897 tkm of signaling & telecommunication and 316 tkm of integrated composite project. Scale and Speed have been the hall mark of these projects - executed through state-of-the-art mechanised methods. The projects have reached major milestones with multiple sections commissioned for commercial operation.

L&T is also executing major World Bank funded sections in Eastern Dedicated Freight Corridor involving Civil, Track work and 2x25 kV Electrification.

In the realm of Urban Transit Infrastructure, L&T is executing a 26 km Integrated Transit System in Mauritius of which major sections are in commercial operation. We are also executing the System works (Track works, Traction and OHE, CBTC Signalling, Telecom, AFC) for Dhaka Metro Line 6 (JICA funded) which is in advance stage of completion. L&T has also been associated with Civil and Systems works for various Transit Systems in India and in Middle East (Riyadh Metro, Doha Metro)

### **Our range of services include:**

- Integrated / Composite Railway Projects
- Dedicated Freight Corridors
- Conventional and Ballast less trackwork
- Railway Electrification
- Signaling and Telecommunication Systems
- Urban Rail Mass Transit System (Metro/LRT/Monorail)



- Bridges, Tunnels, Underground and Elevated Stations
- Rail Connectivity for Coal links and Core Sector Developers

**Key features of Quality system:**

L&T Railway SBG is ISO 9001:2015 certified organization. QMS (Quality Management System) has been designed to address the requirement of both National and International Customers.

Our motto is "Delighting Customers through capacity building and establishing Quality culture". Accordingly, QMS focuses on following aspect for sustainable system.

1. Digitalization: All the major processes of QMS i.e., Audit management, NCR management, Inspection request management & laboratory management has been fully digitalized and paperless. These enables in real time data acquisition and analytics towards Quality 4.0.
2. Knowledge management: All the processes have been made accessible to all users. QR code-based control of document & drawings ensures availability of current revision at the point of use
3. First Time Right: concept has been adapted design, procurement, execution, and fabrication.  
 "Kitting Concept" as a way of procurement to upgrade vendor planning, quality has been a paradigm shift from traditional material supply approach.
4. 5S: Warehouse management tool from Lean management has been employed in the project stores, laboratory, and offices. Besides ensuring faster retrieval, it ensures increased productivity improved internal efficiencies and operational effectiveness.
5. SPOT: Targets to individuals for spotting of potential noncompliant processes proactively, empowers everyone to stop the processes in case of non-conformity
6. Benchmarking: is carried out not only for projects but for external providers as well. Enables healthy competition and sharing of best practices and mutually beneficial relationship.



## Awardees in Power Sector

### SILVER (THIRD) PRIZE

**Name of Organization: CESC Ltd. Budge Budge Generating Station**

**Location: Kolkata**

#### **About the Organization:**

CESC Limited, the flagship company of RP-Sanjiv Goenka group of companies, is in the business of Generation and Distribution of electricity in the City of Kolkata over a century. It has a licensee area of 567 sq. km. and a consumer base of over 3.2 million. It has 3 generating Stations of which Budge Budge Generating Station (BBGS) is the prime one.

BBGS, a coal fired thermal power plant of 3 x 250 MW installed capacity, is situated on the bank of river Hoogli. Coal is brought to the Station by wagons, crushed in crushers, pulverized in mills and is burnt in Boiler to produce steam. Water is taken from river, de-mineralized in DM Plant and fed to Boiler as makeup. Superheated Steam from the Boiler rotates the Turbine, condenses in Condenser and is fed back to Boiler. Turbine acts as prime mover for Generator. As the Generator rotates Electricity is produced which reaches the consumers via transmission & distribution networks.

Accessibility of affordable, uninterrupted and quality power is one of the main determinants of today's quality of life. BBGS, a zero effluent discharge station, boasts of having most of the performance figures placed among the top notches in the country. High PLF (Plant Load Factor), low Specific Energy Consumption, high PAF (Plant Availability Factor), low stack emission, low specific water consumption, 100% ash utilization are some of its traits. We implement energy saving initiatives to make our processes sustainable and environment friendly.

#### **Key features of the Quality Systems**

BBGS is aligned with the Vision, Mission and Core Values of CESC. It is certified with ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 and ISO50001:2018. The Quality Strategic Plan is inclusive of the internal and external factors and the directions to deal with them. Top management ensures the achievement of the Objectives by translating them further to functional objectives and monitoring the achievement of the targets assigned to these objectives. Key Performance Indicators are reviewed, and necessary corrective and preventive actions are taken to achieve the goals. Improvements are carried out through implementation of various initiatives, innovations, Kaizen, and benchmarking activities.

Identification of Quality risks is done based on risk-based thinking approach which includes both risks & opportunities depending on the organization context. It considers external & internal issues and needs and expectation of the interested parties relevant to the organization & its various Departments.

To maintain a consistent good quality service BBGS pays attention to both the technological amelioration and



the modernization of operation & maintenance practices. BBGS is equipped with the state-of-the-art technologies like remote monitoring system handling numerous live and historical data, PADO (Performance Analysis Diagnostics and Optimization) -an artificial intelligence based tool for identifying and controlling the parameters which cause efficiency deviations, in-house built Decision Support System for instant process related decision making, upgraded version of DCS (Distributed Control System), Energy Monitoring server for collecting, comparing and analysing the trend of power consumption, Cloud based online checking of field parameters, Application based Safety Observation, Online SMS application for Management Information System, Visitors' Safety Management System and an in-house portal containing almost every data and reports of the plant. Lock Out Tag Out (LOTO) is an integral part of our online Defect Management System.

BBGS takes prime concern in protecting environment. We adopt best possible practices to reduce Carbon footprint and achieve sustainable development. BBGS is the globally first thermal power plant to register two of its projects with UNFCCC as CDM (Clean Development Mechanism) projects.

CESC is a 'Great Place to Work'. Communication meetings with top management and surveys are conducted throughout the organization to have the holistic reflection of the employees' overall satisfaction level towards the organization, towards their workplace, their discontent, views etc. In BBGS apart from these, there are EHS meetings with contractor proprietors and with workmen in every quarter to discuss and solve the safety related issues.

Corporate Social Responsibility is an integral part of CESC's mission and vision. BBGS endeavours different projects including the infrastructure development of schools and health centers, amelioration of library, distribution of wheelchair, tricycles and hearing aids to differently abled people, awareness building programs to uplift the society.

**Name of Organization: JSW Energy (Barmer) Limited**

**Location: Barmer, Rajasthan**

**About the Organization:**

JSW Energy (Barmer) Limited (JSWBL) plant is located in the Thar Desert of Rajasthan and has capacity to produce 1,080MW (8X 135MW) of power. In spite of Extreme weather condition, JSWBL manage to smooth operation and generate maximum Power. JSWBL plant is based on the CFBC technology, which allows the use of low-grade fuel such as lignite. Lignite is sourced from neighboring Jalipa and Kapurdi Mines.

JSWBL has a power purchase agreement with the Government of Rajasthan to sell its entire Power. The water for the power plant is sourced from IGNP canal at Mohangarh through intermediate pumping station. This plant was one of the first in India to have a dedicated 185-km pipeline constructed to source water from the Indira Gandhi Canal.

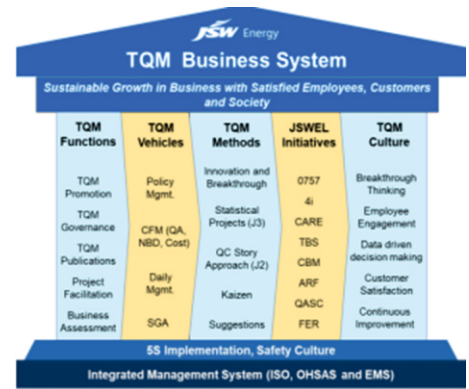
JSWBL conduct all its activities and operations in a reliable and responsible manner resulting in efficient and effective processes which enable uninterrupted supply of energy, prevent pollution, provide safe and healthy work environment.



## Key features of the Quality Systems

### Total Quality Management (TQM) Culture at JSWBL

The TQM team under the guidance of leadership formulated an integrated House of TQM which is known as 'TQM Business System'. It is seen as Business System rather than a Management System. Its 5 pillars are driven by each other. The whole system of TQM Deployment works on the underlying principle of 'Sustainable Growth in Business with Happy Employees, Customers and Society'.



### JSWBL Quality Enablers

- EMS Implementation
- Performance Monitoring (OSI PI)
- Analytics Dash board in Qlik Sense
- Linking of Operational and Financial Measures for Continual Improvement

### Policy Management at JSWBL

Policy Deployment (PD) is an important element of the overall process of TQM. PD process provides an opportunity to continually improve JSWBL's performance by properly deploying the mission, goals, targets and strategies from corporate level to the lower levels.

### Daily Management (DM) Implementation at JSWBL

Daily Management at JSWBL is carried out for sustenance of KPI performance through the existing processes with incremental improvements. We defined organizational capability as the ability to maintain, improve and transform ourselves in a changing world. The "improve" portion consists of both small and big improvements. While big improvements and transformation are taken under Policy (Breakthrough) Management.

The process flow for Daily Management at JSWEL are:

1. Abnormality Handling Recurrence Prevention Framework
2. KPI Health Check-up through graphs
3. Gemba (Shop-Floor) promoted by Leadership

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### Employee Engagement Initiatives at JSWBL

JSWBL believes employees engagement is an experience that creates a conducive environment for employees and leads to improvement in organization's productivity, cost and quality of its products and services. TQM Promotion plays the key lever for engaging employees across the organization at JSWEL. TQM Promotion is a major activity that is being practiced across the organization in massive scale and has evolved over a period of time.



Key TQM Promotional elements that have helped binding the mass together at JSWBL are:

1. Interactive TQM Portal
2. TQM Quiz
3. TQM Newsletter
4. TQM Promotion at Shop-floor
5. Internal and External Competition

### TQM Training and Education at JSWBL

The TQM Capability building Model evolved and developed with 3 elements:

- 3-tier Analytical Training Program Architecture called J1, J2 and J3
- Interactive Online Education Platform
- Job specific training modules.

## Awardees in Mining Sector

### SILVER (THIRD) PRIZE

**Name of Organization: Rampura Agucha Mines, Hindustan Zinc Limited**

**Location: Rajasthan**

#### **About the Organization:**

Vedanta Resources Limited is a Globally diversified Natural Resources Company with interests in Zinc, Lead, Silver, Iron ore, Steel, Copper, Aluminum, Power, Oil and Gas. We are empowered to drive excellence and innovation; we demonstrate world-class standards of governance, safety, sustainability, and social responsibility. Hindustan Zinc Limited (subsidiary of the Vedanta Group) is ranked Globally Top 5 in Dow Jones sustainability index. It is India's largest and world's second largest zinc-lead miner with 50+ years of operational experience in the Mining, Beneficiation, and Smelting field, we dedicate the highest priority to the safety and welfare of our employees. Our fully integrated Zinc smelting operations currently hold 78% market share in India's primary zinc industry. We are also among the Top 6 silver producers globally with an annual capacity of 600 MT+. Our vision is to be the largest and most cost-efficient Lead & Zinc manufacturer in the world and ensure Zero Harm, Zero Waste and Zero Discharge. Our strategy is to build a sustainable social connect with our business partners and focus on Energy Saving Goals. The HZL Quality Policy is tailor made to ensure customer delight by committing to deliver business objectives through systematic implementation of continuous improvement initiatives by adapting the TQM Framework and achieving operating excellence through digitalization.

Rampura Agucha Mines, located in Rajasthan, is home to the world's largest underground Lead-Zinc Mines with a total metal production capacity of +5,00,000 TPA.

#### **Key features of the Quality Systems**

Rampura Agucha Mines is empowered with an excellent infrastructure of two declines, a main shaft of 960m depth and a fully functional paste filling system in the mines and a 4 Stream Ore Beneficiation unit with a total capacity of 6.5MMTPA which diligently recover lead, zinc and silver and send it to the smelters. In last 2 years, many quality improvement initiatives have been completed by adopting TQM framework. The mining cycle time was reduced from 38 days to 31 days by improving the capacity of the paste flow from 160m<sup>3</sup>/hr to 180 m<sup>3</sup>/hr and improving stope barricade design. By optimizing the efficiency of jumbo drills, we have achieved an





increase in the pull per blast from 3.2-4m. In the mills innovative technologies like modifying Eh/pH of Pb flotation, Implementation of Advanced Process Control (APC) with Grade Recovery Optimizer and operational excellence initiatives like Grind size close control by altering grinding media size and many other has improved our Lead Recovery by 18%, Ag recovery by 47% and Zn recovery by 4% in last two years. Our inhouse R&D Lab (Zn Technology center) is also helping us pioneering tailor made chemicals in collaboration with Chemical suppliers. We have successfully replaced the conventional graphite depressant (Nigrosine-carcinogenic chemical) with a non-carcinogenic alternative (X-900) which has not only minimized the health risks posing to the workforce but also reduced the impurity content in the concentrate which helped our smelters to improve throughput and reduce operational costs. Similarly, development of a tailor made chemical (PM-40) which promotes silver flotation also helped us to recover more silver from the ore. With the help of digitalization, we are making data driven decision through continuously monitoring, analyzing, simulating the process conditions, and then implementing the changes to achieve operational excellence. We continue to strive daily to surpass our limits by implementing innovative and cost-effective solutions in our operations and our employees are rewarded for their contributions and efforts.

# Certificate of Appreciation Recipients



1. Adani Electricity Mumbai Limited
2. Cipla Ltd - Patalganga
3. Flextronics Technologies (India) Private Limited
4. Gabriel India Ltd. Khandsa (Gurgaon)
5. Hindustan Zinc limited, Dariba Zinc Smelter Complex
6. International Tobacco Company Ltd, Ghaziabad
7. JSW Energy Ltd - Bellary
8. Larsen & Toubro Limited, Transportation Infrastructure, Railway SBG, Mauritius LRT project
9. Larsen & Toubro Limited, TLT Manufacturing Unit - Kanchipuram, Power Transmission & Distribution IC
10. Narayan Powertech Pvt. Ltd. (Unit - 1)
11. SB Packagings Pvt. Ltd.
12. Shriram Pistons & Rings Limited
13. TATA REALTY.
14. M/s TE Connectivity India (Aerospace Defense & Marine )
15. Tex Corp Pvt Ltd





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## **About FICCI**

Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies.

A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry. From influencing policy to encouraging debate, engaging with policy makers and civil society, FICCI articulates the views and concerns of industry. It serves its members from the Indian private and public corporate sectors and multinational companies, drawing its strength from diverse regional chambers of commerce and industry across states, reaching out to over 2,50,000 companies.

FICCI provides a platform for networking and consensus building within and across sectors and is the first port of call for Indian industry, policy makers and the international business community.

## **CONTACT**

Federation House, 1, Tansen Marg, New Delhi 110001, INDIA

E: [manufacturing@ficci.com](mailto:manufacturing@ficci.com)

[www.ficci.in](http://www.ficci.in)