

EXCELLENCE IN CONSISTENT TPM ACHIEVEMENT - 2023



LUMAX INDUSTRIES LIMITED

Plot No.-69 & 70-A, Phase-2, Sector-2

Bidadi Industrial Area, Bidadi

Ramanagar Taluk

Dist.- Bengaluru

Pin- 562109

State – Karnataka

(India)

1. Organization profile:

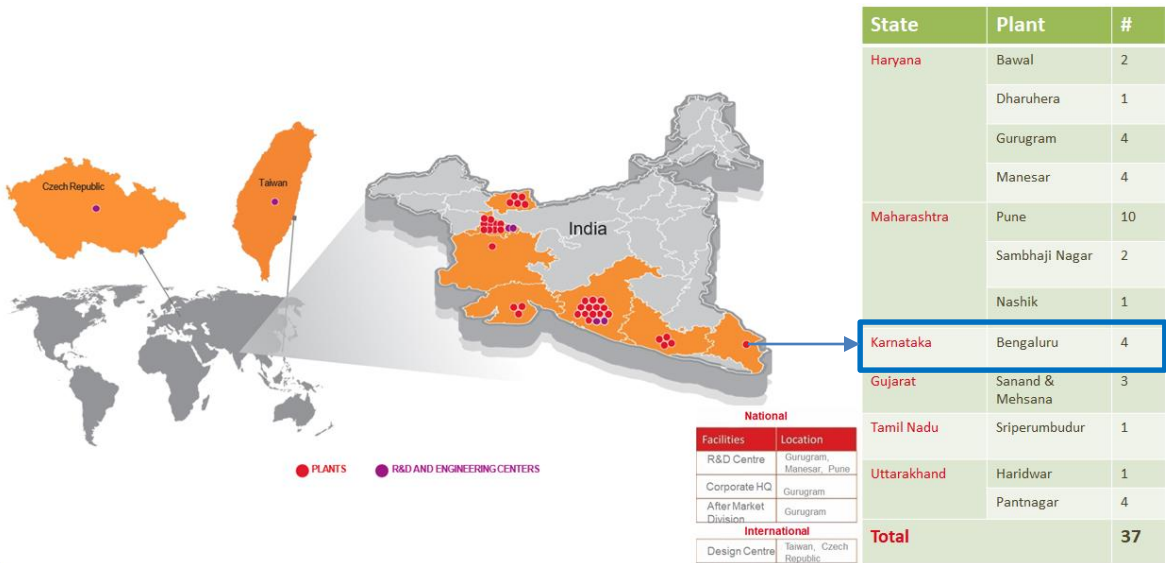
In the 80s and 90s, when the Automotive Industry was taking shape in India, a huge opportunity arose. The opportunity of being a potential leader in the Automotive Lighting and Allied Automotive components industry. Lumax took firm hold of this opportunity and turned it into a reality lived every day by its 12,000-strong workforce, working across 38 modern manufacturing locations across India. This manufacturing strength is backed by 3 Research Centers, 1 Engineering Centre in India and 2 design centres in Taiwan and Czech Republic. The Lumax Group has a turnover of over INR 6,800 Crore FY22-23, and diligently empowers the assembly lines of almost all Top Automotive OEM brands. Lumax is also improving its international footprint with real intent and is accomplishing all this with the timeless values of Respect, Integrity, Passion and Excellence. The rich legacy withstanding the fact that Lumax is still young at heart and ever evolving, and it believes that success has just begun to unravel!

The DK Jain Group has Auto Component manufacturing capabilities across several product categories including end-to-end Automotive Lighting solutions, Air Intake systems, Urea Tanks, Integrated Plastic Modules, Gear Shifters, Transmission Products, Seat Structures, 2-Wheeler Chassis & Swing Arm, 3W Trailing Arm, Electric & Electronic Components, HVAC Panels, On-board Antennas, Power Window Switches, Vehicle Interior Systems & Components etc.



Plant at Bengaluru Location:

Lumax DK Jain Group is owned by DK Jain Family and consists of two listed companies, i.e. Lumax Industries Limited and Lumax Auto Technologies Limited. Lumax is currently operating with 15 entities spread in seven states across India. There are thirty-seven manufacturing plants across India.



Our Partnerships:

LUMAX INDUSTRIES

JAPAN **STANLEY**
 * 1984 * 37.5% Share
 * End-to-end Lighting, HVAC Panels & Electronics

SOUTH KOREA **SL Corporation**
 * 1997 * 21.28% Share
 * End-to-end Lighting and other Automotive parts

LUMAX AUTO TECHNOLOGIES

ITALY **Coraglia**
 * 2007 * 60% share
 * Emission Systems - Urea Tank, Air Filter, CAC Ducts

JAPAN **MannoH**
 * 2013 * 5% share
 * Gear Shifters - MT, AT, AMT, DCT, Monostable GLSA, Cables

SPAIN **FAE**
 * 2017 * 84% share
 * Oxygen Sensors

ISRAEL **Ituran**
 * 2017 * 50% share
 * Telematics Products and Services

GERMANY **JOPP**
 * 2019 * 50% share
 * Transmission Products - Shift Towers, E-Actuators, Fork Shifter

JAPAN **Yokowo**
 * 2020 * 60% share
 * On-board Antennas - Shark Fin, Micro Antenna, IP Antenna

JAPAN **ALPS ALPINE**
 * 2021 * 50% share
 * Electric Devices and Components - Power Window Switches

JAPAN **JO INDUSTRY CO., LTD.**
 * 2022
 * Technical Agreement For Kinematic Components
 * IP Louvers, Pre Coloured Garnish, Metal to Plastic Conversion

USA **IAC**
 * 2023 * 75% share
 * Vehicle Interior Systems & Components - Door Panel, Instrument Panel, Cockpit















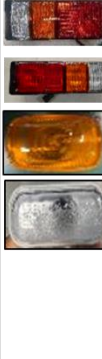






LUMAX TOURS & TRAVELS LIMITED

- * 2008
- * Travel & Tours

LUMAX ANCILLARY

- * 1992
- * Wiring harness, Control Cables, Main Wiring, Harness of Ev 2w

Ground breaking ceremony of Lumax Bengaluru Plant started on 12th June 2011 and production commenced on 27th Aug 2012 with manufacturing of Automotive Lights for Toyota Kirloskar Motor Ltd. Lumax Bengaluru Plant is having installed capacity of 26 million Two-Wheeler Sets per annum and currently its capacity utilization up to 24 million Sets per annum and for four-wheeler Capacity is 1.4 million of automotive lighting & current utilization is up to 1.2 million vehicle Sets

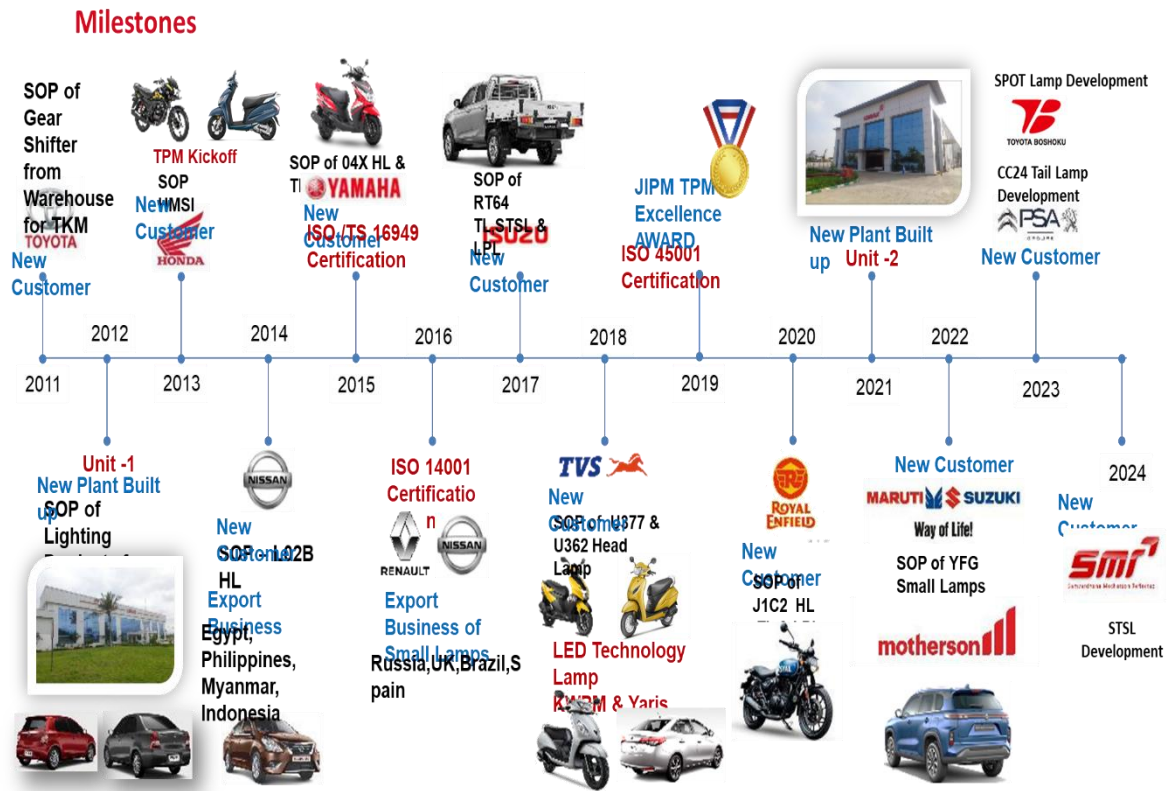
4W						2W				
										
Annual Volume in Vehicle Sets(HL+TL) :-										
1,39,100	37,000	2,00,000	4,500	2,00,000	20,000	19,23,000	8,32,000	3,000	6,000	
Supply Locations :-										
Bidadi	Chennai, Egypt, Brazil	Bidadi	Sricity	Bidadi	Chennai	Narsapur	Hosur, Mysore, HP	Chennai	Chennai	
										

Total area in Lumax Industries Limited, Bengaluru Plant have 21812 Sq.Mts. and Built-Up area is 12000 Sq. Mts. Total Manpower Strength is 609 Nos.

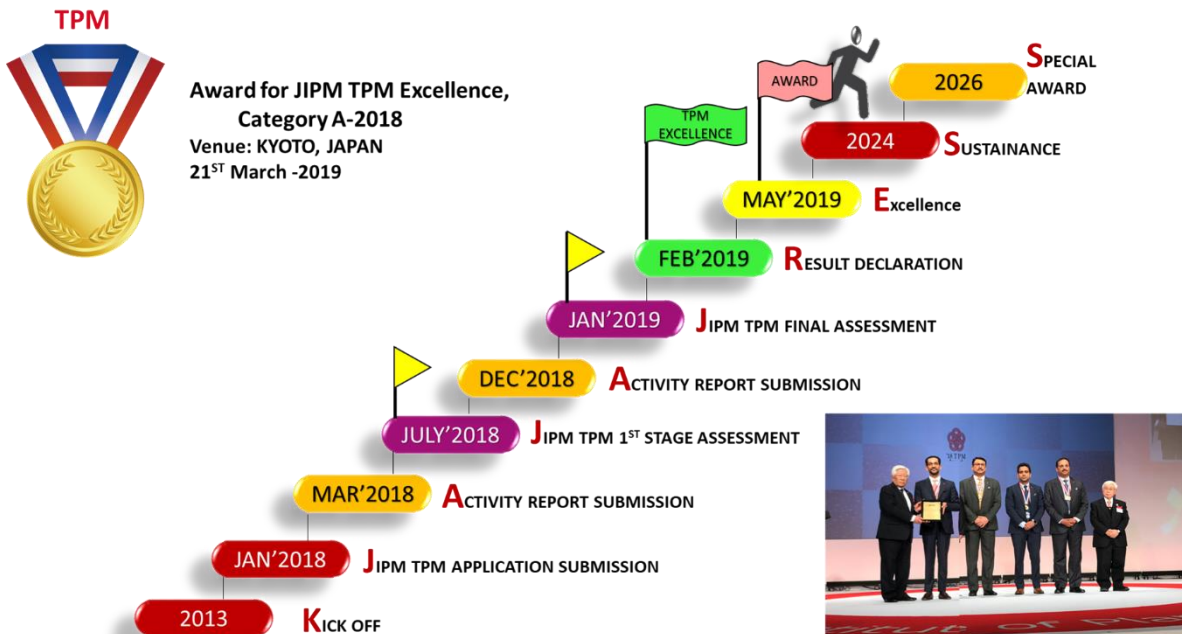
2. Milestones on Journey of manufacturing Excellence

The LIL Bengaluru Plant started TPM with management declaration on 05/07/2013 and Kick off on 17/12/2013 by Customer & our M.D. Mr. Anmol Jain. We considered this year as Benchmark 1. By Deploying TPM Methodologies & Achieving Targeted Results, we challenged TPM Excellence Award in year 2018-19 and achieved TPM Excellence Award from JIPM. After this we are continually practicing TPM Methodologies by Deepening & Widening TPM. We considered 2018-19 as BM2 (Benchmark 2) and defined Targets & Prepared Master Plan by Deepening & Widening TPM till Special Award target Year 2026-27

Key Milestones of LIL Bengaluru Plant

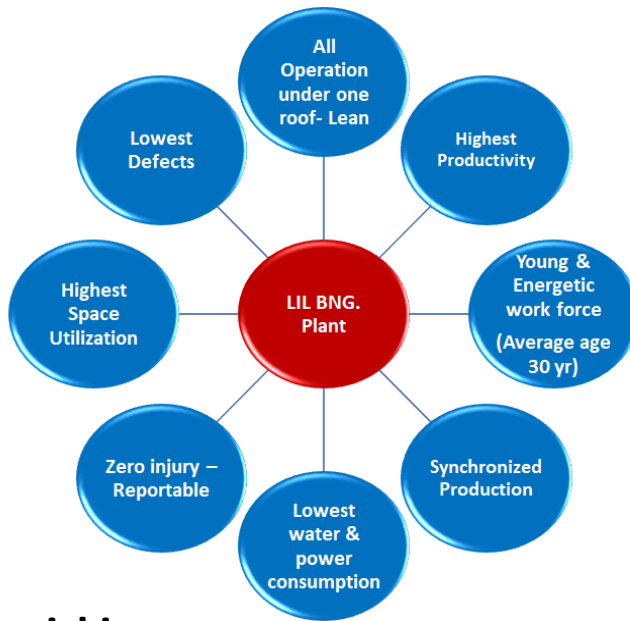


TPM Journey of manufacturing Excellence

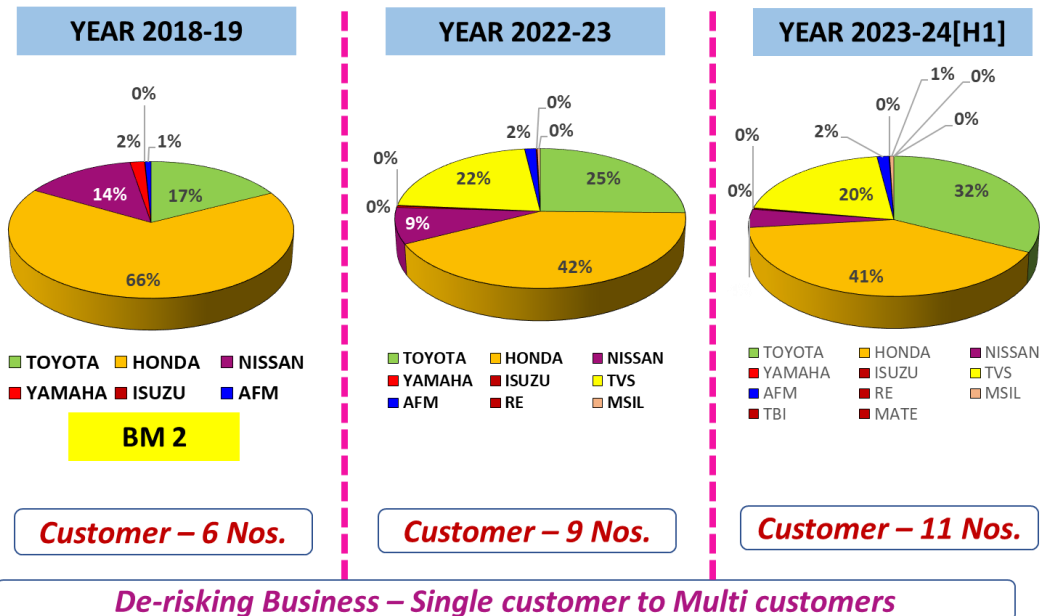


Process Technology & Plant Uniqueness:

Process technologies available in our plant are Plastic Injection moulding, Plasma coat metalizing, Hard coat, Base coat, Top coat, Antifog, Plastic paint shop and assembly lines. In assembly process we are having Glue dispensing robots, conveyORIZED assembly lines, robotic ultrasonic welding technology, Impulse welding, vibration welding machine, In-built photo testing and basic mould maintenance facilities.



Business De-risking



3. Benefits Achieved: -

TPM Implementation at Lumax Industries Limited Bengaluru Plant helped in achievement of business results. Our financial & other Business Parameter growth which has seen a steady upward trend right since TPM Kick-off. All Improvements shown w.r.t BM2 (2018-19) to YTD(Sep-23)

3.1 Key Tangible Benefits:

- LIL Bengaluru Plant Sales Improved by 90% from BM2 (2018-19).
- We achieved >18% PBDIT.(Improved by 45% from BM2 (2018-19).
- Sustenance of Zero Reportable Accident
- Productivity Improved by > 42% from BM2
- Breakdown Reduced by > 83% (All Machines)
- Mfg. conversion Cost reduced by 36%
- In-house Quality Defect Reduced by > 50%
- Warranty Complaints Reduced by 70%
- Achieved > 7 Training Man-hours Per Month per Employee
- Sustenance of 100% Delivery Performance

3.2 Intangible Benefits:

Apart from Tangible Benefits we achieved Intangible benefits also through TPM ways.

Key Intangible benefits are given below.

- Created Mind set Culture towards Zero BAD (Breakdown, Accidents, Defect)
- Improvement focused Environment
- Employees Morale, Skill & Will Improved
- Safe Culture
- Total Employee Involvement
- Way forward approach towards Digitalization

These Benefits achieved through TPM Methodologies & by 100% Employees Involvements. Few Glimpses of Employee Involvement is given below:



Employee Involvement is achieved through TPM Circle, 5S, QCC, CCC(Cost Cutting Champions) & Kaizen Competition initiatives. Promotion and reward mechanism is in place for all improvement initiatives



4. Key of Our Manufacturing Excellence

We are Committed to Execute Excellence at LIL Bengaluru Plant through TPM ways. We will extend TPM in End-to-End Supply Chain.

Our future Plan for Manufacturing Excellence is as Follows:

- Integrating Industries 4.0 with IOT
- Synchronization of three processes Moulding, Surface treatment and Assembly for Runners.
- Sequential Production System
- To become Sustainable Manufacturing Plant
- Real Time Monitoring of production and machine down time.
- To achieve Benchmark Level of End-to-End Lead Time
- Future Ready Capability Development – Data Analytics & Digitization
- To create TPM Cluster at Southern India – with Consideration of Local Vendor Base
- Focus on Localization
- Lumax Production System

6. Achievement Sheet

2023 TPM Award - Achievement Sheet

Company & plant name		Lumax Industries Limited, Bengaluru		
TPM Slogan/Objectives		TPM - Lighting Lumax, Lighting Life		
ID- 23027			▼ Please fill in the range of data you are collecting ▼	
Category	Index	Unit	BM (TPM Started or last time awarded)	Actual Status Upto Dec'23
Enter the year →			2018-19	2023
S	Number of work-related accidents requiring days off work	Cases/ year	0	0
S	Number of work-related accidents not requiring days off work	Cases/ year	2	0
P	Productivity for main products	Parts/Operator hours	9.8	14.4
P	OEE (or Overall Plant Efficiency)	%	85.9	90.4
P	Availability	%	88.7	97
P	Performance Rate	%	80.2	95.2
P	Quality Products Rate	%	88.9	98
P	Number of breakdowns	Nos	61	5
P	MTTR	Minutes	49	15
P	MTBF	Days	940	245
Q	Number of customer complaints (2018- 19 3 Customer & 22-23 8 Customer)	Number/year	2	1
Q	In-line defect rate (scrap) wrt RMC	%	1.2	0.7
Q	In-line defect rate (rework)	%	0.4	0.1
C	Cost Index (Conversion Cost)	Cost index % sales	8.9	5.7
D	Production Lead time	Hour	91	36
D	Delivery performance	%	100	100
S	Frequency rate of Occupational Accident with Leave	Number of occupational accidents with leave for 1 000 000 worked hours	0	0
M	Number of Employee Suggestions	Number/Qtr	3	4