

KNOWLEDGE SHARING | CROSS LEARNING | NETWORKING



NATIONAL PRODUCTIVITY SUMMIT 2022

“Showcasing Excellence in Manufacturing”

18 - 19 November 2022

BIEC, BANGALORE


16th
EDITION


INSIGHTFUL
PLANT VISITS


ENRICHING
KEYNOTES


INSPIRING
CASE STUDY
PRESENTATIONS

AWARDS SPONSOR

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Indian Machine Tool
Manufacturers' Association



NATIONAL PRODUCTIVITY SUMMIT 2022

"Showcasing Excellence in Manufacturing"

18 - 19 November 2022 | BIEC | BANGALORE

The resurgence of Indian manufacturing sector has opened new avenues for business growth. With the growing convergence of physical and digital manufacturing worlds, companies are constantly challenged to innovate in all spheres of their business so as to reduce costs through productivity improvement measures, sustain growth and remain competitive.

To champion the cause of productivity in the Indian manufacturing industry, the Indian Machine Tool Manufacturers' Association (IMTMA) is organizing the 16th edition of National Productivity Summit on **18 – 19 November 2022 at BIEC, Bangalore**. The event showcases best practices in manufacturing through enriching keynotes, live case study presentations and plant visits.

This summit brings out why companies should embrace an integrated approach to increase manufacturing productivity, and how to prepare their people, processes and technology as part of this journey of productivity excellence.

► Enriching Keynote Sessions

Industry leaders will share their knowledge and expertise on various facets of manufacturing competitiveness.



Dr. Gopichand Katragadda
Founder & CEO
Myelin Foundry



Dr. S Devarajan
Sr. Vice President
TVS Motor Company



Mr. M S Shankar
President – Future Mobility
(Innovation & Technology)
Anand Group

► Pre-Summit Plant Visits (Thursday, 17 November 2022)

This summit offers technical tours to delegates, which provides a unique opportunity to witness some of the best productivity improvement projects.

Leading manufacturing companies open their doors to participants on 17 November 2022 to showcase best manufacturing practices on their shop floor.

TOUR A : Ashok Leyland & TVS Motor Company

TOUR B : Indo - MIM & Tractor and Farm Equipment (TAFE)

TOUR C : Continental Automotive Components & SEG Automotive



► IMTMA - ACE MICROMATIC PRODUCTIVITY CHAMPIONSHIP AWARDS 2022



Witness Live Case Study Presentations on some of the best practices in manufacturing. The IMTMA - ACE MICROMATIC Productivity Championship Awards 2022 will recognize and reward outstanding efforts from the shortlisted case studies of companies which have excelled in achieving superior performance and gives away cash prizes worth ₹ 10 Lakhs.



► Key Take Aways

- Insightful plant visits to renowned manufacturing companies
- Learn and benchmark from best manufacturing practices
- Listen to keynote presentations from industry leaders
- Learn innovative approaches to address productivity challenges
- Exchange new ideas and concepts – Knowledge networking
- Ideal platform to interact and network with several manufacturing professionals
- Knowledge sharing sessions on best practices in Micro & Small Enterprises

► Who Should Participate

CEOs, Top Management Executives, Senior Executives, Practicing engineers, Industry consultants and R&D Specialists from Automotive, Auto components, Die and Mould, Consumer durables, Machine tool, Tool rooms, Aerospace, Defence and Railway units, PSUs, General Engg. and other discrete manufacturing industries.

CONTESTING COMPANIES AND THEIR CASE STUDY SUMMARY

➤ Bharat Electronics Limited, Bangalore



Manufacturing of 30,000 ICU Ventilators in 90 days

Manufacturing of critical care medical equipment without prior experience, domain knowledge and infrastructure. Bharat Electronics Limited (BEL) Bangalore will showcase a case study on agility, entrepreneurship and a new business model with a unique stakeholder management approach, in a rapid scale-up of productivity with severely crunched timelines.

Ⓜ BOSCH Bosch, Bangalore ◀

Productivity improvement through the application of emerging technologies and digital solutions

Meeting customer demand through manufacturing of CBx (Common-Rail Beng) pumps aided by emerging technologies and digital solutions. Manufacturing of CBx pump line has classical productivity improvements integrated with an AI-based patented Adaptive Dynamic grinding along with Manufacturing Analytics, AI based video analytics, LCA etc. resulting in substantial savings and 30% productivity increase.

➤ Hero Motocorp, Alwar ◀ HERO

MTTPM reduction through digitalization of PM activities in ASRS system by implementing IoT based CBM monitoring system

Use of TPM in a warehouse environment for enhancing productivity and reducing 'Mean Time To Preventive Maintenance' (MTTPM). The case study explores the use of customized IoT devices in a 'Conditional Based Monitoring' (CBM) network linked to the warehouse management through 'Automatic Storage & Retrieval System' (ASRS) at their Global parts centre, Neemrana. The solution has helped Hero Motocorp to improve the availability of the pallet cranes, which are its key resources.

◀ HERO Hero Motocorp, Haridwar ◀

To increase throughput of Crank Case ABZA (160cc) line

Hero Motor Corp, Haridwar, will present a case study modelled on the TPM, KK Pillar, using the traditional ECRS (Eliminate, Combine, Rearrange, and Simplify) method in its machine lines by setting a challenging target of 25% cycle time reduction using line balancing, casting improvement and advanced tooling in a systematic way.

➤ Hitachi Astemo, Bangalore Astemo ◀

Enhancement of manufacturing capacity by meeting requirements of Quality, Cost, Delivery, Safety and Morale (QCDSM)

Productivity improvement in a pressure regulator line through a systematic, detailed process analysis, capacity study, loss identification and measures, addressing bottleneck operations impacting PQCD (Productivity, Quality, Cost, Delivery) parameters.





PRODUCTIVITY CHAMPIONS

► Kasturi Foundry, Kolhapur



Productivity and Quality improvement in Rear Axle Housing & Case for Front Axle (E68) machining line

Enhanced productivity in 2 major value streams using robots in core painting and machining areas. Coupled with other improvements, this has enabled breakthrough benefits in cost, manpower, and savings on electricity, considering the working environment in a foundry where high rejections, safety, variation in quality and stable manpower are perennial issues.



► Kirloskar Oil Engines, Kolhapur ◀

Enhance capacity and improve productivity of existing machine lines through resource optimisation

This case study from Kirloskar Oil Engines Limited is aligned with the Plant vision of "Single Digit Conversion cost" for achieving competitiveness through resource utilisation. Theory of Constraints (ToC) was used to identify machining lines with lesser utilization and redesign the flow, eliminating multiple machines, mass balancing, innovative fixturing to double-per-person output with reduced inventory and rejections.

► Larsen & Toubro, Kanchipuram



L&T Construction
Power Transmission & Distribution

Productivity enhancement through digital transformations

Productivity enhancement through digital transformations in L&T's heavy engineering shop, eliminating paperwork in a project-based environment. The case study presents a digitization approach that includes the use of AI, VR, RFID, IoT in areas of fabrication and galvanizing. Enhancement of throughput, cost reduction and the OEE (Overall Equipment Effectiveness) performance are some of the major benefits achieved while implementing the project.



► Mahindra & Mahindra, Kandivali ◀

The key to boosting efficiency – 'Single piece flow', a lean manufacturing method to improve efficiency by increasing productivity, reducing waste and enhancing quality

Single piece flow concept implemented at Mahindra & Mahindra's (M&M) legacy plant with space optimization and adopting an innovative approach in merging testing lines. M&M, while manufacturing its Bolero vehicle, uses the time-tested concept of lean and rearranges the standard practices for productivity improvement. This case study reflects on the merging of two testing lines and an innovative concept of steering wheel alignment during on-road track testing, thereby debottlenecking the line for a significant "No Fault Forward" initiative.

► Tata Motors, Pune



Progressive increase of EV capacity through productivity improvement and innovation

Leveraging market opportunity by scaling up the Nexon EV production. The evolution from a proto-shop to a mass production environment using conventional approaches has resulted in capturing huge market share and achieving breakthrough benefits.

Special Stream for Small & Micro Enterprises (SMEs)

➤ Associated Plasmatron, Thane

To enhance productivity and reduce material consumption during HVOF (High Velocity Oxy-Fuel) coating of small parts with the help of multi-spindle rotator system

Enhancing productivity and reducing material consumption during redesign of HVOF (Hi Velocity Oxy Fuel) used in the coating of small parts with the help of a multi-spindle rotator system. This has helped Associated Plasmatron in enhancing productivity by reducing costs and energy conservation.



J.P.F. METACAST PVT.LTD
- CASTING TOTAL QUALITY

JPF Metacast, Belgavi



VISION 2020: To establish new parts of machining and supply process to fulfill the customer project

JPF Meta cast will present a case study that reflects aligning its business to its Customer Vision 2020 project. It took up an ambitious project of machining 28 families of parts involving foundry and machining process in a short span of time, adding value to the customer, securing its business and generating ROI with improvement in all facets of operations.

➤ Mekhos Technology Services, Bangalore

Productivity improvement in Cabin Latch Unit assembly and testing line

Mekhos Technology Services will present a case study on how they enabled a Global OEM to cut down complexity, costs, set up change times in manufacturing cabin latch assembly of vehicles, through the innovative design of fixtures, resulting in breakthrough productivity at the customer's facility.

➤ Productivity champions of yesteryears

TOYOTA KIRLOSKAR AUTO PARTS  and many more

Tentative Programme Schedule

Pre-Summit Plant Visits: 17 November 2022 (Thursday)

0700 : 0800	Registration	0800 : 0900	Travel to Plant tour companies
0900 : 1700	TOUR A : Ashok Leyland & TVS Motor Company TOUR B : Indo - MIM & Tractor and Farm Equipment (TAFE) TOUR C : Continental Automotive Components & SEG Automotive		

Summit Day 1: 18 November 2022 (Friday)

0830 : 1000	Registration
1000 : 1100	Inaugural & Keynote Session
	Guest of Honour: Dr. Gopichand Katragadda , <i>Founder & CEO, Myelin Foundry</i> Keynote Address: “Artificial Intelligence and Industrial IoT: The Last Mile”
1100 : 1120	Networking Tea / Coffee
1120 : 1200	Case Study 1: Progressive increase of EV capacity through productivity improvement and innovation, Tata Motors
1200 : 1205	Change Over
1205 : 1245	Case Study 2: The key to boosting efficiency – ‘Single piece flow’, a lean manufacturing method to improve efficiency by increasing productivity, reducing waste and enhancing quality, Mahindra & Mahindra
1245 : 1250	Change Over
1250 : 1330	Case Study 3: Manufacturing of 30,000 ICU Ventilators in 90 days, Bharat Electronics Limited
1330 : 1430	Lunch
1430 : 1510	Case Study 4: Enhance capacity and improve productivity of existing machine lines through resource optimisation, Kirloskar Oil Engines
1510 : 1515	Change Over
1515 : 1555	Keynote Address: “Paradigm shift in manufacturing and supply chain in lieu of technological developments”, Dr. S Devarajan, Sr. Vice President, TVS Motor Company
1555 : 1600	Change Over
1600 : 1640	Case Study 5: To increase throughput of Crank Case ABZA (160cc) line, Hero Motocorp- Haridwar Plant
1640 : 1645	Change Over
1645 : 1725	Case Study 6: Productivity and Quality improvement in Rear Axle Housing & Case for Front Axle (E68) machining line, Kasturi Foundry
1725 onwards	Networking Tea / Coffee

Summit Day 2: 19 November 2022 (Saturday)

0930 : 1010	Case Study 7: MTTPM reduction through digitalization of PM activities in ASRS system by implementing IoT based CBM monitoring system, Hero Motocorp - Alwar Plant
1010 : 1015	Change Over
1015 : 1055	Case Study 8: Productivity improvement through the application of emerging technologies and digital solutions, Bosch
1055 : 1115	Networking Tea / Coffee

CONCURRENT SESSIONS

1115 : 1155	Case Study 9: Enhancement of manufacturing capacity by meeting requirements of Quality, Cost, Delivery, Safety and Morale (QCDSM), Hitachi Astemo	Productivity improvements in SME sector	
		1115 : 1145	SME Case Study 1: To enhance productivity and reduce material consumption during HVOF (High Velocity Oxy-Fuel) coating of small parts with the help of multi-spindle rotator system, Associated Plasmatron
		1145 : 1215	SME Case Study 2: Productivity improvement in Cabin Latch Unit assembly and testing line, Mekhos Technology Services
1155 : 1200	Change Over	1215 : 1245	SME Case Study 3: VISION 2020: To establish new parts of machining and supply process to fulfill the customer project, JPF Metacast
1200 : 1240	Case Study 10: Productivity enhancement through digital transformations, Larsen & Toubro		
1245 : 1345	Lunch		
1345 : 1425	Keynote Address: “Productivity - INNOVATING SUSTAINABLY,” Mr. M S Shankar, <i>President - Future Mobility (Innovation & Technology), Anand Group</i>		
1425 : 1445	Networking Tea / Coffee		
1445 : 1615	IMTMA - Ace Micromatic Productivity Championship Awards 2022 Presentation Ceremony		

Registration Fee

17 November 2022 : For Pre-Summit Plant Visits
Rs. 2500 Per Delegate for Tour A / Tour B / Tour C (Add 18% GST)

TOUR A: Ashok Leyland & TVS Motor Company

TOUR B: Indo - MIM & Tractor and Farm Equipment (TAFE)

TOUR C: Continental Automotive Components & SEG Automotive

- Note
- A participant has the option of choosing only one of the plant visit i.e. either Plant Tour A or Plant Tour B or Plant Tour C, since these visits are concurrent.
 - Registration for plant visits will be limited to 25 delegates only and will be taken on 'first-come-first' basis.
 - Delegates opting for Plant visits must register on or before 10 November 2022. Confirmation for plant visits will be at the sole discretion of the host companies.
 - Plant Visits are open only to delegates participating in the summit. (on 18 -19 November 2022)

18 - 19 November 2022 : For Summit only (Per Delegate)

	Companies nominating upto 3 delegates	Companies nominating more than 3 delegates
IMTMA Members, Micro & Small Enterprises, Research & Educational Institutions	Rs. 7500*	Rs. 7000*
All other Companies	Rs. 8500*	Rs. 8000*

- Note
- *Add 18% GST
 - Registration fee includes summit documentation and Lunch on Day 1 and 2
 - Pre-payment of delegate fee is mandatory for confirmation of participation
 - Delegate fee is Non-refundable. However, change of nominations within the same company acceptable
 - Micro & Small Enterprises companies must produce valid UDYAM Registration Certificate
 - IMTMA Members may avail their membership redemption points for participating in the summit

Registration for participation must be made online only.

To register online, log on to www.productivity.imtma.in

For details or any queries/clarifications during 'Online registration' process, please contact

Abhishek : Mob: 9844294387 | E-mail: abhishek@imtma.in

Madan : Mob: 7899437625 | E-Mail: madan@imtma.in

About IMTMA

Constituted in 1946, Indian Machine Tool Manufacturers' Association (IMTMA) is a single point of contact for the machine tool industry in India. The apex body of machine tool industry in the country, IMTMA has a membership of about 460 companies from both the public and private sectors, manufacturing a wide range of metal-cutting and metal-forming machines, accessories, cutting tools and other allied equipment. The Association has over the years deeply committed itself to focus on issues of productivity, quality, technology, new product development, design, customer satisfaction, etc. for enhancing competitiveness of the industry. IMTMA is proactive in taking new initiatives to promote advancement of metalworking industry in India. IMTMA organises the prestigious IMTEX and Tooltech exhibition, where both Indian and overseas manufacturers showcase their metalworking machines, equipment and tools.



Indian Machine Tool Manufacturers' Association
www.imtma.in

Head Office

@ Bangalore International Exhibition Centre (BIEC),
10th Mile, Tumkur Road
Madavara post, Bangalore - 562 123
T : +91 80 6624 6711 | F : +91 80 6624 6661
E-mail : madan@imtma.in

Gurgaon Office

Plot No. 249F, Phase IV, Udyog Vihar,
Sector 18, Gurgaon - 122 015
T : +91-124-4014101 | F : +91-124-4014108
E-mail : imtma.ggn@imtma.in

Pune Office

12/5, D-1 Block, MIDC, Chinchwad
Pune - 411 019
Tel : +91 7066030531 / 532
E-mail : imtma.pune@imtma.in