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Indian Machine Tool
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Golden Gears in Motion

69



BEST PRACTICES
Toward Zero Defect Quality

58



JASPREET SIDHU
CHIEF EXECUTIVE OFFICER
NCAM

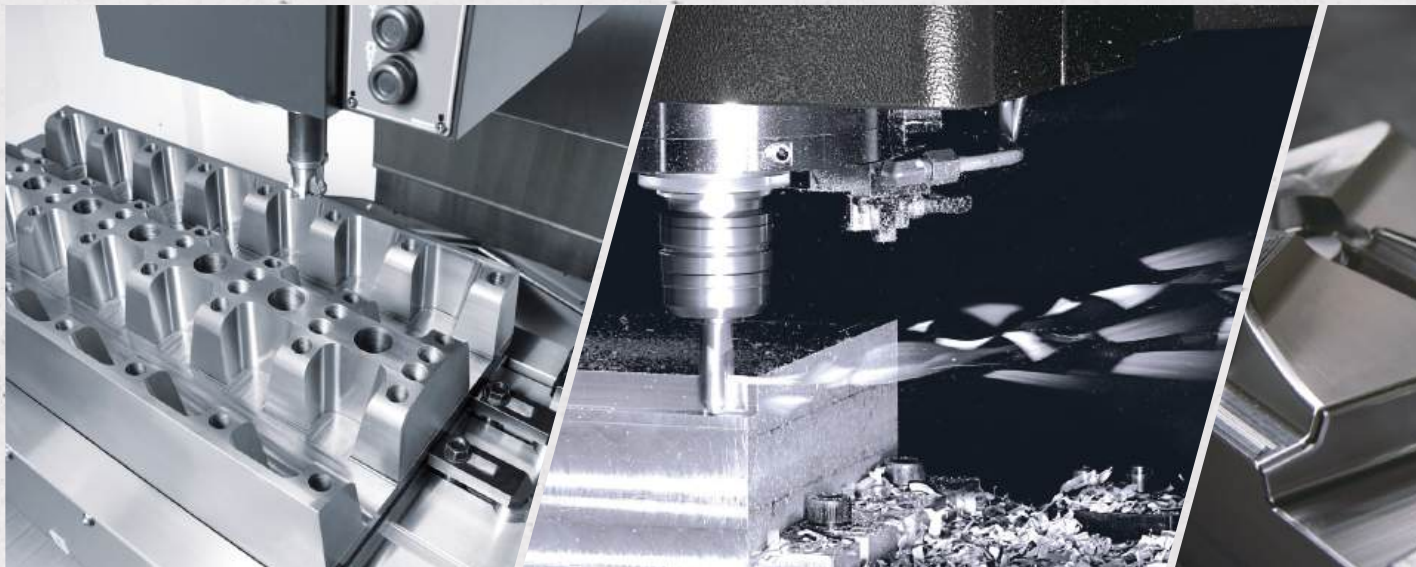
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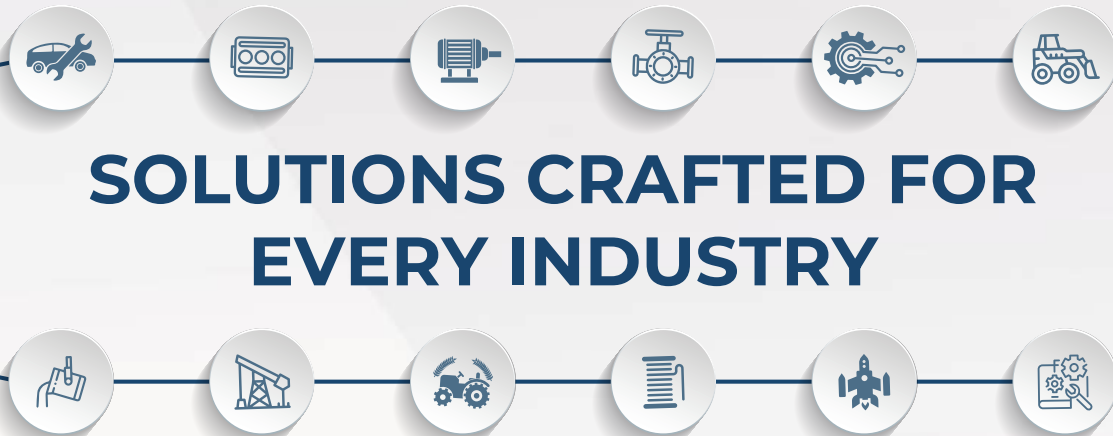
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INDIAN MACHINE TOOL INDUSTRY: ACCELERATING GROWTH



Rajamane

RAJENDRA S RAJAMANE
PRESIDENT
IMTMA

The Indian machine tool industry has been maintaining its growth momentum as seen in the record business visitors' attendance at IMTEX 2025, organized by Indian Machine Tool Manufacturers' Association (IMTMA) from January 23 - 29 2025, at Bangalore International Exhibition Centre (BIEC), Bengaluru. The exhibition once again reinforced the growing importance of the machine tool industry in the manufacturing space.

The Union Budget 2025-26 was recently presented by the Government of India to enhance business conditions and introduce key measures. These include the allocation of INR 20,000 crore for private sector-driven research and the announcement of a National Manufacturing Mission covering small, medium, and large industries. Such initiatives are expected to transform India's manufacturing

landscape. As these measures unfold in the upcoming financial year, India's manufacturing and entrepreneurial ecosystem may undergo significant changes.

Initiatives in the Union Budget 2025-26 such as the allocation of INR 20,000 crore for private sector-driven research and the announcement of a National Manufacturing Mission, covering small, medium, and large industries are expected to transform India's manufacturing landscape.

IMTMA is organizing the fifth edition of Delhi Machine Tool & Manufacturing Technology Expo 2025 (DMTX 2025), a focused platform for showcasing the latest technologies in the field of metalworking machinery

together with their accessories and components, from May 8 - 11, 2025 at Bharat Mandapam (Pragati Maidan), New Delhi. The second edition of Factory Equipment Expo (FACTEQ 2025), an exclusive exhibition showcasing modern factory equipment, material storage, sustainable and environmental solutions, etc. for the factories of tomorrow, will be held concurrently.

DMTX 2025 & FACTEQ 2025 is expected to feature over 200 exhibitors from India and overseas. I urge readers to block their calendars and attend this expo to connect, collaborate, and explore manufacturing solutions.

Wishing everyone a joyous reading of this edition of Modern Manufacturing India.



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JIBAK DASGUPTA
DIRECTOR GENERAL & CEO
INDIAN MACHINE TOOL MANUFACTURERS' ASSOCIATION
BANGALORE INTERNATIONAL EXHIBITION CENTRE

Dear Readers,

The resounding success of the recently concluded IMTEX 2025 once again cements India's position as a global manufacturing powerhouse.

With over 1,100 exhibitors from 23 countries occupying a sprawling 90,000 sq mt exhibition space, IMTEX 2025 welcomed a record 1,33,166 business visitors from 70 countries, a testament to the growing global interest in India's machine tool and manufacturing industry.

The sheer scale of focused visitors translated into remarkable business outcomes, generating around INR 37,700 crore enquiries and INR 3,500 crore of confirmed orders, making the twenty-first edition of the show, the largest and most impactful one in IMTMA's history.

As seen in some of the big exhibitions organized so far this year, it is clear that India is not just propelling its individual economic growth but is also playing a vital role in shaping global industrial landscape's growth. With an enviable combination of abundant resources, a thriving innovation ecosystem, inherent economic resilience,

political stability, and strategic geography, India has all the ingredients to become a global hub of modern manufacturing.

In its endeavour to bring technologies to the doorsteps of industries in the northern region, IMTMA is organizing the fifth edition of Delhi Machine Tool and Manufacturing Technology Expo (DMTX 2025) alongside the second edition of Factory Equipment Expo (FACTEQ 2025) from May 8 - 11, 2025, at Bharat Mandapam (Pragati Maidan), New Delhi.

The winds of change are blowing stronger than before with trade becoming more accessible, sustainable and future-ready. Such transformative factors are ushering in numerous opportunities for established players and start-ups. India has climbed from tenth-largest to fifth-largest economy in a decade and is expected to continue its rise in coming years.

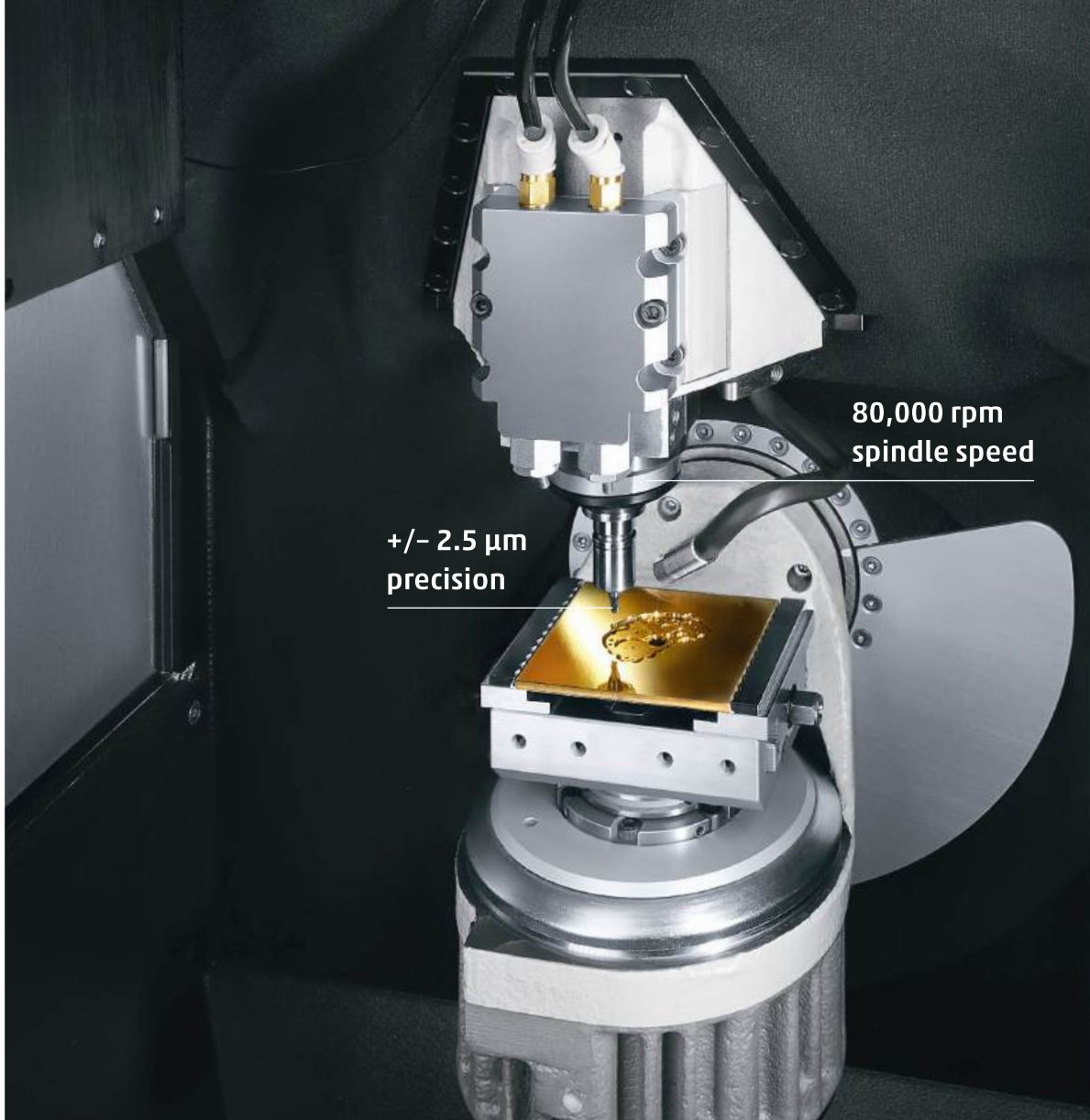
At the heart of this transformation lies a steadfast commitment to self-reliance

by building homegrown products and creating robust local supply chains. With the effective utilization of the advancements in artificial intelligence and a focus on long-term vision, India can lead the next industrial revolution.

As we step into a new financial year, things look promising for the machine tool and manufacturing industries. In its endeavour to bring technologies to the doorsteps of industries in the northern region, IMTMA is organizing the fifth edition of Delhi Machine Tool and Manufacturing Technology Expo (DMTX 2025) alongside the second edition of Factory Equipment Expo (FACTEQ 2025) from May 8 - 11, 2025, at Bharat Mandapam (Pragati Maidan), New Delhi.

In this edition of Modern Manufacturing India (MMI), we bring you a report on IMTEX 2025 which concluded on a highly promising note. I urge readers to share their feedback for the magazine to help us understand your needs.

Wishing you an insightful and engaging read of this edition of MMI.



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THE JOURNEY FROM MILESTONES TO LANDMARKS



Soumi Mitra

SOUMI MITRA
Editor-in-Chief
Modern Manufacturing India
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As I pen this piece today, I am transported back to 2007, a landmark year when IMTEX debuted at Bangalore International Exhibition Centre (BIEC). Deftly organized by IMTMA, that edition welcomed an astounding 1,30,000 business visitors, capturing the attention of the global manufacturing industry. It was a defining moment that signaled a new era for India's manufacturing ecosystem—one driven by innovation, collaboration, and an unwavering commitment to excellence.

Over the years, the show's organizers have propelled IMTEX to unparalleled heights, transforming it into one of the world's most prestigious manufacturing technology trade fairs. IMTEX 2025's resounding success underscored the event's growing influence in the global manufacturing community.

This January, BIEC was abuzz with 1,33,166 business visitors from 70 countries, reflecting IMTEX's expanding global footprint. As per the latest figures, orders worth approximately ₹3,500 crore were booked, with inquiries soaring to an impressive ₹37,700 crore. Spanning 90,000 sq mt of exhibition space, IMTEX 2025 housed 1,100 exhibitors from 23 countries, alongside seven Country-Group Pavilions. IMTEX continues to scale up, mirroring the dynamic evolution of the manufacturing industry.

Team MMI dedicates this issue to the collective efforts of all who made this show an epic feat. Every landmark was once a milestone—and every milestone paves the way for the next big leap.

Here's hoping these narratives inspire us to set new benchmarks for success!

Do the difficult things while they are easy and do the great things while they are small. A journey of a thousand miles must begin with a single step.

- Lao Tzu

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INDUSTRY GROWTH, CHALLENGES, AND THE ROAD AHEAD

The Indian machine tool industry is experiencing growth in production and consumption, but exports are struggling while imports are rising. The Government policies and global economic conditions will play a crucial role in shaping the industry's future.

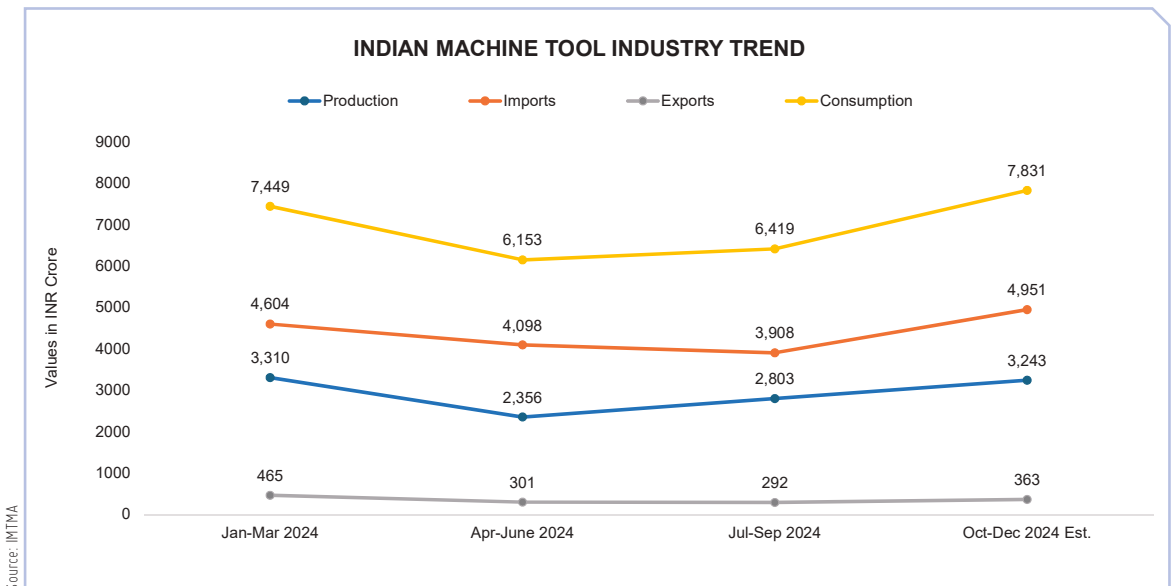


Table 1. Indian Machine Tool Industry Trend

Indian key economic indicators showed a mixed trends in January 2025 with the Services PMI moderated to a 26-month low of 56.5, while the Manufacturing PMI increased to a six-month high of 57.7, indicating a slowdown in the services sector while the manufacturing sector saw a positive uptick during the month. Meanwhile, the Index of Industrial Production (IIP) growth dropped to a three-month low of 3.2 percent in December 2024 from 5.0 percent in November 2024 due to moderation in the growth of manufacturing output. In 3QFY25, IIP growth was higher at 3.9 percent as compared to 2.7 percent in 2QFY25.

Monetary Policy and Inflation Trends

In its February 2025 monetary policy review, RBI lowered the repo rate for the first time since May 2020 by 25 basis points to 6.25 percent. CPI inflation eased to a five-month low of 4.3 percent in January 2025, whereas core CPI inflation remained steady at 3.7 percent for the fourth successive month, while WPI inflation decreased marginally to 2.3 percent in January 2025 from 2.4 percent in December 2024.

Fiscal and Trade Performance

Fiscal indicators also indicate a positive picture, with the Government of India's (GoI) Gross

Tax Revenue (GTR) showing a growth of 10.48 percent with growth in direct taxes at 12.2 percent and that in indirect taxes at 7.4 percent during April-December FY25. India's merchandise trade deficit reached to US\$ 23 billion in January 2025 from US\$ 21.9 billion in December 2024. Merchandise exports showed a contraction for the third successive month at -2.4 percent in January 2025 while growth in imports increased to 10.3 percent in January 2025 from 4.9 percent in December 2024. The IMF projected global growth at 3.3 percent in 2025 and India's growth is projected to remain stable at 6.5 percent in FY26.

Article source: Data & Policy Team, IMTMA



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In CY2024, the Indian machine tool industry's imports saw a rise of 23% year-on-year, amounting to INR 17,561 crore and exports reported a -8% degrowth on a low base, amounting to INR 1,421 crore.


Source: Magic Wand Media



The Indian Machine Tool industry production in CY2024 increased by about 6 percent year-on-year, reaching INR 11,712 crore (US\$ 1.4 B). The industry's imports in CY2024 saw a rise of 23 percent year-on-year, amounting to INR 17,561 crore (US\$ 2.1 B). Machine tool exports during CY2024 from India reported a -8 percent degrowth on a low base, amounting to INR 1,421 crore (US\$170 M) and consumption is estimated to have increased by 17 percent to reach INR 27,852 crore (US\$ 3.3 B) in CY2024.

Key Trends in Machine Tool Imports and Exports

In CY2024, China (27%), Japan (19%), and Germany (12%) emerged as the top countries for imports to India, contributing to 58 percent of the total machine tool imports. Presses (17%), Cylindrical Grinding Machines (11%) and Turning Centers (10%) were the top machinery types imported, valued at INR 6,739 crore (US\$ 805 M), constituting approximately 38 percent of total machine tool imports during the period.

While for exports, Russia (22%), UAE (10%) and USA (7%) emerged as the top three export destinations, accounting for 39 percent of total machine tool exports in CY2024, with a total export value of INR 561 crore (US\$ 67 M). Turning Centers (19%), Vertical Machining Centers (15%), and Presses (13%) were the top three machinery types exported, valued at INR 664 crore (US\$ 79 M), constituting approximately 47 percent of total machine tool exports during CY2024. 



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UNION BUDGET 2025: SETTING NEW DIRECTIONS

India is on the cusp of a transformational leap in machine tool and manufacturing growth, thanks to visionary policies and strategic financial allocations announced in the Union Budget 2025. The Union Government's measures aim to fortify manufacturing, streamline processes, and create a thriving ecosystem for innovation and industrial expansion.

For the Indian machine tool industry, which serves as the backbone of manufacturing, these reforms signal a promising trajectory of growth, modernization, and global competitiveness.

The Indian machine tool industry comprises a large number of micro, small, and medium enterprises (MSMEs), forming the foundation of the country's industrial ecosystem. The Government's decision to enhance

investment and turnover limits by two-and-a-half times, coupled with improved credit guarantee cover, is a game changer for these enterprises.

With greater access to capital, MSMEs can confidently invest in advanced machine tools, automation, and cutting-edge technologies. Additionally, the allocation of INR 20,000 crore for private sector-led research ensures that even small-scale industries can ex-

periment, iterate, and compete with global giants.

National Manufacturing Mission for Self-Reliance

In a push for self-reliance in manufacturing, the Government has announced the National Manufacturing Mission, which is a defining moment for India's industrial resurgence. By incentivizing electronics manufacturing and sustainable toy production, this initiative will drive

Source: IMTMA



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demand for precision machinery, tool-making equipment, and automation solutions.

For instance, a thriving electronics sector necessitates high-quality machine tools for precision engineering, surface finishing, and component fabrication, leading to increased demand for the machine tool industry's products and services.

Strengthening R&D

In a world where competition rules the roost, research and development play a crucial role, and from this perspective, the Government's move to allocate funds for agriculture research will have a cascading effect on the machine tool industry. With the increased demand for specialized machinery in agro-processing, precision engineering will see exponential growth. Furthermore, the establishment of an INR 10,000 crore Fund of Funds and a Deep Tech Fund of Funds to support next-generation startups provides a fertile ground for technological advancements in manufacturing. Initiatives such as these will drive the development of AI-driven manufacturing, robot-

ics, and smart factory solutions in manufacturing.

Spurring Innovation Across Regions

The proposed national framework for Global Capability Centres (GCCs) in tier 2 cities is a step towards decentralizing India's industrial growth. The GCCs will act as innovation hubs, spur the adoption of new-age manufacturing technologies, enhance supply chain efficiencies, and bridge the technological divide between urban and semi-urban regions.

Facilitating Exports and Global Market Access

With easier access to export credit and cross-border factoring support, industries—especially the Indian machine tool sector—can overcome non-tariff barriers and expand their global footprint with ease.

Additionally, the streamlining of presumptive taxation for non-residents providing technology and other services to electronics manufacturers will create a business-friendly environment. Fast-track mergers and a rationalized process for com-

pany integration will encourage industry consolidation, leading to stronger, more competitive manufacturing entities.

The decriminalization of tax collected at source (TCS) and the rationalization of tax deducted at source (TDS) will simplify compliance, enabling industries to focus on growth rather than navigating bureaucratic hurdles.

Industry Exhibitions: Catalysts for Economic Growth

Large-scale exhibitions and industry events serve as vital platforms for business networking and economic expansion. This year, key events such as IMTEX, Aero India, the Global Investors Meet, and India Energy Week have underscored their importance in driving sectoral growth. The Indian Government's measures along with some of the marquee events mentioned above will lay a solid foundation for building India's manufacturing sector. India's vision is set to become a tangible reality, paving the way for a robust, resilient, and globally competitive manufacturing ecosystem. 

The Indian Government's measures along with some of the marquee events such as IMTEX, Aero India, the Global Investors Meet, and India Energy Week will lay a solid foundation for building India's manufacturing sector. India's vision is set to become a tangible reality, paving the way for a robust, resilient, and globally competitive manufacturing ecosystem.



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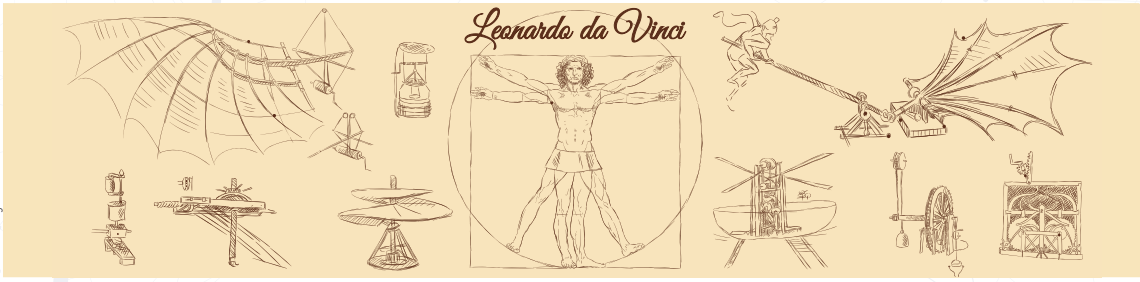
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ers, including one designed to grind curved mirrors and an 'internal' grinder. The Mirror Grinding Machine was designed with gears and a rotating tool for precise grinding, enabling the creation of both concave and convex mirrors. The intricate gear system allowed for adjustable speeds, enhancing the precision and quality of the surface finish.

File-Cutting Machine: This machine, depicted in the Codex Atlantico, a 12-volume, bound set of drawings and writings by Leonardo da Vinci was designed to be automatic, driven by a falling weight and a pulley system, demonstrating a mastery of automation and mechanical efficiency.

Other Notable Designs by Da Vinci:

33-Barreled Machine Gun: While not built, this design, featuring multiple barrels in three rows, influenced the design of modern machine guns.

Aerial Screw (Helicopter): Leonardo's concept of a helical air screw, envisioned as a device that could lift off the ground by spinning rapidly, foreshadowed the development of helicopters.

Flying Machine: Leonardo also designed a flying machine with a crank-powered system for flapping wings, demonstrating his interest in flight mechanics.

Mechanical Jacks: Leonardo designed mechanical jacks for lifting heavy loads, reflecting his understanding of mechanics and engineering principles.

Robotics

Da Vinci's creations span the gamut of robotics, including human-like and animal-like designs. Although many of Da Vinci's designs are incomplete, they were ahead of their time, and they have since served as inspiration for modern robots in the medical and astronomy fields.

Da Vinci's self-propelled cart is an invention considered the ancestor of the modern automobile. Constructed out of five different types of wood, the cart was five and a half feet long and nearly five feet wide and could theoretically move over


40 yards before needing to be rewound.

The drawings of Da Vinci's cart were first uncovered in the early 1900s by historian Girolamo Calvi, who nicknamed the cart 'Leonardo's Fiat'. For decades, attempts to recreate his design failed, and researchers couldn't understand why. Finally, in 1997, it was discovered that the fault lay not in Da Vinci's design but in researchers' understanding of it; the design's cart springs were intended to regulate the cart's drive mechanism, but researchers had been using them in an attempt to drive the car itself. In 2004, a working replica of Da Vinci's cart was created in Florence. These replicas bore a vague but unmistakable resemblance to the Mars Land Rover. This is now considered to be the first humanoid robot ever created and Da Vinci's design would later be utilized by NASA to aid in the construction of planetary exploration robots.

Da Vinci also created a hydraulically powered machine that could be programmed to ring a bell. Another robot was designed to beat a drum, and a third resembled a modern-day drone. Today, these and other designs have been utilized to create even more robots, including the medical machine that bears his name: the Da Vinci Surgical System, which is a robotic platform that allows surgeons to perform complex minimally invasive procedures with precision and accuracy, using small incisions.

The Multi-Talented Genius

Leonardo da Vinci was a true Renaissance mastermind, whose boundless curiosity and innovative spirit continue to inspire awe. Da Vinci effortlessly bridged the gap between art, science, engineering, and mathematics, and his detailed designs revealed a profound understanding of the interconnectedness of all disciplines.

From the sublime elegance of the Mona Lisa to ingenious designs for flying machines, armored vehicles, machine tools and robots, Da Vinci's works cement his status as one of the greatest geniuses in human history. 

Da Vinci also made a very detailed drawing of a pipe-boring mill. The design was considered so complete that a scale model was crafted from it and put on display at the London Science Museum.

Tech Talks is a column by industry veteran and journalist Reji Varghese that talks about the latest advancements in Machine Tools, provides snippets from history, interesting facts, etc. about the Machine Tool industry.

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INDIA'S JOURNEY TO NEW FRONTIERS

The curtains have drawn on what can be described as one of the most transformative and successful IMTEX ever. Organized by Indian Machine Tool Manufacturers' Association (IMTMA), the last edition of the machine tool and manufacturing technology show, IMTEX 2025 & Tooltech 2025, did not just meet expectations—it shattered them, welcoming a staggering number of business visitors, surpassing its own earlier attendance record.



Source: Magic Wand Media

A glimpse from the inaugural ceremony of IMTEX 2025 & Tooltech 2025

Organized by IMTMA, IMTEX 2025 was concurrently held with Tooltech 2025 and Digital Manufacturing 2025. The event, in its 22nd edition, attracted 1,100 exhibitors from 70 countries, drawing an astonishing 1,33,166 business visitors. Reaffirming its stature as South Asia's premier machine tool and manufacturing tech exhibition, it marked a new milestone in the world of manufacturing innovation.

The expansive venue Bangalore International Exhibition Centre (BIEC), Bengaluru, spanning 90,000 sq mt area across 8 halls, surpassed the scale of

previous editions. As Ramesh T K, Managing Director, Ace Designers Ltd, AceMicromatic Group, put it, "All IMTEXs are interesting, but what made this one special and better was that it had the largest number of exhibitors, the largest number of halls, and, of course, the largest number of visitors."

Concluding on January 29, 2025, this seven-day tech showcase and knowledge exchange extravaganza is set to give the country a much-needed edge. It marked the closing of a chapter in India's most confident stride toward becoming a global powerhouse, featuring ground-

breaking innovations aligned with the nation's vision of self-reliance and sustainability. Amidst the innovations and advancements shaping India's manufacturing landscape, IMTMA took the opportunity to honor one of the industry's guiding lights—Late Mr Shailesh R Sheth. Fondly remembered as the 'Guru' of the Machine Tool sector, his legacy was commemorated through a special remembrance program, underscoring his enduring influence on the industry. The event featured a heartfelt memorial lecture delivered by Jamshyd N Godrej. An eminent independent corporate advisor and a Board

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Source: Magic Wand Media

Fondly remembered as the 'Guru' of the Machine Tool sector, Late Mr Shailesh R Sheth's legacy was commemorated through a special program.

Member at Bharat Fritz Werner Ltd, Late Mr Sheth's multifaceted contribution to the growth of IMTMA and the Indian Manufacturing Industry remains unparalleled. At the august gathering at IMTEX 2025, attendees recollected his impactful efforts toward promoting the Indian Machine Tool industry. The event commenced with a documentary film, followed by his associates from IMTMA narrating their shared experiences with him.

From Showcase to Impact

From CNCs and robotics to additive manufacturing and AI-led systems, IMTEX 2025 was a full-spectrum showcase of the next phase of industrial evolution. However, it wasn't just

about product features—it was about purpose, processes, and problem-solving. IMTEX 2025 saw a marked shift in conversations. "Visitors meant business, and there couldn't be a better time to engage in machine tools," points out Jibak Dasgupta, Director General & CEO, IMTMA & BIEC. "This time, the machines at the event rivalled what you'd see at IMTS - The International Manufacturing Technology Show (North America), EMO Hannover, or JIMTOF (Japan International Machine Tool Fair), indicating that IMTEX has actually come a long way."

Ravi Raghavan, Managing Director, Bharat Fritz Werner Ltd and Immediate Past President, IMTMA, shared, "We've probably broken all records

for footfall, but what's remarkable this time is the quality of engagement. Visitors spent serious time exploring the machines and having deep technical discussions. That's a real game-changer."

The focus had clearly shifted from products to purpose and this tone resonated across the halls. Left impressed and lauding the quality of the visiting crowd, Soundhar Rajhan K, Chief Strategy Officer, LMW Ltd, highlighted the industry's shift toward customized machining solutions, stressing that no more commodity machines can sell; only solutions can sell. "Customers no longer come for basic equipment; they seek the company's expertise in curating customized solutions, from machine recommendations to tooling advice."

IMTEX 2025 attracted 1,100 exhibitors from 70 countries, drawing an astonishing 1,33,166 business visitors, marking it as the largest edition ever, held across 90,000 sq mt at BIEC, Bengaluru.



Source: Magic Wand Media

International Seminar on Machining Technologies (ISMT) 2025 highlighted evolving trends in machining technologies.

Automation & Digitization in Overdrive

If one theme tied together all halls of IMTEX 2025, it was automation. Ramadas P, Managing Director, AceMicromatic Group—a veteran of the machine tools industry, noted, "Automation has become the need of the hour. Whether you like it or not, automation is here to stay." He further emphasized the rising

AceMicro-matic Group and German Engineering Federation (VDMA) at IMTEX 2025 hosted an exclusive open show for German, European, and American delegates, showcasing India's advancements.



Source: Magic Wand Media

Auto Components Industry Transformation Summit, jointly hosted by the ACMA (Automotive Component Manufacturers Association of India) Mobility Foundation and IMTMA, brought together top minds to reimagine the future of auto components manufacturing.

demand for robotic and cantilever solutions across MSMEs and larger enterprises alike. Niranjana Nayak, Managing Director, Delta Electronics India Pvt Ltd, a key player in power and thermal management solution, exclaimed, "This is a very important show for us!" The company made its presence felt at IMTEX 2025 by urging its machine tool partners to align solutions with global trends like automation and digitization and also launching its CNC controller, the high-performance next-gen five NC series. "Today, the industry is going through a transformation," Siva Arvinth, President - Machine

Tool Division, LMW Ltd, added, "Customers expect faster and better performance, increase of productivity, and reduction of cycle time, amidst the shortage of skilled labor availability." Delta's SCARA Robot integration into LMW's SmartTurn machine marks their strategic alliance. "So now this IoT, industrial automation and the solutions, what Delta and other companies are doing will really enhance the performance of the machine, giving a value experience to the customers," asserted Arvinth. Blaser Swisslube also highlighted its digitalized and automated support tools, which integrate seamlessly with the Industrial

Internet of Things (IIoT), ensuring the highest productivity and competitiveness.

Global-Local Synergy & Industry Transformation

What was once a show largely dependent on international technologies now echoed the voice of a confident India designing for India—and beyond. In a special initiative, AceMicromatic Group and German Engineering Federation (VDMA) hosted an exclusive open show for German delegates and a few European and American delegates, offering a closer look at India's manufacturing prowess and highlighting the innovations on display. The foreign delegates appreciation of the technology and solutions highlighted India's evolution from an emerging market to a global manufacturing hub. Commenting on it, Ramesh TK, Managing Director, Ace Designers Ltd, said, "We are heading towards an era of joint manufacturing, and the importance of India is growing—not just for making in India, but for making for the world."



Source: Magic Wand Media

Under the aegis of the Ministry of Heavy Industries (MHI), IMTMA also organized an awareness session on Omnibus Technical Regulations (OTR) at IMTEX 2025.



Source: Magic Wand Media

KLS Gogte Institute of Technology, Belagavi, clinched the top spot in the Manufacturing Technology Quiz Contest.

Underscoring the company's collaboration with BFW for advancing sophisticated machining solutions and the commitment to expanding its Indian presence, Victor Backman, Chief Executive Officer, SMT Swedish Machine Tool AB, remarked, "How impressive the Indian market is," clearly moved by the response from customers and partners. Takashi Yamazaki, President, Yamazaki Mazak Corporation, accentuated the company's long-standing relationship with the Indian market. Reflecting on the shift in demand, he highlighted the rising need for both commodity and high-end machines in industries like Aerospace, Semiconductors, and Railways.

Sustainability & Future-Ready Ecosystems

Beyond performance, energy efficiency and sustainability were hot topics. Automation providers weren't just pitching ROI, but also carbon savings. At the forefront of change, Yatendra Kumar (Rajput), Business Head, MotulTech India Pvt Ltd, highlighted the company's groundbreaking biosourced lubricant MOTUL GREEN TECH™ range, which made its Indian debut at

IMTEX. "The footfall has been fabulous this year," Kumar noted, "and what's truly encouraging is the serious interest in sustainable development."

With the stage set as such, praising IMTEX for its scale and energy, Yamazaki Mazak President, on transition from traditional automotive manufacturing to EVs, said, "Mazak is prepared for the shift with advanced machine tools tailored for EV components." He further shed light on the company's role in the energy sector, where their versatile technologies, such as laser cutting machines, meet the needs of solar

and wind energy manufacturers. In terms of future-ready solutions, digitalization has moved from being a buzzword to being a business need. Dr Vishwas Puttige, Business Head, amace solutions—part of AceMicromatic Group, promoting accessible additive manufacturing (AM), was equally impressed with the number of inquisitive guests flocking to their booth. Adding another feather to its hat, amace solutions partnered with National Centre for Additive Manufacturing (NCAM) to drive innovation in metal additive manufacturing during IMTEX 2025. It was evident that such partnerships further bolster India's readiness for Industry 4.0 and fulfilling the Sustainable Development Goal (SDG).

With a Holistic Approach

Taking it further, a highlight of IMTEX 2025 was the strong emphasis on talent development. The i2 Academia Pavilion was abuzz with activity. The flagship initiative of IMTMA aims to promote collaboration between industries and academia, develop transformative new technologies, and understand each other's contexts and challenges through the platform of IMTEX.

The i2 Academia Pavilion saw participation from 33 colleges, with KLS Gogte Institute of Technology, winning the first prize, followed by Amrita Vishwa Vidyapeetham, and SASTRA Deemed to be University.



Source: Magic Wand Media

Chennai Institute of Technology bagged the second prize in the Quiz Competition.

IMTMA and EEPC India organized the 'Engagement with Overseas Buyers' connecting global buyers from countries like Russia, Sri Lanka, UAE, and Vietnam, fostering global trade opportunities.



The i2 Academia Pavilion at IMTEX 2025 where students from engineering colleges displayed their innovative engineering projects.

In a momentous celebration at IMTEX 2025, the i2 Academia Pavilion witnessed the acknowledgment of outstanding students. Among 33 colleges and more than 50 projects, two prestigious awards were presented. The first prize, in the i2 Academia Pavilion Award category, worth INR 50,000, was awarded to KLS Gogte Institute of Technology, Belagavi. The second prize, worth INR 25,000, was secured by Amrita Vishwa Vidyapeetham, Kollam. The third prize, worth INR 15,000, was won by SASTRA Deemed to be University, Thanjavur. In addition to these awards, the Popular Choice Award was also presented. The first prize in this category was won by Vishwakarma Institute of Technology, Pune, while SASTRA Deemed to be University, Thanjavur, secured the second prize. The Manufacturing Technology Quiz Contest was also hosted. The event brought together ten engineering colleges, with KLS Gogte Institute of Technology, Belagavi, clinching the top spot and Chennai Institute of Technology finishing second. Rajendra Rajamane, President, IMTMA, underscored the sig-

nificance of such competitions, stating, "The manufacturing industry continues to suffer from skilled worker shortages due to increasing youth interest in white-collar jobs, making these events even more crucial." JAGRUTI, an IMTMA initiative, was also held. Designed to nurture students and make them industry-ready, the program focused on honing their abilities to observe and quantify those observations effectively. To instill these critical skills, the 29 participating students were divided into smaller groups and were asked to present their observations. Mentors provided feedback, highlighted missing aspects, and guided the students on how to improve their analytical approach. IMTMA also organized an awareness session, under the aegis of the Ministry of Heavy Industries (MHI), on Omnibus Technical Regulations (OTR) at IMTEX 2025. The OTR for Machinery and Electrical Equipment Safety-2024 is a pioneering framework in India, aimed at enhancing the Manufacturing sector capabilities and ensuring safer workplaces. It was notified on August 28, 2024,

and will come into effect on August 28, 2025. Dr Nagahanu-maiah, Director, Central Manufacturing Technology Institute (CMTI), delivered a special address on OTR. Mohit Janohiya, Scientist 'D' and Joint Director, Central Marks Department – I, Bureau of Indian Standards (GoI), gave a detailed presentation on the subject.

With the aim to facilitate export opportunities for Indian machine tool manufacturers and foster global partnerships, IMTMA, along with EEPC India, organized the 'Engagement with Overseas Buyers'. The two-day event received an overwhelming response from the machine tool importers from the countries including Russia, Sri Lanka, UAE, and Vietnam.

During IMTEX 2025, a seminar and live webinar on 'Export Controls for Japanese Machine Tools' conducted by Japan Machine Tool Builders' Association (JMTBA) at the IMTMA Technology Centre. The seminar provided the participants with an overview of security export regulations and compliance requirements for Japanese machine tools. Designed exclusively for distributors of Japanese machine tools in India, the event emphasized the role of export controls in preventing the misuse of sensitive technologies.

Strategic Collabs & Deal Flows

Quantifying strategic networking impact, Saurabh Kaul, Commercial Director, Quaker Houghton, emphasized "We've been part of



'Engagement with Overseas Buyers' provided IMTEX exhibitors a significant opportunity to penetrate the overseas markets.



Source: Magic Wand Media

The 'Jagruti - IMTMA Youth Programme' aims to help engineering students stay abreast of the latest trends in the Manufacturing sector.

IMTEX for years, but this time, the quality of footfall and new initiatives like the ACMA-IMTMA Summit, industry-specific seminars and fireside chats, have fostered real collaboration."

The 'Auto Components Industry Transformation Summit', jointly hosted by the ACMA (Automotive Component Manufacturers Association of India) Mobility Foundation and IMTMA, brought together top minds to reimagine the future of auto components manufacturing. Similarly IMTMA's flagship event, International Seminar on Machining Technologies (ISMT) 2025, was dedicated to bringing the global manufacturing community together while highlighting evolving trends in machining technologies, through keynotes, technical sessions, and panel discussions.

Innovation, the Great Equalizer

IMTEX 2025 had 'innovation' as its main focus through the prestigious IMTMA Best Design Award 2025 that honored indigenous design excellence and development. The winners this year were: Grind Master Machines Pvt Ltd - Special Purpose

Bearing Race Superfinishing Machine; Kennametal India Ltd - Blank Profile Grinding Machine BPG15; and Sunita Engineering Corporation - 5 Axis CNC Micro Milling Machine 5X-100. Apart from innovation, global competitiveness also was in the limelight. The IMTMA Export Performance Award, in memory of Shailesh R. Sheth, recognized companies that have made outstanding contributions to India's machine tool exports. The honorees included Pragati Automation Pvt Ltd and Indotech Industries India Pvt Ltd.

Alongside, the IMTMA - Cooper Award for Outstanding Supply Chain Unit in Memory of Sir D.B. Cooper was conferred upon Sphoorti Machine Tools for the year 2025 and Vikram Salunke of Accurate Group was honored with the IMTMA - Premier Outstanding Entrepreneur Award in Memory of Vinod Doshi.

Taking this forward, at their 'Town of Technology' themed stall encapsulating the company's commitment to advanced manufacturing, Parakramsinh G Jadeja, Chairman & Managing Director, Jyoti CNC Automation Ltd, declared India's arrival as an innovation leader. "The Indian market

has truly awakened," he commented with evident pride. "Our manufacturing processes have matured significantly. We are no longer just comparing ourselves to Japanese and German standards; we are poised to set new benchmarks for them to follow."

Similarly, capping the event's transformative impact, Christian Müller, Member of the Board and CSO, GROB-WERKE GmbH & Co. KG, declared, "We are an Indian company with German DNA," emphasizing the company's commitment to producing cutting-edge machines locally while maintaining world-class standards. With GROB's key highlight, the G350 5-axis universal machining center, powered by flipping technology, is a perfect fit for global shops looking for a sustainability revolution.

Reinforcing India's strategic role in global manufacturing, Andreas Vollmer, Sales Director, Member of the Executive Board, Paul Horn GmbH—the company represented by NN Combined Engineering Agencies Pvt Ltd—noted that 'India is a fast-evolving, challenging market'. Paul Horn has steadily built its footprint through its collaboration with NN Combined Engineering Agencies Pvt Ltd, which is following a focused, exclusive partnership strategy rather than spreading thin across multiple distributors.

All in all, the successfully concluded IMTEX 2025 furthers India's push in the Manufacturing sector, which focuses on diversifying into upgrading production lines and industrial capacity, alongside the creation of a global competency-based domestic supply chain network. As the stakeholders and fraternity eagerly look forward to the upcoming edition, achieving the sector's true potential and raising the sector-wise contribution of manufacturing to the country's GDP is near reality.

The Export Performance Award, in memory of Shailesh R. Sheth, was awarded to Pragati Automation Pvt Ltd and Indotech Industries India Pvt Ltd, acknowledging their contributions to India's machine tool exports.



Source: Magic Wand Media

JMTBA Seminar on 'Export Control for Japanese Machine Tools'.

STRENGTHENING INDIA'S AM CAPABILITIES

Jaspreet Sidhu, Chief Executive Officer, National Centre for Additive Manufacturing (NCAM), in this in-depth conversation with MMI's Editor-in-Chief Soumi Mitra, shares the apex body's initiatives toward positioning India as a leading force in additive manufacturing, the several challenges it faces in this endeavor, and the ways to address them.



Source: Magic Wand Media

“The National Centre for Additive Manufacturing is dedicated to accelerating the adoption, innovation, and industrialization of Additive Manufacturing (AM) in India. By fostering collaboration between the Government, industry, and academia, NCAM plays a pivotal role in implementing the National Strategy for Additive Manufacturing and strengthening the country's AM ecosystem.”

Jaspreet Sidhu, Chief Executive Officer, National Centre for Additive Manufacturing (NCAM)

What is the primary mission of NCAM, and how does it contribute to India's additive manufacturing landscape?

The National Centre for Additive Manufacturing is dedicated to accelerating the adoption, innovation, and industrialization of Additive Manufacturing (AM) in India. By fostering collaboration between the Government, industry, and academia, NCAM plays a pivotal role in

implementing the National Strategy for Additive Manufacturing and strengthening the country's AM ecosystem. It supports R&D, startup incubation, skill development, and industry adoption, enabling businesses to harness AM for prototyping and production.

Additionally, NCAM facilitates standardization and certification, ensuring high-quality manufacturing practices. By

providing access to advanced infrastructure, funding, and training, it empowers startups, MSMEs, and large industries to integrate AM into their operations. These efforts reduce import dependency, promote local innovation, and enhance India's global competitiveness in key sectors such as Aerospace, Healthcare, and Automotive. NCAM's initiatives position India as a leading force in ad-

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ditive manufacturing, driving technological progress and economic growth.

How does NCAM support industries in adopting additive manufacturing technologies?

NCAM as an apex body supports industries in adopting additive manufacturing technologies by addressing critical challenges such as fiscal and non-fiscal incentives, low-cost R&D and policy support. It actively organizes webinars, seminars, workshops, and conferences to foster awareness, identify industry challenges, and drive collaborative solutions. A key priority is developing a comprehensive standards and certification framework for AM components, materials, and processes in collaboration with leading domestic and international certification bodies such as the Centre for Military Airworthiness & Certification (CEMILAC), the American Society of Mechanical Engineers (ASME), and the American Society for Testing and Materials (ASTM).

It also supports the industry in adopting and adhering to global standards, ensuring product competitiveness in domestic and international markets. Through strategic collaborations with global stakeholders, it facilitates the adoption of best practices to strengthen India's AM ecosystem.

Additionally, NCAM conducts outreach initiatives and award programs to expand industry engagement and showcase groundbreaking innovations. Playing a crucial advisory role, it provides policy recommendations to the Government bodies on standards (BIS), taxation, customs duties, and easing restrictions on material imports, driving the overall growth and competitiveness of the AM sector.

“NCAM has established state-of-the-art metal AM infrastructure, including advanced 3D printing machines and post-processing equipment. We are actively working on the indigenization of metal powders, alloys, and critical components, collaborating with material manufacturers and research institutions to develop AM-grade metals such as titanium, aluminum, and nickel-based superalloys.”

Jaspreet Sidhu
Chief Executive Officer
National Centre for Additive Manufacturing (NCAM)

What are some of the key initiatives or projects that NCAM has undertaken to promote metal AM?

NCAM has established state-of-the-art metal AM infrastructure, including advanced 3D printing machines and post-processing equipment. We are actively working on the indigenization of metal powders, alloys, and critical components, collaborating with material manufacturers and research institutions to develop AM-grade metals such as titanium, aluminum, and nickel-based superalloys.

It also drives industry adoption by co-developing metal AM applications in sectors like Aerospace, Defence, Space, Healthcare, and Automotive, supporting projects such as the repair of aerospace components, customized medical implants, and advanced tooling solutions. Additionally, it focuses on workforce development by

conducting training programs and certification courses in partnership with the industry and academia, covering essential aspects like design for AM (DfAM), process optimization, post-processing, and quality assurance.

On the policy front, NCAM plays an advisory role in shaping government policies, fiscal incentives, and regulatory frameworks to accelerate metal AM adoption, advocating for favorable taxation policies, import duty relaxations, and funding support for startups and enterprises. Through these efforts, NCAM is strengthening India's capabilities in metal AM, fostering innovation, reducing import reliance, and positioning the country as a global leader in advanced manufacturing.

How does NCAM facilitate research, skill development, and industrial adoption of additive manufacturing?

NCAM facilitates research, skill development, and industrial adoption of AM through a multi-faceted approach. It supports the indigenous design and development of prototypes, products, and new technologies while identifying key components in the value chain that are currently imported.

By recommending a phased manufacturing program, NCAM aims to localize the production of machines, materials, software, and design solutions in the medium and long term. It fosters partnerships between the industry and academia to identify opportunities in globally focused sectors such as Aviation, Defence, Space, Healthcare, and Automotive, as well as emerging areas aligned with national priorities, such as low-cost housing.

It also drives application development and research by re-

NCAM facilitates standardization and certification, ensuring high-quality manufacturing practices. By providing access to advanced infrastructure, funding, and training, it empowers startups, MSMEs, and large industries to integrate AM into their operations.

Playing a crucial advisory role, it provides policy recommendations to the Government bodies on standards (BIS), taxation, customs duties, and easing restrictions on material imports, driving the overall growth and competitiveness of the AM sector.



NCAM and amace solutions will spearhead collaborative R&D projects to explore new materials and applications in metal AM.

ducing barriers to entry in this capital-intensive industry. Additionally, it collaborates with industry experts and organizations to design skilling programs and conduct hands-on workshops. By standardizing job roles and skillsets, NCAM ensures alignment between industry needs and academic training, bridging the gap between education and employment in the AM sector.

What challenges does NCAM face in advancing additive manufacturing in India, and how is it addressing them?

NCAM faces several challenges in accelerating AM adoption in India, including high costs, limited local production of AM materials, regulatory gaps, and a shortage of skilled professionals. To tackle these issues, NCAM provides shared infrastructure to lower entry barriers for startups and industries, reducing the need for heavy capital investment. It collaborates with research institutions and manufacturers to develop

indigenous AM materials, minimizing dependence on imports. Additionally, NCAM is working with regulatory bodies to establish certification frameworks, ensuring reliability and compliance in AM processes. To address the skill gap, it conducts specialized training programs and partners with academic institutions to integrate AM into technical education. Awareness and industry adoption are further promoted through workshops, pilot projects, and policy recommendations that advocate incentives for AM businesses. These initiatives collectively strengthen India's AM ecosystem, driving technological progress and global competitiveness.

How does NCAM align with India's 'Make in India' and 'Atmanirbhar Bharat' initiatives?

NCAM aligns with India's 'Make in India' and 'Atmanirbhar Bharat' initiatives by fostering domestic innovation, reducing import dependence, and positioning India as a global hub for AM. It provides world-

class infrastructure, including advanced AM machines and facilities, to support R&D, innovation, and product prototyping across various sectors. Additionally, it nurtures startups by guiding them from technology readiness (TRL 3-8) to full-scale product development and manufacturing (TRL 9-10).

To promote import substitution, NCAM identifies key components in the AM value chain that can be indigenized and develops phased manufacturing programs to localize the production of critical materials, software, and hardware, reducing reliance on imports.

Furthermore, NCAM advances research, product development, and technology transfer, facilitates funding opportunities, and collaborates with industry stakeholders to enhance India's global competitiveness in AM. Through these efforts, NCAM strengthens the country's self-reliance in advanced manufacturing and contributes to India's manufacturing excellence in emerging technologies.



Source: Magic Wand Media

What led to the collaboration between NCAM and amace solutions? How does this partnership enhance India's self-reliance in metal additive manufacturing?

The collaboration between NCAM and amace solutions emerged from a shared goal of advancing India's capabilities in metal AM by fostering indigenous technology development and reducing reliance on foreign systems. amace solutions contributes its expertise in metal 3D printing machines, process engineering, and application development, while NCAM provides the necessary ecosystem, infrastructure, and industry support to accelerate adoption.

This partnership strengthens India's ability to design, manufacture, and deploy metal AM solutions tailored to domestic needs, making high-performance manufacturing more accessible to key industries such as Aerospace, Healthcare, and Automotive. By driving localized innovation, enhancing material research, and fa-

“The collaboration between NCAM and amace solutions emerged from a shared goal of advancing India's capabilities in metal AM by fostering indigenous technology development and reducing reliance on foreign systems. amace solutions contributes its expertise in metal 3D printing machines, process engineering, and application development, while NCAM provides the necessary ecosystem, infrastructure, and industry support to accelerate adoption.”

Jaspreet Sidhu
Chief Executive Officer
National Centre for Additive Manufacturing (NCAM)

ilitating industrial integration, this initiative plays a crucial role in reinforcing India's position as a competitive player in advanced manufacturing. Furthermore, it supports workforce development and standardization efforts, ensuring long-term sustainability and global recognition for India's metal AM sector.


What specific technologies or innovations will this collaboration bring to the Indian manufacturing sector?

NCAM and amace solutions will spearhead collaborative R&D projects to explore new materials and applications in metal AM. Joint initiatives will focus on educating and enabling industries to integrate metal AM into their manufacturing ecosystems,

ensuring faster adoption across various sectors. The partnership will work towards unlocking new use cases and practical applications of metal AM by combining NCAM's resources with amace solutions' technical expertise and customer insights.

How does NCAM's new facility at Osmania University strengthen India's additive manufacturing ecosystem, and what key advancements can industries expect from this initiative?

NCAM's new facility at Osmania University is a significant step toward strengthening India's AM ecosystem by providing state-of-the-art infrastructure, fostering research collaborations, and enabling industry-driven innovation. This center serves as a hub for cutting-edge AM technology development, offering access to advanced 3D printing machines, material research labs, and post-processing capabilities. By being housed within a premier academic institution, it bridges the gap between the academia and industry, facilitating joint research, talent development, and real-world application testing.

Industries can expect several key advancements from this initiative, including accelerated R&D in AM materials, processes, and applications, development of cost-effective and indigenous AM solutions, and enhanced skill-building programs to create a highly trained workforce. Additionally, the facility will play a crucial role in standardization, certification, and policy advocacy, ensuring seamless industrial adoption of AM technologies. This initiative strengthens India's self-reliance in AM, positioning the country as a global leader in advanced manufacturing. 

NCAM's new facility at Osmania University is a significant step toward strengthening India's AM ecosystem by providing state-of-the-art infrastructure, fostering research collaborations, and enabling industry-driven innovation.



Source: Accurate Group

REDEFINING METROLOGY

Accurate Group has spent nearly four decades reshaping metrology and manufacturing with innovation at its core. Now, with the IMTMA Premier Outstanding Entrepreneur Award in Memory of Vinod Doshi, the company adds yet another milestone to its journey of redefining measurement and quality control.

For Vikram Salunke, Managing Director, Accurate Group, this award isn't just a mark of achievement; it's a tribute to years of effort, resilience, and forward thinking. "It is truly an honor to receive this award, and it holds a special place for me and the entire Accurate family," he shares.

This recognition is especially significant because of its association with Vinod Doshi. "Vinod Doshi was a pioneer who played a key role in shaping the Indian manufacturing sector. Being recognized in his memory is

both humbling and inspiring," he adds.

He sees parallels between his leadership approach and Doshi's legacy. "Vinod Doshi's leadership was defined by his foresight, adaptability, and belief in technology-driven growth. I strongly relate to his philosophy of continuously innovating and investing in R&D to stay ahead in a competitive industry," he says. "Like him, I believe in empowering people, fostering a culture of expertise, and making long-term strategic decisions that drive sustainable growth."

A Journey of Precision and Progress

Salunke's journey with Accurate Group began when he was just 20 years old. Over the past 37 years, he has steered the company through defining moments that have shaped its standing on the global stage. "The journey of building Accurate Group has been a fulfilling one, filled with challenges and achievements," he reflects. One of the company's major milestones came in 1991, when it introduced India's first indigenously built Coordinate

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"It is truly an honor to receive this award, and it holds a special place for me and the entire Accurate family. This award is a testament to the hard work, dedication, and relentless pursuit of excellence by our team at Accurate Gauging. It strengthens our commitment to innovation and motivates us to keep pushing the boundaries in metrology and precision measurement."

Vikram Salunke
Managing Director
Accurate Group



Source: IMTMA

Measuring Machine (CMM) at IMTEX in Mumbai. This breakthrough marked a turning point, demonstrating its ability to develop advanced metrology solutions within the country.

In 1993, the company's dedication to research and development was acknowledged with its first R&D award. "This milestone not only validated our efforts but also reinforced our commitment to strengthening in-house innovation capabilities, paving the way for future breakthroughs," says Salunke.

By 1997, the company had expanded beyond domestic borders, exporting its first CMM to the Middle East. "This step into the global market was a testament to our growing expertise and the trust international customers placed in our technology," he shares.

Over the years, the company has forged strong relationships with key industries such as Automotive, Aerospace, and Electronics. More recently, it has extended its expertise to high-tech sectors. "We have broadened our impact across industries, including the Semiconductor and 3C (Computer, Communication, and Consumer Electronics)," he reveals.

Breaking Barriers in Global Expansion

Taking Indian manufacturing solutions to the international

stage came with significant hurdles. "Expanding internationally posed several challenges, including establishing brand credibility in highly competitive global markets, meeting diverse industry regulations, and adapting to different customer expectations," explains Salunke. Instead of letting these challenges become roadblocks, the company turned them into opportunities. "We invested heavily in building a strong sales and service network and focused on skill development and customer education to showcase the value of our solutions globally," he adds.

The Future of Metrology is Here

The company's success in metrology is built on three pillars: Technology-Driven Solutions, Reliable Manufacturing, and Customer-Centric Approach.

"We develop high-precision, industry-specific solutions that keep pace with evolving market demands. Our processes ensure repeatability and accuracy, delivering results that industries can depend on. And we continue to expand our reach through strategic collaborations and partnerships," shares Salunke.

He emphasizes that continuous R&D has been at the core of the company's growth. "We focus on staying ahead of market trends and emerging technologies to ad-

dress the expanding needs of our customers," he says. "We have also enhanced customer experience through dedicated support, training programs, and digital solutions to provide unmatched value."

Leadership & Lessons for Aspiring Entrepreneurs

For Salunke, leadership is about driving change, staying resilient, and creating opportunities for people to grow. "For me, leadership is about pushing boundaries, taking challenges head-on, and fostering an environment where people thrive," he adds.

His advice to entrepreneurs looking to make an impact in manufacturing and metrology is rooted in real-world experience. "Solve real industry problems by focusing on practical, high-quality solutions," he emphasizes. He believes that long-term success comes from continuous learning and innovation. "Invest in R&D and skill development—it's the foundation for long-term success."

Adaptability, according to Salunke, is just as critical as technical expertise. "Stay adaptable—market needs and technology change rapidly, and the ability to evolve is crucial," he advises. He also highlights the importance of relationships in business. "Build strong relationships with customers and partners, because trust takes

With Vikram Salunke receiving the IMTMA Premier Outstanding Entrepreneur Award, Accurate Group continues to push boundaries—expanding into high-tech industries, embracing digitalization, and advancing automation.

Increasing manufacturing capabilities to meet growing domestic and international demand highlights the company's focus on increasing production capacity while maintaining high-quality standards.



Source: Accurate Group

time but is the key to growth.” Above all, he stresses that quality should never be compromised. “Never compromise on precision and reliability, especially in industries where even the smallest margin of error matters.”

What's Next for Accurate Group?

With a strong foundation in place, the company is setting its sights on new frontiers. “At Accurate, we are always looking ahead and planning our next big move,” says Salunke. The company is actively pursuing opportunities to expand its expertise into new industries, adopt advanced technologies, and strengthen its global footprint.

One of its key priorities is expanding into the semiconductor and 3C industries. “Expand-

ing into the Semiconductor and 3C Industries with specialized metrology and manufacturing solutions” is a crucial step in aligning with the rapidly evolving demands of high-tech manufacturing.


The company is also focusing on digitalization to enhance quality control processes. “Digitalization to revolutionize quality control” reflects the company’s vision of integrating advanced digital tools to ensure precision and efficiency in inspection systems.

Another major area of development is shopfloor automation. “Shopfloor Automation Solutions to enhance efficiency” is part of the company’s strategy to streamline manufacturing workflows and improve productivity through smart automation solutions.

Strengthening its global presence remains a key goal. “Strengthening global presence through strategic partnerships” allows the company to reach and collaborate with global industry leaders to bring its expertise to a broader market.

With increasing demand for its solutions, the company is scaling up its manufacturing operations. “Increasing manufacturing capabilities to meet growing domestic and international demand” highlights its focus on increasing production capacity while maintaining high-quality standards.

Beyond technological advancements, the company is also investing in people. “Setting up skilling centers to develop the next generation of quality professionals” demonstrates its dedication to nurturing talent and ensuring a skilled workforce for the future.

With these initiatives in place, Accurate Group is not just planning for growth—it is actively shaping the future of manufacturing and metrology on a global scale. 

Source: Accurate Group

*I.M.T.M.A. – Premier Outstanding Entrepreneur Award
in memory of Vinod Doshi*

Citation

The steep ascent for precision engineering with a visionary outlook pioneered by Vikram Salunke. It was his father, Vikram Salunke, who founded Accurate Group in 1963, a metrology solutions company that became a globally recognised firm through the sheer grit and talent of Vikram Salunke, a pioneer of metrology in India.

Vikram Salunke aspired to pursue engineering and take over the reins of his family business but destiny had other plans as he opted to do commerce from Brihan Maharashtra College of Commerce (B. MCC) in Pune as per his father's wish.

It was only later in life that Vikram Salunke realised his father's vision for him when he worked part-time as an apprentice in Accurate while pursuing his studies. Vikram Salunke gained hands-on experience in manufacturing products while learning the fundamentals of commerce in college. He became adept in leveraging analytical and business skills besides excelling in project management, cost analysis, business development, and operations management.

Rightfully, Vikram Salunke credits his father's vision for sowing entrepreneurship skills in him which helped in pioneering Accurate to scale greater heights over the years. Vikram Salunke has spearheaded the indigenization and commercialization of 3D coordinate measuring machines for highly critical measuring applications, a truly "Made in India" technology for the world, substituting imports.

The entrepreneurial skills of Vikram Salunke have helped Accurate Group to expand its horizon beyond geographical boundaries, develop some path breaking technologies, and earn a global reputation. These efforts resulted in his company gaining important awards and accolades over the years.

Vikram Salunke's sphere of influence extends beyond everyday business. He has played an active role in serving societal needs such as improving the quality of life of village inhabitants, increasing the participation of communities in rural development through education and training, as well as organic farming. He also played a crucial role during the pandemic period when his company supplied medical equipments to hospitals across India, saving precious lives.

In recognition of his visionary pursuit of entrepreneurial excellence and his unique leadership style, we are pleased to confer Mr. Vikram Salunke with the I.M.T.M.A. – Premier Outstanding Entrepreneur Award in memory of Vinod Doshi.

Bangalore, 23rd January 2025

*Rejendra A. Rajaramar
President
I.M.T.M.A.*



8 - 11 May 2025

Bharat Mandapam (Pragati Maidan) New Delhi



Indian Machine Tool
Manufacturers' Association

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ACKNOWLEDGED FOR EXCELLENCE

At the recently concluded highly successful IMTEX 2025 & Tooltech 2025 held at Bangalore International Exhibition Centre (BIEC), Sphoorti Machine Tools Pvt Ltd was honored with the IMTMA Cooper Award, a testament to the company’s unwavering commitment to supply chain excellence.

The IMTMA Cooper Award has ignited a new level of enthusiasm within Sphoorti Machine Tools, reinforcing its commitment to operational efficiency, customer satisfaction, and global market expansion.

The accolade is more than just a trophy for the company; it is a catalyst for further innovation and responsibility. Expressing the team’s excitement, P Sekar, Managing Director, Sphoorti Machine Tools Pvt Ltd, states, “This award has highly rejoiced everyone at Sphoorti. It has not only boosted our morale but also instilled a greater sense of responsibility. Our colleagues are now more focused on strengthening the supply chain at all levels to meet and

exceed customer expectations.” Sphoorti fondly remembers AV Sathe, a revered veteran of the Indian machine tool industry, whose guidance and heartfelt blessings continue to be the driving force behind its achievements. The award has inspired the company to push its limits, expand its customer base, and enhance its global market presence. Ram Purohit, Managing Director, Sphoorti Machine Tools, attributes this success to the company’s customers’ unwavering support, saying, “Our Original Equipment (OE) customers have been instrumental in guiding us at all levels. This has kept our employees to meet internal and external commitments on a daily basis, ensuring Just-In-Time

(JIT) supply to prevent any disruptions in machine completion activities.” The award has further encouraged the team to be more efficient and strive for more awards.

Pathbreaking Initiatives for Supply Chain Optimization

One of the key initiatives that has optimized Sphoorti’s supply chain operations is its proactive approach to meeting the supply chain demands of OE customers. By collaborating closely with forging and pre-sized raw material suppliers, the company has successfully shortened lead times, eliminated unforeseen delays internally, and ensured timely deliveries. “As India witnesses significant industrial growth, OE

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Source: IMTMA

customers are keen to adapt to new systems for improving supply chain operations. Sphoorti proactively engages with them to align with their needs, ensuring seamless operations," adds Sekar.

Strengthening Supplier Relationships

Sphoorti Machine Tools firmly believes in fostering long-term, mutually beneficial relationships with its vendors. Purohit emphasizes this aspect, stating, "Today, we don't need to deeply monitor our supply chain due to our long-standing partnerships with them. We are even exploring AI-based solutions to further optimize our inbound and outbound supply chains, helping us eliminate even the smallest bottlenecks."

Tackling Supply Chain Disruptions and Inventory Management

Efficient supply chain management requires agility, and Sphoorti ensures seamless operations by monitoring de-



Source: Magic Wand Media

"Our Original Equipment (OE) customers have been instrumental in guiding us at all levels. This has kept our employees to meet internal and external commitments on a daily basis, ensuring Just-In-Time (JIT) supply to prevent any disruptions in machine completion activities."

Ram Purohit
Managing Director
Sphoorti Machine Tools
Pvt Ltd

liverables on daily basis. Inventory management plays a crucial role in balancing demand and supply while maintaining cash flow stability. "We meticulously track our supply chain operations daily, replicating key findings back to our suppliers. By involving key personnel in monitoring inventory levels, we maintain a steady balance between customer needs and operational efficiency," explains Sekar.

Role of Automation and Digital Tracking in Supply Chain Management

The company has embraced automation and digital tracking to enhance operational visibility and efficiency. Purohit explains, "While some OE customers strictly adhere to digital process-



Source: Magic Wand Media

"We meticulously track our supply chain operations daily, replicating key findings back to our suppliers. By involving key personnel in monitoring inventory levels, we maintain a steady balance between customer needs and operational efficiency."

P Sekar
Managing Director
Sphoorti Machine Tools
Pvt Ltd

es, others have yet not fully integrated them. Sphoorti ensures flexibility to meet all kinds of requirements. Our team is fully integrated into these digital advancements, ensuring timely deliveries while maintaining a customer-centric approach."

Focused on Growth and Excellence

Receiving the IMTMA Cooper Award for Sphoorti Machine Tools is just the beginning of its growth journey. This significant milestone will bolster its commitment to improving supply chain efficiency, embracing new technologies, and fostering strong partnerships, strengthening the company's positioned for sustained growth and continued success in the global market. 

One of the key initiatives that has optimized Sphoorti's supply chain operations is its proactive approach to meeting the supply chain demands of OE customers. By collaborating closely with forging and pre-sized raw material suppliers, the company has successfully shortened lead times, eliminated unforeseen delays internally, and ensured timely deliveries.



Source: Magic Wand Media

INNOVATING WITH AFFORDABILITY

With the IMTMA Export Performance Award in memory of Shailesh R Sheth, awarded by Indian Machine Tool Manufacturers’ Association, under its belt, Indotech Industries (I) Pvt Ltd is proving that Indian manufacturers are more than capable of keeping up with international players and setting new benchmarks.

For Rahul Kasat, Director, Indotech Industries (I) Pvt Ltd, this recognition is more than just a mere trophy on the shelf. “It is truly significant and heartwarming to be recognized and validated by a premier institution like IMTMA, especially for a company like ours,” he shared. With its presence in 14 countries, the company is marching forward with a clear mission. “This recognition

provides us with the motivation and inspiration to move forward with pride, as an Indian company striving to make a lasting impact in the global market.”

Ready to Take on the World
The company’s achievement highlights the untapped potential of India’s Manufacturing sector, and Kasat believes the country is poised for even bigger wins. “With the cost-effective

manufacturing capabilities in India and the inherent flexibility of our working culture, we are uniquely positioned to compete in the global market,” he said.

Of course, winning on the world stage isn’t just about having the right tools—it’s about having the right mindset. As Kasat aptly put it, “The main challenge we face in establishing a strong international pres-

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“It is truly significant and heartwarming to be recognized and validated by a premier institution like IMTMA, especially for a company like ours. This recognition provides us with the motivation and inspiration to move forward with pride, as an Indian company striving to make a lasting impact in the global market.”

Rahul Kasat
Director
Indotech Industries (I) Pvt Ltd

ence lies in fostering the right attitude and mindset across our team, ensuring consistency in delivering high-quality products, with all team members aligned towards this common goal.” The company has recognized this and is tackling the challenge head-on.

Export Journey Fueled by Passion

Taking a deeper look at Indotech Industries’ success, the Director offered a glimpse into how the company has evolved over the years to compete on a global level. “It has been an incredibly long journey, marked by steady progress and unwavering determination each day,” he reflected. The company has faced fierce competition from some of the world’s most established brands, but instead of shying away, it has leveraged the challenge as a catalyst for innovation. “Competing with the world’s best brands fuels our passion to constantly push the boundaries and achieve even greater heights, making our journey truly rewarding.”

And the results speak for themselves. Today, the company has built a strong presence in the USA, Brazil, Peru, the UK, Spain, Portugal, Italy, Russia, South Ko-

rea, and several other key markets. It has distinguished itself on the global stage through its approach to balancing innovation with affordability. “While we wholeheartedly acknowledge that innovation is our strength, we leverage this by offering products that match the best in the world in terms of performance, but at significantly more affordable prices,” he noted.

Winning Trust, One Market at a Time


Global expansion is a concept that is not only defined by product distribution; it requires building strong relationships. Recognizing this early on, the company strategically prioritized establishing a local presence in each of its markets. “We adopted a strategy of establishing a local presence in each country we operate in, which has helped build customer confidence and strengthen relationships,” explained Kasat. This strategy has allowed the company to expand its footprint and build a reliable reputation with customers worldwide.

However, one of the biggest roadblocks for Indian machine tool exporters is breaking global perceptions. “India’s relatively low recognition in the global

market for manufacturing and exporting high-quality machine tools remains one of our biggest challenges,” he admitted. But the tide is turning. “With changing times and an increased focus on quality standards by manufacturers, we are highly optimistic about the future and the opportunities ahead.”

The Road to 35 Countries—and Beyond

Expanding to 14 countries is a significant achievement, but Indotech Industries has even more ambitious plans ahead. The company is not slowing down; instead, it is accelerating its efforts for rapid global growth, a reflection of the dedication that led to its recognition with the IMTMA Export Performance Award.

“We are determined to expand our global footprint and aim to increase our presence from the current 14 countries to at least 35 over the next five years,” he revealed. This ambition is backed by a strong foundation of innovation, affordability, and customer trust. With the IMTMA Export Performance Award serving as a milestone rather than a final destination, the company is ready for the next chapter. 

Indotech Industries (I) Pvt Ltd, winner of the IMTMA Export Performance Award, is making a global impact with its innovative and cost-effective machine tools. With a presence in 14 countries and plans to expand to 35, the company is proving that Indian manufacturers can compete—and thrive—on the world stage.

TOOLING THE WORLD THE INDIAN WAY

With a 'Made-in-India' mindset, decades of vision, and relentless pursuit of quality, Pragati Automation wins the Indian Machine Tool Manufacturers' Association (IMTMA) Export Performance Award at IMTEX 2025 and inspires the industry with its SME success story.



Source: Magic Wand Media

At IMTEX 2025, amid the buzz of live demos, cutting-edge machines, and global business collaborations, one name quietly but powerfully stood out—Pragati Automation Pvt Ltd, recipient of the prestigious IMTMA Export Performance Award. For Mr Atul Bhirangi, Managing Director, Pragati Automation, this award is the vindication of a vision set in motion over three decades ago. “The award makes us feel happy and at the same time proud because it means that as an accessory manufacturer, our export performance is better than Machine Tool Builders (MTBs),” says Mr Bhirangi. “This recognition motivates us to scale up to the next level of higher exports.”

The Power of Vision

Founded in 1977, Pragati Automation has grown to become one of India's most respected names in the machine tool accessory space world-wide. Best known for turrets and automatic tool changers (ATCs), the company is also stepping into CNC and servo systems. Its products have carved a niche in reliability and precision, earning the trust of over 100 MTBs world-wide, with more than 100,000 turrets and ATCs operational across continents. What's remarkable is how early Pragati bet on the world market. “Pragati's vision has always been to make products for the global market and make 'Made in India' a global brand,” shares Mr Bhirangi, noting it as one of

the main factors for its strong export performance—its vision. Back in 1990, with a turnover of just INR 1.50 crore, the company made its international exhibition debut. It has since participated in two international exhibitions every year, making itself a known and respected name across the globe.

Where Quality Meets Commitment

Success on the international stage demands more than ambition—it demands relentless quality, and Pragati knows that well. As Mr Bhirangi asserts, “For any product to be successful in the global market, it needs to satisfy the key elements like good quality, reliable performance, com-

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“For any product to be successful in the global market, it needs to satisfy the key elements like good quality, reliable performance, competitive price, and low after-sales service cost. All our products satisfy all these requirements.”

Mr Atul Bhirangi
Managing Director
Pragati Automation Pvt Ltd



Source: Pragati Automation

petitive price, and low after-sales service cost. All our products satisfy all these requirements.”

While developing a new product, Pragati benchmarks similar products of the top 3 global leaders for key parameters like technical specification, accuracy, and precision levels and develops products to match them. “Every new product undergoes tests and validation processes for 2 million cycles before it is offered to customers,” he continues. “Ensuring quality through proper process planning and producing parts on modern precision machines and timely upgradation of products as per market demand. These actions will help us meet global standards and compete effectively against international brands.”

The World as a Market

Building relationships is what Pragati believes in, which is exemplified by its expansive reach through export. “Our direct exports are to MTBs in more than 22 countries across continents,” says Mr Bhirangi. The company’s primary markets are Europe and China, with Germany leading the European front, followed by Poland, Italy, and Switzerland.

Although for the company it’s not just about direct sales. “Indirect exports through all MTBs extend to all corners of the world,” he adds, reinforcing Pragati’s far-reaching impact.

Next Frontier: Bigger, Faster, Closer

With the IMTMA award lighting the way, the company is planning strategic moves to expand even further, including product portfolio expansion, production capacity enhancement, and global customer proximity.

“We plan: i) to expand our products range to enable us to cater to the needs of every machine tool builder making machinery in the machinery spectrum of entry level upto high end. ii) to increase our production capacity to shorten delivery times. iii) invest in marketing and service set-up in Europe (Germany) to be able to be close to our customers in Europe to render timely service support,” reveals Mr Bhirangi.

Wisdom for the Industry

As an industry veteran, Mr Bhirangi has some advice for fellow Indian MTBs eyeing export markets. “Indian MTBs as a business strategy should have a clear focus on exports and commit an annual expenditure for promotion of exports,” he says. Exports will help them to maintain a steady revenue as the revenue from different geographic regions will grow differently, which will help balance out any market upheavals in different geographies. “Exports will also help improve product offerings according to the market demands in different countries,” he

further stresses. “In due course of time, products will become globally acceptable.”

Shifting his focus to another key factor, Mr Bhirangi shares, “Regularly participate in international machine tool exhibitions to get good exposure for the products. With more Indian brands seen in International exhibitions, ‘Made in India’ brand machines will be considered seriously by overseas users. It will also help to get good insight of the new trends and products in the global market, explore new supply chains, get an idea of the marketing and sales activities of competitors. Exports will also help earn precious forex for the country.”

IMTEX: India’s Global Launchpad

This year’s IMTEX 2025, held at Bangalore International Exhibition Centre, set new records, drawing a massive number of visitors in comparison to all its earlier editions. In turn, the event resulted in a good number of important business inquiries, underscoring India’s growing manufacturing might.

And it was in this vibrant space that Pragati stood tall as an SME that has made it big. Apart from mirroring Pragati’s success story through its journey and recognition, it’s also a call to action for Indian SMEs to dream global, invest in quality, and champion the ‘Made-in-India’ brand world over. 

Pragati Automation’s direct exports are to MTBs in more than 22 countries across continents. The company’s primary markets are Europe and China, with Germany leading the European front, followed by Poland, Italy, and Switzerland. Indirect exports through all MTBs extend to all corners of the world.

RACING TO THE TOP

Testifying to the adage that ‘true innovation never stands still,’ Grind Master Machines Pvt Ltd has once again received an award from the Indian Machine Tool Manufacturers’ Association (IMTMA)—the IMTMA Design Award—for its Special Purpose Bearing Race Finishing Machine.



Source: Magic Wand Media

For Milind Kelkar, Managing Director, Grind Master Machines Pvt Ltd, this recognition is a powerful validation of the company’s continuous efforts. “IMTMA awards are given after an extremely discerning evaluation,” he explains. “I remember facing a sharp jury back in 2001 when we won for our Superfinishing Unit, and this year was no different. The competition was intense, and I am thrilled that our Bearing Superfinishing Machine has been selected.”

The company is no stranger to accolades. Over the years, it has secured the IMTMA Premier Outstanding Entrepreneur Award in 2017 and the IMTMA

Excellent Export Award in 2023, proving the company’s capability in pushing the boundaries of manufacturing technology.

Transforming Bearing Race Superfinishing

Kelkar explains that Bearing Raceway Superfinishing requires a highly precise and specialized machine known to be manufactured by German and Japanese companies. “Our machine doesn’t just match global standards—it goes beyond them with key technological advances,” he adds.

These breakthroughs include:

- A unique high-speed oscillation mechanism for robust working (Patent Pending);

- Machine Learning Software Platform NANOPRAGNA for intelligent finishing.

“Superfinishing requires rapid oscillation, and our unique mechanism enables it at faster speeds with greater reliability. Additionally, the use of servo motors within optimal limits eliminates potential failure points in such systems,” he adds.

Process Monitoring System

Kelkar explains the company’s breakthrough process monitoring system that has solved key superfinishing challenges while enhancing precision and performance.

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“Indian Machine Tool manufacturers must focus on machine reliability and accuracy over lifetime in order to compete on the global stage. India being a developing country has benefits of lower costs, but in capital goods the longevity is often more important than initial investment.”

Milind Kelkar
Managing Director
Grind Master Machines Pvt Ltd



Source: Grind Master Machines Pvt Ltd

“Raceway finishing is done with ‘superfinishing stones’ which are prone to wear, breakage and loading. This generates inconsistency in finishing during the production lifetime of the machine,” he shares. The process monitoring system ensures that a uniform process is applied for all the parts. It has intelligent features that can detect tool wear, tool break, and even tool loading.

IIT Madras Partnership & Government Support

The company’s ability to innovate at such a rapid pace is also a result of strong collaborations. The company partnered with AMTDC - IIT Madras and received funding from the Ministry of Heavy Industries (MHI), which significantly accelerated the machine’s development.

“Government support has been a game-changer,” he acknowledges. “It has allowed us to develop this machine at least three times faster than usual, giving us the ability to focus on refining the technology.” The collaboration between the company and IIT Madras was built on complementary expertise. “Our strength lies in machine design, manufacturing, assembly, and software development,” he shares. “IIT Madras brought in their capabilities in analysis, validation, and machine learning. Together, we’ve created something truly exceptional.”

The Way Forward

Being a highly innovative company, Grind Master Machines has its focus on Process Research. “With the aid of Machine Learning, we continue to develop our new prod-


ucts such as Ballscrew Superfinishing and Roll Superfinishing,” shares Kelkar.

“Largely driven by the rapidly changing finishing requirements in the Automotive industry, particularly in electric vehicles (EVs), Microfinishing and Superfinishing, as existing processes, continue to evolve with ongoing advancements, The application of microfinishing to EV motors and shafts is expanding rapidly, primarily for noise reduction,” he elaborates.

Advice for India’s Machine Tool Industry

Kelkar believes that to compete globally, Indian machine tool manufacturers must build high-quality, long-lasting machines through sustained research and collaboration, rather than relying solely on cost advantages. “India being a developing country has benefits of lower costs, but in capital goods, longevity is often more important than the initial investment.”

Additionally, he calls for a collaborative effort between the industry and academic institutions that can drive innovation, leading to the development of globally competitive machine tools.

He also stresses the need for domestic development of critical machine components. “Machine tools rely on key elements like rails, ballscrews, electronics, and pneumatics. If India truly wants to compete, we must develop and manufacture these base products ourselves.” 

Grind Master Machines Pvt Ltd wins the prestigious IMTMA Design Award for its Special Purpose Bearing Race Finishing Machine. Backed by IIT Madras and MHI funding, the company continues to lead innovation in superfinishing, microfinishing, and EV component manufacturing.



Source: Grind Master Machines Pvt Ltd

LEADING THROUGH INNOVATION

WIDMA® Machining Solutions Group of Kennametal India Ltd has once again proven its mettle, earning the IMTMA 'Best Design Award 2025' for its Blank Profile Grinding Machine BPG-15. This accolade highlights the company's dedication to innovation and precision engineering, raising the bar in metal cutting and grinding technology.

“We are truly honored to receive this recognition,” said Vijaykrishnan Venkatesan, Managing Director, Kennametal India Ltd. “IMTMA offers a prestigious platform that unites the top players in the Machine Tool industry to showcase their latest advancements, creating a highly competitive environment.” “This makes the recognition even more meaningful and special to us. It stands as a testament to our ability to develop state-of-the-art machines that not only address the current needs of our customers but are also engineered to meet their future requirements.” he further explained.

Advancing Technology with User Feedback

According to Venkatesan, “WIDMA's commitment to innovation emanates from a customer-cen-

tric mindset. Our customers' feedback plays a crucial role in shaping our new product development strategies that address their challenges and provide them with a competitive edge.” “Backed by our all-in-one, state-of-the-art manufacturing facility, our new product development team is continuously working to expand our portfolio,” Venkatesan shared. “Today, we offer a highly diversified assortment of machines, right from special purpose machines, horizontal machining centers, vertical turning lathes, and deep hole drilling machines to tool & cutter grinding machines, as well as fixture and tooling solutions through the 'WIDMA' brand.”

BPG-15: The Evolution of Precision Grinding

The journey towards develop-

ing the BPG-15 began with a deep understanding of industry processes and pain points. “As it goes with any new product launch, the first milestone in the journey was understanding the prevailing process in the industry on blank preparation,” Venkatesan explained. Currently, most carbide round tool manufacturers rely on manual cylindrical grinding machines for outer diameter (OD) preparation and the formation of steps and profiles on blanks. These preformed blanks then serve as inputs for CNC tools and cutter grinding machines to manufacture the finished tool. Recognizing the growing demand for round tools, the company realized the need for automation and benchmarking with advanced operations like in other countries.

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IMTMA Best Design Award

2025

Awarded to

Kennametal India Ltd.

for their

Blank Profile Grinding
Machining BPG



Source: Kennametal India



“We are truly honored to receive the IMTMA ‘Best Design Award 2025’ for our new Blank Profile Grinding Machine BPG-15 for its design, aesthetics and specifications suitable for multiple geometries in a single setup. The BPG-15 was introduced to augment our Tool & Cutter Grinding machines portfolio, enabling customers to choose from a comprehensive range of solutions.”

Vijaykrishnan Venkatesan
Managing Director
Kennametal India Ltd



Source: Kennametal India

What Sets the BPG-15 Apart?

WIDMA's BPG-15 is not just another grinding machine—it is a breakthrough in precision engineering and automation. “WIDMA's new Blank Profile Grinding Machine is specially designed with high axial force linear motors for all linear axes, dedicated to the preparation of cutting tool blanks (dia 0.4 mm to 32 mm) in one setup,” Venkatesan highlighted.

The BPG-15 is equipped with eBlank software, offering a user-friendly interface for grinding tool blanks with greater efficiency. More importantly, it replaces traditional ball screws with high axial force linear motors, significantly reducing maintenance requirements while enhancing performance.

“This innovative design also minimizes the number of machines and fixtures required, consolidating multiple operations into a single, efficient unit,” he added. “Additionally, its IoT compatibility adds a layer of intelligence, enabling smarter monitoring and control. Built to global standards, the machine offers superior quality and incorporates advanced safety and automation features such as auto loading and unloading.”

Advanced Engineering for Unmatched Precision

At its core, the BPG-15 incor-

porates a range of cutting-edge technologies designed to enhance precision and efficiency.

“The BPG-15 machine is a Precision 4+1 axes CNC cylindrical grinding machine that utilizes the pinch/peel method of grinding, ensuring superior performance and optimal concentricity,” Venkatesan detailed. “It features linear motor technology, offering high dynamic response, and a direct drive for the rotary axis (C-axis) for smooth and efficient operation.”

In addition to its advanced control system, the machine's rigid base, constructed with a special dampening material, significantly reduces vibrations. “These advancements combine to deliver exceptional accuracy, concentricity, and surface roughness for carbide tool manufacturers,” Venkatesan stated.


Collaboration and Research: The Backbone of Innovation

WIDMA regularly collaborates with academia, industry bodies, and R&D institutions to develop next-gen solutions like the BPG-15.

“We leverage some leading engineering institutes to incorporate design enhancements and technological ad-

vancements in our offerings,” Venkatesan noted. “We have a long-standing association with IMTMA for various trainings on skill development, which strengthens our team's competence in building what's next.”

Furthermore, the company ensures that every product is rigorously tested before deployment. “We also leverage the capabilities of external agencies such as the Advanced Machine Tool Testing Facility (AMTTF) to ensure a robust and fail-safe machine testing mechanism,” he added.

The company's strong R&D process has positioned it as a recognized innovator, continuously addressing complex manufacturing challenges while staying ahead of emerging trends like high-speed machining, sustainability, e-mobility, and exotic materials. 

WIDMA® Machining Solutions Group of Kennametal India Ltd received the IMTMA Best Design Award 2025 for its Blank Profile Grinding Machine BPG-15, highlighting its expertise in precision engineering.



Source: Kennametal India



Source: Magic Wand Media

COMMITTED TO PRECISION

Sunita Engineering Corporation has long been recognized in the CNC micro-milling sector for its continuous innovation and drive to manufacture with precision. The company recently added the IMTMA Best Design Award, presented by Indian Machine Tool Manufacturers' Association, for the 5-axis CNC Micro-Milling Machine 5X-100 to its long list of accolades.

“Winning the IMTMA Best Design Award for our 5-axis CNC micro machining center, the 5X-100, is a proud moment for Sunita Engineering Corporation. It validates our commitment to innovation, precision, and advanced manufacturing,” notes Rohan Kelkar, Head - Business Development, Sunita Engineering Corporation. Further speaking on the merits of receiving the prestigious award, he states, “This recognition strengthens our credibility, boosts customer confidence, and motivates us to push the boundaries of CNC technology. It is a testament to the hard work of our team and our dedication to delivering world-class 5 axis micro machining centers.”

The Inspiration Behind the 5X-100

According to Kelkar, the development of the award-winning 5X-100 was a natural evolution from the company's experience in manufacturing 3-axis and 4-axis CNC micro-milling machines. Customers in precision-driven industries demanded a compact 5-axis solution, especially for intricate parts. The Jewelry sector also drew attention to the need for efficient dust extraction to minimize material loss when machining gold. Additionally, standard fixturing solutions were unsuitable for the extremely small parts that customers manufactured for industries such as Watchmaking and Medical Implants. As a swift response, the company developed

custom fixtures to increase precision in machining. “Overcoming these challenges helped us create a highly precise, efficient, and application-focused 5-axis micro machining center,” he states.

What Makes the 5X-100 Stand Out?

Shedding light on the unique selling points of the 5X-100, he explains, “The 5X-100 stands out with its patented design that creates an isolated machining chamber, ensuring efficient dust extraction and protecting critical electro-mechanical components.” The machine's proprietary CNC controller improves motion dynamics for superior accuracy and surface finish. Equipped with a 4kW, 40,000 RPM spindle, the machine can support ultra-small

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Rohan Kelkar
Head of Business Development
Sunita Engineering Corporation

tools, as small as 0.1mm in diameter, enabling intricate and precise machining. “These features make the 5X-100 a world-class contender in 5-axis micro machining, ideal for industries demanding extreme precision and reliability,” Kelkar adds.

The Power of 5-Axis Machining

When considering conventional milling, which often requires multiple setups, the machine’s 5-axis capability allows complex geometries to be machined in a single setup. This advantage supports multi-angle cutting, improves precision, and reduces tool wear. “This flexibility is crucial for intricate micro-milling applications,

where maintaining tolerances at the micron level is essential,” he explains. “The ability to machine undercuts and complex curves with fewer setups improves efficiency and consistency.”

A machine with profound advantages as the 5X-100, inevitably becomes appealing for industries requiring high-precision components, such as Aerospace, Medical, and Jewelry Manufacturing.

An Industry Benefit

The 5X-100 is ideal for industries requiring extreme precision and intricate machining. Primary applications include micro-milling for aerospace components, medical implants,

watchmaking, high-end jewelry, and precision engineering.

Its ability to handle ultra-small tools and achieve micron-level accuracy makes it perfect for manufacturing miniature parts, complex geometries, and high-quality surface finishes. “Industries like Electronics, Dental, and Mold-Making also benefit from its 5-axis capability, which enables efficient, high-precision machining with minimal setups,” shares Kelkar.

Transforming the Indian Market

With precision rearing its head as a constant theme, the company’s 5X-100 offers all the advanced capabilities of high-precision that are comparable to international micro-milling machines but at a significantly lower cost.

“Since we own the patented design, manufacture our own CNC controller, and produce all mechanical components in-house, we optimize costs to suit the Indian market,” he explains. “Our local manufacturing ensures quick technical support, minimizing downtime—an issue faced with imported machines that lack service centers in India,” he adds on a final note. This combination of world-class performance, affordability, and reliable support makes the 5X-100 a definite choice for manufacturers in India. 

Sunita Engineering Corporation’s 5X-100 CNC micro-milling machine recently won the IMTMA Best Design Award. The cost-effective 5-axis solution delivers micron-level accuracy, advanced dust extraction, and superior motion dynamics, making it a vital stepping stone in the Indian manufacturing industry.



Sunita Engineering Corporation’s 5-Axis CNC Micro Milling Machine 5X-100

FROM GARAGE TO GLOBAL: THE STORY OF A VISION REALIZED

From a modest garage in Aurangabad, Maharashtra, to the global stage, Grind Master Machines Pvt Ltd has expanded its footprint, setting new benchmarks in precision engineering. As the company commemorates four decades of growth, Chief Executive Officer, Samir Kelkar, reflects on its journey—one driven by innovation, perseverance, and a constant push to redefine possibilities.



Throwback from IMTEX 2025 during the book launch

Source: Magic Wand Media

Garage to Global' is a book that encapsulates Grind Master Machines Pvt Ltd's journey. The newly launched book, authored by Kelkar, chronicles the vision, challenges, and triumphs that transformed a small family-run venture into a driving force in modern engineering.

The company's technological achievements—especially in the fields of Microfinishing and Superfinishing—have set new standards in international markets, including China, Japan, Germany, and the USA. By pioneering advanced surface

finishing solutions, the company has proven that world-class innovation can emerge from India. "Our success is a shining example of Make in India - Make for the World," says Kelkar.

A Tale of Two Siblings

For Kelkar, the company has been a constant presence in his life. "Considering both Grind Master Machines and I were born in 1984, it is like my twin sister," he shares. "The company is like a daughter to Milind and Mohini Kelkar." Growing up alongside the company, Kelkar witnessed firsthand the dedi-

cation and resilience that went into shaping the business.

It is this deep-rooted connection that makes the 40th-anniversary celebration particularly special. On that note, the launch of 'Garage to Global' is an ode to the company's legacy and a heartfelt narrative of a journey fueled by grit and determination.

Why a Book in the Age of Reels?

In today's digital age, where short-form content thrives, writing a book offers a timeless and in-depth way to share a story. "I still do believe that books

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“I was inspired to personally write ‘Garage to Global’ to make it a one-of-a-kind ‘inside story’ behind a family-owned technology company – to capture not only the ‘what’ and ‘when’, but also the ‘how’ and most importantly ‘why’. I believed that as an insider who experienced the story, I could narrate it well.”

Samir Kelkar
Chief Executive Officer
Grind Master Machines Pvt Ltd



Source: Grind Master Machines Pvt Ltd

convey the essence of not only the journey but also the intricacies of the circumstances and the people involved in a more complete way,” explains Kelkar. With this belief, he took on the task of writing ‘Garage to Global’, ensuring that it was not just a chronological account of milestones but a deeper exploration of the ‘what,’ ‘when,’ ‘how,’ and, most importantly, the ‘why’ behind the company’s success. The book offers an insider’s perspective on the decisions, struggles, and breakthroughs that have defined the company’s growth.

Mountains are for Climbing—And So are Challenges

At the company, the motto ‘Mountains are for climbing’ extends beyond the workplace—it is a philosophy that defines the company’s approach to challenges. “The phrase ‘Mountains are for climbing’ comes from the Kelkar family’s love for mountain sports – hiking, trail running, mountain biking,” Kelkar explains. Just as every summit conquered inspires the desire for a higher peak, every challenge overcome at the company has paved the way for even greater engineering feats. “We kept on looking for technological mountains and climbing them, failing in some cases, and that failure,

and our response to that failure, is also captured in the book,” he notes. Whether conquering the Himalayas or pushing the frontiers of engineering, the company’s journey has been one of constant learning.

The Defining Moment

Among the many milestones in the company’s journey, one stands out—the pivotal moment in 2009 when Grind Master proved its mettle on the global stage.

In a high-stakes meeting in Shanghai, an American automotive JV, known for its preference for German equipment, set an ambitious challenge—a 30-minute crankshaft manufacturing line setup change. While established German players hesitated, “With only two prior sales in China and no prior experience in the market, Milind Kelkar, Chairman and Managing Director, Grind Master Machines Pvt Ltd, entered the room with only a wood-and-steel prototype model he had personally carried from Aurangabad,” Kelkar shares.

Initially met with skepticism, his demonstration silenced doubts. The company won the project, securing its place as a world-class engineering solutions provider. “Against all odds, Grind Master secured the project, which transformed the

company, cementing its position as one of a handful of companies globally that can build mission-critical microfinishing machines,” Kelkar recalls. It was a defining validation of Indian engineering advancements.

100-1 = ZERO: The Quality Philosophy

For Grind Master Machines, precision extends beyond a choice—it is a necessity. The company’s ‘100-1 = ZERO’ philosophy highlights its continuous efforts toward ensuring world-class quality, where even the smallest error is unacceptable.

As Baba Kalyani, Chairperson, Kalyani Group, notes in his foreword to ‘Garage to Global,’ “The saying, ‘sweat in Grind Master rather than bleed at the customer’s end,’ reflects a principle that not only applies to them but is a guiding philosophy for any business striving for excellence.” This mindset has been instrumental in the company’s journey, ensuring that every product meets the highest standards.

The Road Ahead: From Atmanirbhar to ‘Jagat Bhari’

As the company looks to the future, its vision extends beyond Atmanirbhar Bharat. The company aims to position India as a

Authored by Samir Kelkar, CEO, Grind Master Machines Pvt Ltd, the book encapsulates the company’s remarkable evolution, offering an insider’s perspective on the trials, triumphs, and defining moments that have shaped the company’s journey.

Grind Master Machines' story can be perceived as a mindset. A mindset that sees challenges as opportunities, failures as lessons, and innovation as a continuous pursuit.

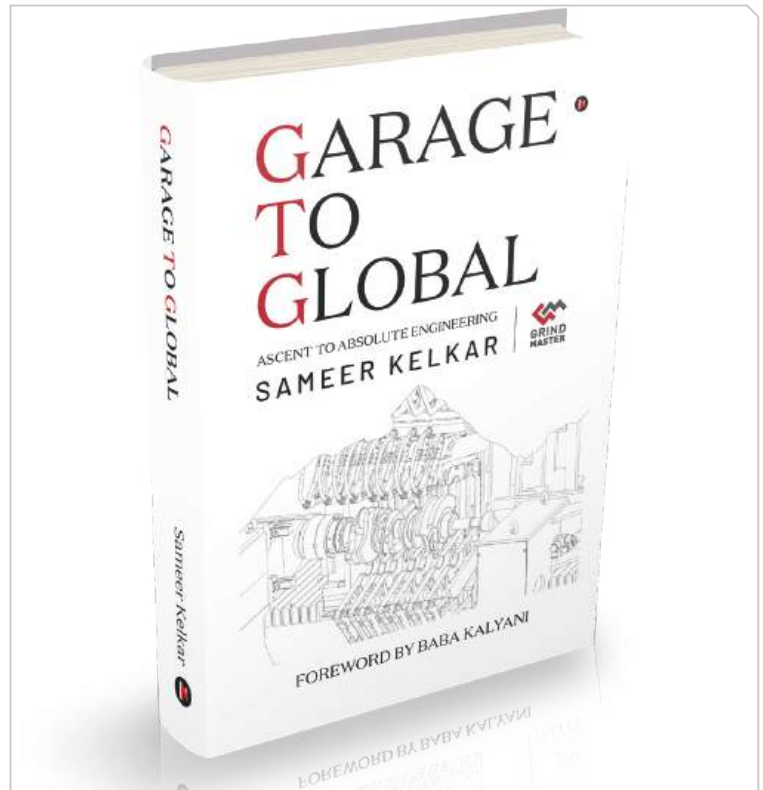
global innovation leader, moving beyond the perception of being a low-wage manufacturing hub to becoming an innovation-competent country.

As Kelkar aptly puts it, "Any specialized technology is already niche, and becoming better means going deeper. When we dig below what seems to be the final step, we find another wonderland. Producing engineered finishes is a rapidly evolving field. We intend to be focused on developing machines and intelligence to be a technology leader."

Seeking the perfect phrase to define this aspiration, Kelkar found inspiration in Marathi: Jagat Bhari—a term that translates to 'recognized as awesome universally.' This captures the company's aspirations of challenging existing technology benchmarks and setting new ones.


Grinding Towards Greatness

Grind Master Machines Pvt Ltd's story can be perceived as



Source: Grind Master Machines Pvt Ltd

a mindset. A mindset that sees challenges as opportunities, failures as lessons, and innovation as a continuous pursuit. Whether in Shanghai conference rooms or metaphorically atop

Himalayan peaks, the company has consistently demonstrated that with vision, resilience, and engineering brilliance, a garage in Aurangabad can become a global player. 

Who did you notice more?

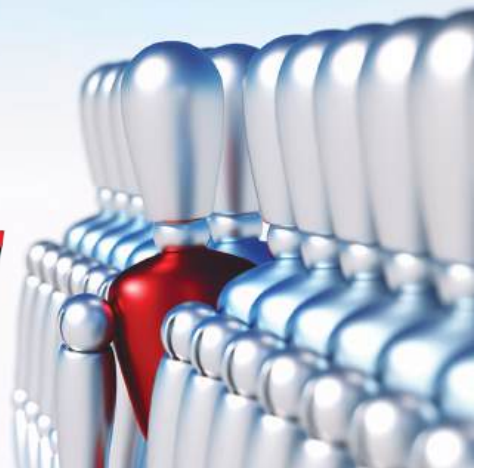


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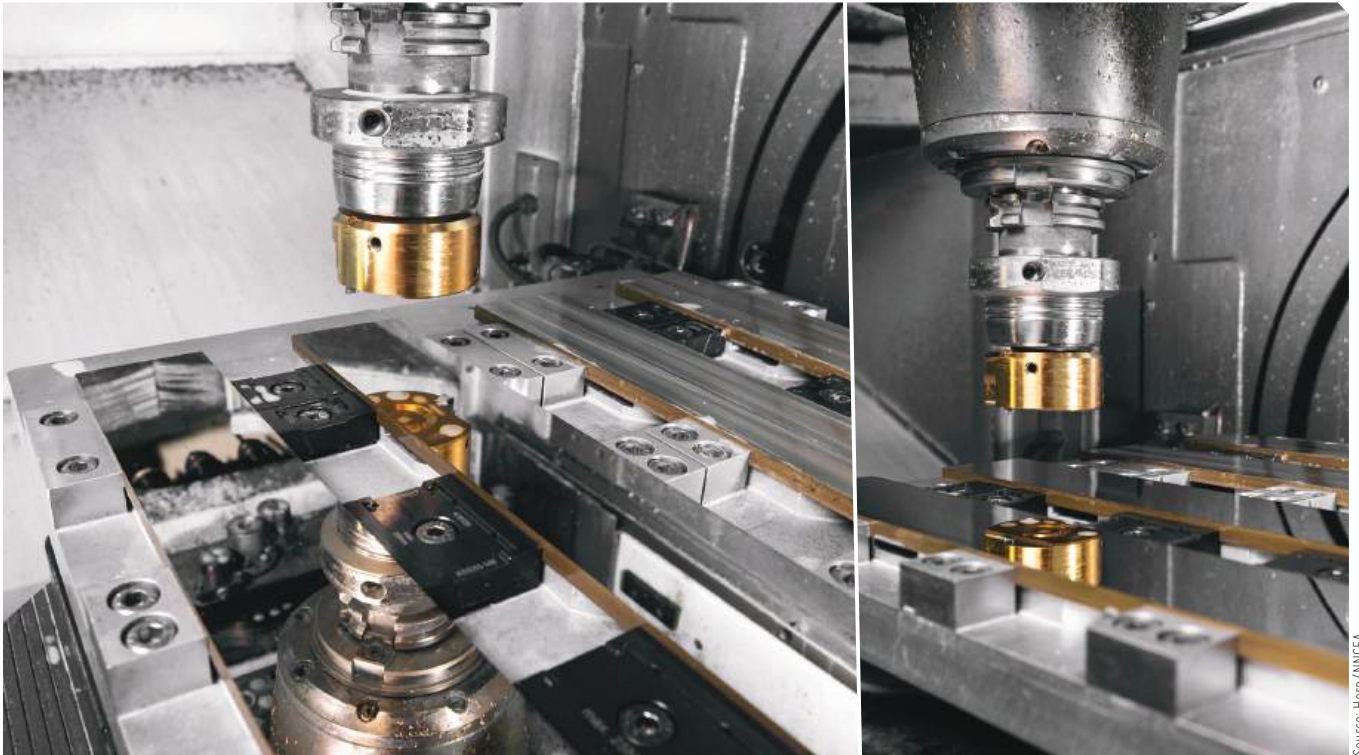
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High-polish milling produces perfect flatness and mirror-like surface finishes in the nanometre range.

Source: Horn/NCEA

WHY DIAMONDS ARE FOREVER IN HIGH-GLOSS MACHINING

While planning bathrooms or kitchens, designers, architects and discerning clients all place high demands on the taps installed. Hence, to ensure the high quality of its products, the high-quality tap manufacturer in Brussels, Belgium, RVB relies on diamond tools from Paul Horn GmbH for high-gloss surfaces.

“The quality of the surfaces is very important. It should be precisely cylindrical or, in the case of shallow fittings, perfectly flat. We can't achieve this precision by polishing,” says Louis-Philippe Gillieaux, Production Manager, RVB.

A polished surface reflects light and shines, but it is not flat. This is why polishing, even when performed by a machine, is not a geometrically precise manufacturing process. The best possible polishing results cost a lot of time and money. “Finding a good polisher is challenging since the job

is highly demanding and hence not widely sought after,” he adds. To further enhance the quality of its premium fittings, the company coats these fitting parts with a layer of copper and nickel before chrome-plating or gold-plating, just like in the old days. This enhances the subsequent shine and color impression and improves the adhesion of gold and chrome to the brass base material, contributing to an even longer service life of the fittings. “Although polishing produces a high lustre, it is not a geometrically precise processing method, as anyone who knows anything about polishing will tell

you. Polishing away one μm too much on a geometric control surface on the brass part destroys the perfect impression of the subsequent mirror finish. These tiny geometric errors are particularly noticeable on rotationally symmetrical or flat mirror-finished surfaces,” Gillieaux adds further.

Monocrystalline Diamond Tools

For these reasons, Gillieaux and his team have been using MCD (Monocrystalline Diamond) tools for over 15 years. When used, the monocrystalline diamonds produce surfaces that make subse-

NIKHIL NAYAK
Managing Director
NN Combined
Engineering Agencies
Pvt Ltd





Source: Horn/ANCEA

The user does not need any special machines for the high-gloss turning process.

quent polishing unnecessary. The switch to machine production has not only enhanced quality, but also reduced costs. “By using diamond tools, we have greatly reduced the cycle time,” explains Gillieaux. Before adopting the diamond tool systems from Horn, the team used tools on which the diamond was soldered directly onto the tool holder. Due to the cumbersome handling and the time-consuming servicing of the tools, they were looking for a modular tool solution. The arguments put forward by Kees

van Bers, Technician, Horn, convinced Gillieaux and his team. Today, RVB relies on a wide range of Horn MCD tools. The high-calibre inserts are used on conventional CNC machines. “You don’t need special machines for milling and turning high-gloss surfaces. The quality is produced by the inserts,” explains van Bers. In addition to turning tools, Gillieaux also relies on MCD milling tools. “We were sceptical at first because of the high cost of the cutting tools, but the performance and results have now complete-

ly won us over,” he adds. When asked about the tool life of the tool systems, van Bers jokes: “With an infeed setting of around 0.02 mm in brass, the tool life is ‘eternal’. If an insert does become blunt, it can be re-polished up to 20 times with the same ‘eternal’ tool life. The greatest danger for MCD tools is the operator error.”

The Supreme Discipline in Machining

High-polish machining with MCD is one of the supreme disciplines of metal cutting processes with geometrically defined inserts. Two hundredths of a millimetre of finishing allowance separate a very good surface from the perfect surface with a mirror finish. The range of applications is broad. The manufacturing process is used in numerous industries. In the Jewelry industry, for example, the tools provide the shine in the production of visible parts of a high-quality wristwatch and most wedding rings. In the production of mirrors for space telescopes, the almost perfect dimensional accuracy of the milled mirror surface guarantees a distortion-free view into space. Diamond-tipped tools were used in the manufacture of almost every visual aid, whether spectacles or contact lenses. Another possible application is in tool, model and mold making. Here, time-consuming and expensive polishing work can be saved. The

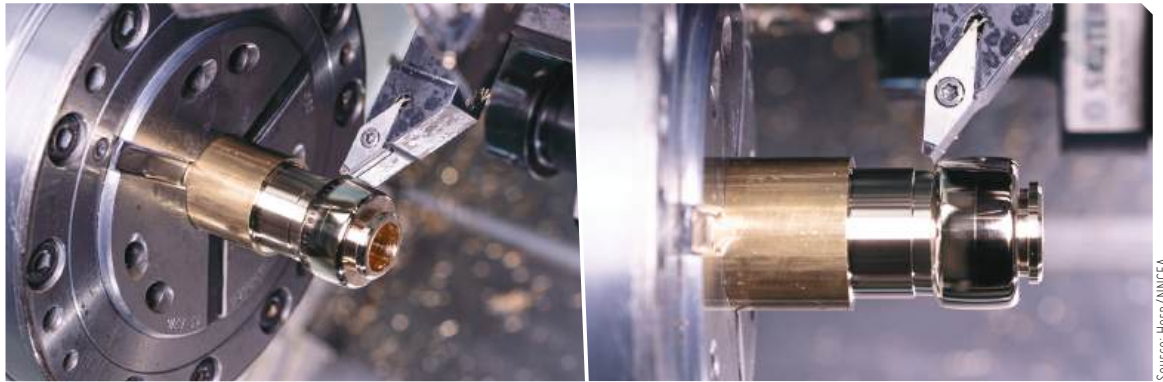
Horn uses high-purity MCC diamonds for its MCD tools. These monocrystalline stones are created using the CVD (Chemical Vapor Deposition) process. Various gases, mainly methane, are used as a carbon source, which are deposited during the process and allow the diamond to grow.



Source: Horn/ANCEA

An MCD-equipped S117 system is used to machine the end faces.

The partnership between RVB and Horn has existed for over 15 years. In addition to MCD tools, the team also relies on Horn tools for grooving and parting off. The service doesn't stop after the sale. The Horn technicians keep at it until the production process runs perfectly.



High-gloss turning of the outside diameter with an MCD-tipped ISO insert.

Source: Horn/NNCEA

list goes on, and these tool systems are firmly established, not least in the Medical industry. The quality of the tool cutting edge plays a decisive role in producing surface finishes with a mirror finish. The quality of the cutting edge is reflected in the surface to be machined. The final inserts or polishing of the MCD cutting edge resembles craftsmanship. Similar to the cutting of a jewelry diamond, the finishing of a tool cutting edge for high-polish machining is done by hand using grinding pliers. Air-bearing grinding tables with a solid granite table top provide optimum conditions for grinding the inserts. A microscope with 200x magnification is used for visual inspection. Under this magnification, the cutting edge must be absolutely free of nicks.

The resulting insert has a maximum radius of 0.0002 mm. Horn has developed a special grinding machine for grinding MCD ball nose end mills for high-polish machining of free surfaces, with which even the smallest radii can be reliably ground.

Synthetic Diamonds

Horn uses high-purity MCC diamonds for its MCD tools. These monocrystalline stones are created using the CVD (Chemical Vapor Deposition) process. Various gases, mainly methane, are used as a carbon source, which are deposited during the process and allow the diamond to grow. The diamonds are characterized by their crystal clear to, depending on their thickness, slightly brownish color. A major advantage of this process is the pos-

sible edge length of the stones. This means that even long tools with cutting edge lengths of 30 mm, for example, can be realized. Previously, natural diamonds had to be used for such tools, which are difficult to realize due to their high price, availability and natural inclusions.

International Designers

The MCD inserts are used at RVB in over 50 different fitting parts. The design of the various series of fittings comes from international designers. "The design is the most important feature for successful competition," says Gillieaux. To this end, RVB works closely with renowned artists. "The designers get in touch with us with their ideas. If they match our DNA and are technically feasible, we realize them in a series," he adds.

The partnership between RVB and Horn has existed for over 15 years. In addition to MCD tools, the team also relies on Horn tools for grooving and parting off. "No matter what requirement we contact Horn with, we are always presented with the appropriate solution for us. The service doesn't stop after the sale. The Horn technicians keep at it until the production process runs perfectly," he explains. 



A successful collaboration: Louis-Philippe Gillieaux in conversation with Kees van Bers.

Source: Horn/NNCEA

HORN in India

Precision Tooling Solutions from Paul Horn GmbH are available in India via NN Combined Engineering Agencies Pvt Ltd. (NNCEA) in cooperation with select OEM partners. NNCEA provides complete logistics and supply chain management solutions for several major medical manufacturing industries in the Indian market.



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TOWARD ZERO DEFECT QUALITY

In its journey towards excellence, Synergy Engineers & Powder Coaters, a Satara-based SME specializing in powder coating, implemented a Zero Defect Approach in its powder coating processes and achieved highly coveted results.



Source: SEPC

Synergy Engineers & Powder Coaters (SEPC) specializes in powder coating (a process that gives a durable and high-quality finish to metal products). Started in 1989 by Shirish Khutale, who previously worked at Maharashtra Scooters, the company began as a small manual powder coating unit and has now grown into one of India's largest fully automated powder coating facilities.

Milestones That Set the Tone
SEPC had the first mover advantage; it was the first independent powder coating service provider in Satara, which helped it attract major customers. The company started working with

major clients including Godrej & Boyce in 1996, leading to collaborations with multiple divisions of Godrej. The ISO Certification in 2003 helped SEPC stand out from smaller, unorganized competitors. In 2010, it joined a Lean Manufacturing Cluster to improve efficiency and reduce waste. A visit to Japan in 2014 further reinforced its commitment to Lean principles.

Zero Defect, Zero Effect (ZED) Approach

'Out of Quality, Out of Business' serves as a constant reminder of the critical importance of quality to any organization. In today's competitive landscape, sustaining growth requires placing qual-

ity at the core of the organization. At SEPC, the focus has been on advancing quality objectives through active participation in various cluster activities. A significant collaboration took place in 2019 between CII and Godrej Interio Division, which proved highly beneficial in implementing the Zero Defect, Zero Effect (ZED) approach in the manufacturing processes on the shop floor.

The Journey of Improvement

The journey began with a comprehensive approach to identify and address key issues, followed by a series of structured steps designed to achieve operational excellence. The process included the following phases:

ADITYA KHUTALE
Director
Synergy Engineers &
Powder Coaters



Zero Defect Quality Strategy

Challenge:

SEPC faced challenges such as losses due to rejections, rework, unnecessary inventory, excessive material handling, improper space utilization, high waiting times, underutilization of manpower, material damage during transit, and overall resource wastage, which affected overall quality and operational efficiency.

Solution

SEPC adopted the 'Zero Defect, Zero Effect' (ZED) approach to eliminate errors and enhance quality. The company implemented Root Cause Analysis to identify defect origins, integrated automation and sensors for better process control, and strengthened employee training and involvement to build a quality-focused culture. This resulted in 12% reduction in defects, 50% cost savings in rejections, 10% increase in productivity, 15% reduction in manpower costs, zero accidents recorded, and improved delivery efficiency. Significant savings were also achieved in resource usage, including water, air, powder, and chemicals.

Problem Identification: The key challenges identified included losses due to rejections, rework, unnecessary inventory, excessive material handling, improper space utilization, high waiting times, underutilization of manpower, material damage during transit, and overall resource wastage. These issues were thoroughly traced and documented to understand the

root causes and their impact.

Preparing a Milestone Chart:

A detailed milestone chart was created, with each task broken down into actionable steps, accompanied by timelines to ensure timely execution and progress tracking.

Team Creation: A cross-functional team was formed, comprising members from senior management to shop floor tech-

nicians. This collaborative group took the lead in driving the initiative, ensuring that all aspects of the process were carefully managed and executed.

Data Collection and Analysis:

A comprehensive assessment identified both active and dormant defects within the plant, evaluating their impact on rejection rates, rework frequencies, and Cost of Poor Quality (COPQ). A detailed analysis of customer complaints and emerging trends quantified the financial and operational repercussions of these defects. Additionally, a defect directory manual was created, mapping defects through the five senses. Defects at each stage of the powder coating process were traced and documented. Common issues, such as peeling, insufficient powder application, oil, and watermarks, resulted in order shortages and operational inefficiencies. This analysis facilitated the development of targeted corrective actions.

Root Cause Analysis: A detailed root cause analysis was conducted to identify the underlying factors contributing to the issues,

Defects at each stage of the powder coating process were traced and documented. Common issues, such as peeling, insufficient powder application, oil, and watermarks, resulted in order shortages and operational inefficiencies.



Source: SEPC

SEPC proudly became the first Small and Medium Enterprise (SME) in India to receive the prestigious GreenCo Platinum rating in 2016, a testament to its unwavering commitment to sustainable and eco-friendly manufacturing practices.



Source: SEPC

ensuring a focused and targeted approach to their resolution. The 'WAR-ROOM' served as the central hub where all live defects were reviewed, and root cause analysis was performed to mitigate and eliminate them. Daily discussions encompassed key data points, including: * Customer complaints * In-process rejections * Quality alert indicators * Debit notes * Defect Traveling Trend Chart (TTC) * Actions taken and Poka-Yoke implementation * Quality performance reports, and * End of Line (EOL) inspection reports

This collaborative and systematic approach enabled the timely identification of issues and the implementation of corrective actions to improve overall quality.

Action Plan and Implementation: Based on the detailed analysis, an action plan was formulated with specific steps to address each identified issue. The plan incorporated a range of techniques to ensure

effective resolution, including: * Accept-Generate-Inspect-Pass (AGIP) * DRVME (Defect, Reason, Validate, Measure, and Eliminate) * Operation Stream Mapping * OPCZ (Operation Process Chart for ZED) * CTQ (Critical to Quality) * CTC (Critical to Cost).

In addition, abnormality mapping was conducted throughout the plant using the 5 Sense concept (Hear, See, Smell, Touch, and Feel) tailored to each operation. This approach uncovered not only minor but also micro-level abnormalities, all of which were systematically addressed to improve process efficiency and quality. Furthermore, in-house subject matter experts convened to develop a list of Poka-Yoke solutions for key areas, including the Pre-Treatment Line, Conveyor, Oven, and Powder Coating Booth, further strengthening process reliability and error-proofing.

Several key upgrades were implemented across various stages of production. These included:

- Interlocks and Sensors installed on the Pre-Treatment Line to monitor and control temperature and liquid levels, ensuring optimal process conditions.
- An Advanced Conveyorized Powder Recovery System and Static Charge Elimination were integrated into the Powder Coating Line to enhance material handling and improve coating quality.
- Resource Management Systems, including FIFO (First-In-First-Out), were introduced to streamline inventory flow and minimize waste.
- Comprehensive Environmental and Safety Enhancements were made across the shop floors, reinforcing adherence to industry safety standards and improving overall work conditions.

Results

These strategic installations contributed to increased operational reliability, process optimization, and a safer, more efficient production environment. The project had a duration of 10 months, with a budget of INR 1.5 lakh and an expected return on investment (ROI) of 1.8 years.

Post-implementation, defects were eliminated, human error reduced, and product quality enhanced. Manpower utilization was optimized, leading to a 10 percent productivity increase, a 12 percent reduction in rejection, and a 50 percent decrease in rejection costs. Manpower costs were reduced by 15 percent, while OTIF and JIT ratings improved, and zero accidents were reported. Significant savings were also achieved in resource usage, including water, air, powder, and chemicals.

Standardization: Best practices were standardized to ensure

consistent and sustainable improvements across all processes.

Horizontal Deployment: Proven practices were extended across other departments and processes to further enhance operational efficiency and reinforce a culture of Zero Defect Quality.


Future Plans

The company's future plans include the establishment of a fully automated Transporter System for the pre-treatment plant, designed to eliminate the manual dipping process. This upgrade aims to streamline operations, enhance consistency, and significantly improve overall efficiency by integrating automated systems that ensure precise control over every stage of the pre-treatment process. The transition to a fully automated system will also reduce labor dependency, minimize human error, and optimize resource utilization, further aligning with our goals for process improvement and

operational excellence.

Going Green and Beyond

SEPC proudly became the first Small and Medium Enterprise (SME) in India to receive the prestigious GreenCo Platinum rating in 2016, a testament to its unwavering commitment to sustainable and eco-friendly manufacturing practices.

Further reinforcing its dedication to environmental stewardship, SEPC recently invested INR 20 lakh in the establishment of a Zero Liquid Discharge (ZLD) unit at its plant. This advanced system ensures that all wastewater generated during the manufacturing process is treated and recycled, with no discharge into the environment. This strategic investment underscores SEPC's ongoing efforts to minimize its ecological footprint, conserve water resources, and strengthen its vision of green manufacturing—a core pillar of its long-term sustainability goals. 

Further reinforcing its dedication to environmental stewardship, SEPC recently invested INR 20 lakh in the establishment of a Zero Liquid Discharge (ZLD) unit at its plant.



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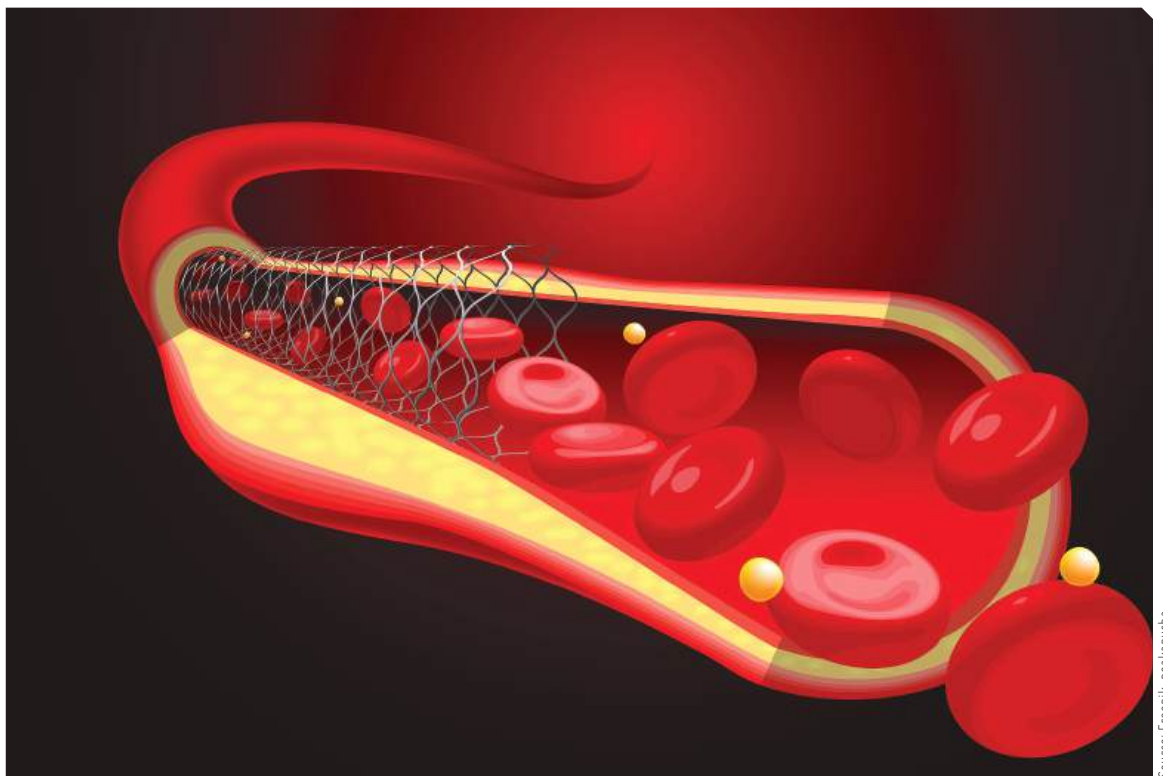

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SEEING IS BELIEVING
In Pursuit of GROWTH

THE POWER OF SOUND WAVES

The manufacturing of medical technology products such as implants, instruments and devices is subject to very strict requirements – including for parts cleaning. Ultrasound is an indispensable process here. It ensures that the required cleanliness is achieved in a stable, efficient and sustainable manner during both intermediate and final cleaning.



Source: Freepik, peakenucha

Stents are used to reopen vessels or keep them open. Very high process and product safety and quality management requirements must be met during their production in accordance with the MDR.

The combination of ultrasound and medical technology is primarily associated with diagnostic imaging. However, ultrasound can do much more in this area. Sound with frequencies above the human hearing range has established itself as an economical and sustainable standard process for wet-chemical cleaning applications in the manufacture and reprocessing of medical technology products such as instruments, implants

and other devices. And it can be used for components made of a wide variety of materials such as stainless steel, titanium, cobalt-chrome alloys, ceramics and plastic.

Optimally Adaptable to the Task

In cooperation with cleaning system manufacturers and users, Weber Ultrasonics develops custom-designed generators and transducer systems as rod, plate and immersible

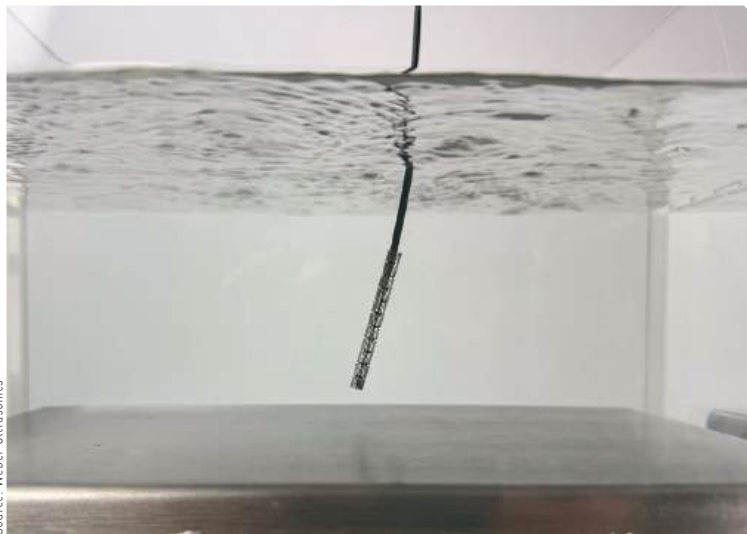
transducers with different frequencies for varied cleaning tasks in medical technology. This includes single-frequency solutions as well as dual- and multi-frequency ultrasonic systems in a frequency range from 25 to 132 kHz. They enable the construction of space-saving cleaning systems that are individually tailored to the workpieces and cleaning requirements. The development of vacuum-proof single, dual and multi-frequency immersible

Source: Weber Ultrasonics AG

transducers also opens up the use of ultrasonic cleaning in full-vacuum cleaning systems. For high-purity applications, where particularly high demands are placed on component cleanliness and cleaning equipment, immersible transducers and plate transducers are available in a suitable design. With a surface roughness of $< 0.35 \mu\text{m}$, they meet the requirements of hygiene class 4 in accordance with DIN 11866.

Reliable Cleaning Stents

Heinz Schade, Managing Director, Weber Ultrasonics, also relies on the wide range of highly effective ultrasonic components. Founded in 1999 and based in Reutlingen, the company develops and produces machines for balloon and catheter production as well as stent processing, which are sold worldwide. In addition, there is software that is optimally adapted to various machines and, among other things, enables seamless documentation and traceability of processes required in medical technology. This helps to ensure that the strict requirements of the



Source: Weber Ultrasonics

The key criteria for stable and damage-free cleaning of the stents include a homogeneous sound field in addition to an optimally tuned ultrasound frequency and power.

MDR with regard to process and product safety and quality management are met.

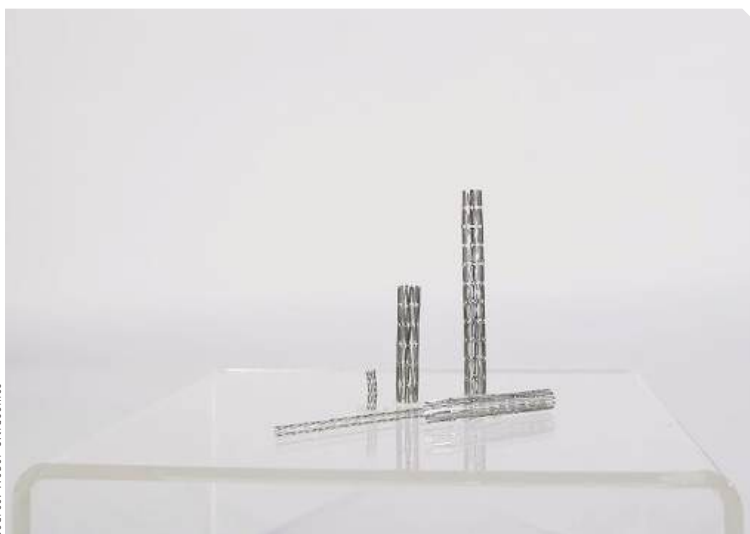
One focus of the system portfolio is on manufacturing steps for stent production that follow laser cutting, such as electropolishing, heat treatment, pickling, and ultrasonic cleaning. The company has been manufacturing tanks for cleaning systems in-house for around 20 years. This allows them to be adapted to various products

and the specific requirements of each customer.

"With our own production facilities, we were looking for a supplier for the ultrasonic components. In Weber Ultrasonics, we found a partner that has impressed us to this day with its expert advice and seamless cooperation," reports Schade.

To ensure the quality and safety of the products, stents are usually cleaned between various processes. Final cleaning is then carried out before packaging, typically in a cleanroom. "Increasingly stringent surface cleanliness requirements must be met. At the same time, it is essential to ensure that the sensitive stents are not damaged during cleaning," says the Managing Director, specifying the requirements. The key parameters for this process are the frequency of the ultrasound and the power in watts per liter of bath volume. Additionally, a homogeneous sound field must be generated in the bath to ensure consistently stable results. "The ultrasonic solutions from Weber Ultrasonics are ideal for these tasks. The power can be set very precisely by con-

In cooperation with cleaning system manufacturers and users, Weber Ultrasonics develops custom-designed generators and transducer systems as rod, plate and immersible transducers with different frequencies for varied cleaning tasks in medical technology. This includes single-frequency solutions as well as dual- and multi-frequency ultrasonic systems in a frequency range from 25 to 132 kHz.



Source: Weber Ultrasonics

Stringent cleanliness requirements are placed on delicate implants such as stents. Gentle cleaning is ensured by ultrasonic cleaning.

For components such as additively manufactured implants with an open-pored sponge structure, combined porous and polished surfaces, or very fine capillaries, ultrasound can be combined with pressure cycling processes.



Source: Weber Ultrasonics

For products with an open-pored sponge structure, with combined porous and polished surfaces and with very fine capillaries, ultrasound can be combined with pressure cycling.



Source: Weber Ultrasonics

Ultrasonic cleaning is the standard procedure for medical technology products such as instruments, implants or other devices with very high cleanliness requirements.

trolling the generator and the sound output is constant and reliable. We have had no problems with the ultrasonic systems so far," adds Schade.

Particulate and Film-Chemical Impurities are Removed

Ultrasound develops its clean-

ing effect in a liquid bath through the physical effect of cavitation: the electrical signals generated by an ultrasound generator are transmitted into the liquid through oscillating elements. The sound pressure is characterized by alternating negative and positive pressure phases. During the negative

pressure phases, microscopically small cavities form and then collapse (implode) in the subsequent positive pressure phase. This process generates shock waves with considerable energy that 'blast off' particulate and film-chemical contaminants. At the same time, microcurrents are created in the liquid, flushing away detached or dissolved contaminants. These effects enable the removal of contaminants not only from the surface but also from complex geometries, cavities, holes, and structures.

For Critical Surfaces in Combination with Pressure Cycling Processes

For components such as additively manufactured implants with an open-pored sponge structure, combined porous and polished surfaces, or very fine capillaries, ultrasound can be combined with pressure cycling processes. In these vacuum flood cleaning processes, alternating negative and positive pressure, along with cavitation effects, are generated through regularly repeated pressure changes. This enables cleaning and rinsing media to reach areas that would otherwise be difficult or impossible to access.



Source: Heinz Schade

The tanks of the cleaning systems are adapted to the products to be cleaned and equipped with ultrasound.

SHAPING THE FUTURE OF THE INDUSTRY

Indian Machine Tool Manufacturers' Association (IMTMA) successfully hosted the International Seminar on Machining Technologies (ISMT) 2025, held in conjunction with IMTEX 2025 at the Bangalore International Exhibition Centre (BIEC) on January 24-25, 2025.



Source: Magic Wand Media

The premier event brought together over 350 delegates from more than 100 companies to explore cutting-edge machining technologies and industry trends.

Inauguration and Keynote Sessions

The seminar was inaugurated by an esteemed panel, including B Thej Kumar, Vice President - Operations, Product Development and Quality, Toyota Gosei South India Pvt Ltd; Anuj Jhunjhunwala, Chief Executive Officer, JJG Aero; and Aditya Narayanan, Vice President - Engineering, Tata Electronics Pvt Ltd. Joining them on the dais were key IMTMA representatives: Rajendra S Rajamane, President, IMTMA; Mohini Kelkar, Vice President, IMTMA; and Jibak Dasgupta, Director General & CEO, IMTMA.

Highlighting India's pivotal role in the global aerospace manufacturing ecosystem, Jhunjhunwala noted, "The realignment of global supply chains and the growing influence of Indian airlines are pushing the commercial aircraft industry to take India's sourcing capabilities seriously. Just as India's Automotive sector rose from near obscurity to become one of the world's top five manufacturing hubs in the last two decades, the Indian Aerospace industry stands on the brink of a similar breakthrough."

Thej Kumar spoke on India's remarkable growth in the Automotive sector, "We are witnessing an 8.8 percent CAGR growth in the Automotive segment. India is poised to become the hub and the third largest automobile manufacturer in the world. This year, we have already reached 4.3 million

in automotive sales – the highest ever in our history, concluded in December 2024. Leading this growth are luxury cars, which represent a rapidly expanding segment in India."

Narayanan, in the session 'Electronics Manufacturing Catalyzing Growth and Making India a Manufacturing Hub', pointed out at the immense growth potential of India's electronics market, and noted, "Currently, the Indian electronics market is valued at US\$ 100 trillion, with 40 percent of this coming from mobile manufacturing. India is now the second largest mobile manufacturer in the world, and we're just getting started."

Event Highlights

The seminar featured an impressive lineup of over 30 technical presentations by industry experts from across the globe. Key topics discussed included: 'Hybrid Manu-

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Source: Magic Wand Media

facturing: The fusion of traditional machining and additive manufacturing; 'Sustainability in Metal Cutting'; 'Industry 4.0 and Data-Driven Manufacturing'; 'Digital Twin Technology'; 'Advanced Tool Holding and Process Optimization'; 'Smart Sustainable Solutions'; 'Virtual and Augmented Reality in CAD/CAM'; and 'Enhancing Productivity and Safety through Collaborative Robots (Cobots)'.

Panel Discussions and Technical Sessions

The seminar also featured a compelling panel discussion on 'Shaping India's Manufacturing Ecosystems for Global Excellence.' The panel was comprised of prominent industry leaders, including Jim Walsh, Vice President - Tooling, Tata Electronics Pvt Ltd; L Krishnan, Managing Director, TaeguTec India Pvt Ltd; Seenivasan Balasubramanian, CEO, International Aerospace Manufacturing Pvt Ltd; Ravi Raghavan, Managing Director,

BFW Ltd; and Praveen VA, Vice President - Engineering, Toyota India Auto Parts Pvt Ltd. Additionally, a presentation by the Ministry of Micro, Small, and Medium Enterprises (MSME) focused on the Open Network for Digital Commerce (ONDC), emphasizing its role in democratizing digital commerce in India. Two parallel concurrent sessions followed, covering: Smart Sustainable Solutions and Emerging Technologies.

Technical Deep Dives

The event also featured in-depth technical discussions on: '5-Axis Machining Techniques for Aerospace and Medical Applications', 'Multi-Sensor Systems in CMMs for Improved Accuracy', 'Tool Wear Monitoring and Compensation', 'Unlocking the Power of Data-Driven Manufacturing', 'Next-Gen Machining Solutions for Enhanced Productivity', 'Condition Monitoring of Machine Tool Spindles', and 'Optimized

Milling and Hobbing Strategies for Worm Gears'.

Impact and Takeaways

ISMT 2025 turned out to be a crucial forum for networking, knowledge sharing, and industry advancement. The seminar highlighted the growing role of machining technologies in bolstering India's Manufacturing sector, supporting national programs like 'Make in India' and 'Atmanirbhar Bharat'.

The event was highly successful in offering industry professionals actionable insights into future-ready machining solutions, reinforcing its significance in driving innovation and operational excellence. Future editions of ISMT 2025 promise even more participation and insights into the changing world of machining technologies. Its role in influencing industry trajectories and developing international collaborations remains crucial in keeping India at the forefront of manufacturing excellence. 

ISMT 2025 highlighted the growing role of machining technologies in bolstering India's Manufacturing sector, supporting national programs like 'Make in India' and 'Atmanirbhar Bharat'.



Source: Magic Wand Media

CRAFTING THE FUTURE OF MOBILITY

Organized by ACMA (Automotive Component Manufacturers Association of India) Mobility Foundation and Indian Machine Tool Manufacturers' Association (IMTMA), 'Auto Components Industry Transformation Summit' on January 26 at Bangalore International Exhibition Centre (BIEC), during IMTEX 2025, served as a crucial platform for navigating the evolving landscape of auto components manufacturing.



Source: Magic Wand Media

The high-profile gathering united thought leaders from OEMs, Tier 1 companies, and cutting-tool innovators and inspired a dynamic exchange of ideas and solutions to combat critical challenges the Auto Components industry faces in its journey towards machining excellence.

A star-studded panel discussion on 'The Auto Components Industry Driving India's Growth' was held under the skilled moderation of Rajesh Nath, Managing Director, German Engineering Federation (VDMA) India Office. The panelists included Dr Umesh Mhatre, Managing Director, Surface Modification

Technologies Pvt Ltd; Nagah-anumaiah, Director, Central Manufacturing Technology Institute; Rohit Bhale, Director, Business Segment, Quaker Houghton; and B Thej Kumar, Vice President, Toyota Gosei South India Pvt Ltd.

A Fireside Chat with industry leaders on 'Analysis of India's Position in the Global Automotive Components Manufacturing Landscape' featured Sriram Viji, Managing Director, Brakes India Pvt Ltd and Chairman, ACMA Southern Region; Prashanth Doreswamy, President & CEO, Continental Automotive Components (India) Pvt Ltd; and Nath.

Call for a Collaborative Approach

Mani, in his keynote address, highlighted that the Indian Automotive Manufacturing industry is undergoing a significant transformation, driven by global trends. He emphasized the need for component redesign, with future components required to be lighter, tougher, and equipped with improved surface treatments to reduce friction. This shift, he noted, demands rapid innovation in production processes to align with evolving industrial requirements.

He further stressed that the Machine Tools industry will play a pivotal role in facilitat-

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ing the production of these next-generation components in a smooth, economical, and globally competitive manner. Mani underscored the importance of a collaborative approach to enhance the quality of both products and production machinery, ensuring the creation of components that meet global standards at the most cost-effective rates.

Echoing his sentiment, Nath highlighted the pivotal role of collaboration between the Machine Tools and Auto Components industries in shaping India's manufacturing future. "The Automotive, Auto Components and Machine Tool sectors have a synergy effect because the Auto Components sector is highly dependent on the Machine Tools sector," he noted.

He emphasized the transformational impact of this relationship, noting that the Automotive industry contributes nearly 7 percent to India's GDP and almost 49 percent of the manufacturing GDP.

"With India's endeavor to become a US \$5 trillion economy and the Manufacturing industry to contribute about US \$1 trillion to it, the Machine Tools sector, I believe, will play a very important role in India's growth story," he added.

For Stronger Industry Partnerships

Doreswamy too shared an insightful perspective on India's manufacturing rise and the critical role of the Auto Components sector in shaping the nation's economy, "The Automotive sector is one of the biggest employers and employs around 35 million people. There is a huge transformation currently underway in the Automotive sector - be it in electrification, convenient features, safety features or the shared mobility.

"Fifty-five percent of the machines which Indian tool makers make is consumed by the Automotive and with more factories getting automated, it is even more essential that we partner with IMTMA even more strongly to make our shopfloors with this digitized work much more efficient. For that, we are looking forward to have a close partnership with IMTMA and look forward to see and adopt many more innovations which could be used in our shopfloors."

"The future of manufacturing is smart, and together, we can accelerate this journey," he noted, underscoring the need for stronger industry partnerships and adoption of next-gen technologies.

Painting a vivid picture of an industry on the brink of a remarkable transformation, Viji stated, "The Auto Components industry isn't just a segment; it's the backbone of India's manufacturing ecosystem."

He added, "The Auto Components industry is the big contributor to the manufacturing segment of India - to both employment as well as the GDP of the country. The industry has experienced significant growth over the past several years. Today, it generates revenue exceeding INR 6.1 lakh crore and is also a significant contributor to exports from India. Over 25 percent of the total sales is in exports."

He emphasized that this isn't about incremental changes but a full-scale revolution. With exports contributing over 25 percent of total sales, the Indian Auto Components industry, he added, is rapidly shifting gears and making its mark on the global stage. "We're not just manufacturing," he explained, "we're crafting the future of mobility."

"The partnership between ACMA and IMTMA has been a long standing one but this edition of the conference is relatively new. We hope that the Indian Machine Tools industry will grow along with ACMA and work hand in hand to develop the next generation of solutions whether it be the next set of machine tools or automation or Industry 4.0 offerings for the industry," he further added.

Commending the Initiative

The participants at the summit lauded the initiative taken by IMTMA and ACMA. "The summit is a great platform to unite stakeholders from ACMA India and IMTMA," said Nath.

With IMTEX 2025 hosting 1,200 exhibitors, he pointed out that it's not just an exhibition but a meeting point for global manufacturers and Indian players to exchange ideas and showcase technologies. "It's a fantastic opportunity for Indian manufacturers to see the latest innovations and understand global trends," he added.

Viji noted with optimism, "Our aim is to make India's Auto Components industry world-class, leveraging localized innovations and collaborative expertise." The summit stands as a testament to India's bold ambition to shape a sustainable and globally competitive automotive future.

Thanking Modern Manufacturing India magazine, Nath concluded with a call to action: "Let's be a part of India's growth story and take the nation forward as we work towards the vision of Viksit Bharat 2047." His remarks reinforced the summit's purpose: fostering innovation, collaboration, and progress in India's Automotive and Manufacturing sectors. 

The high-profile gathering united thought leaders from OEMs, Tier 1 companies, and cutting-tool innovators and inspired a dynamic exchange of ideas and solutions.



Source: VDW

GOLDEN GEARS IN MOTION

As EMO Hannover marks its golden anniversary this year, the world’s leading trade fair for production technology celebrates its five decades of groundbreaking breakthroughs, collaborations, and innovations. The EMO Hannover 2025 World Tour, a precursor to the show, has already set things in motion – scheduling most conferences for India and reaffirming the subcontinent’s status as one of the star players on the global stage.

Organized by the German Machine Tool Builders’ Association (VDW), EMO, since its inception in 1975, has come a long way, becoming an international powerhouse and shaping the future of metalworking worldwide.

Held every two to four years in Hanover under the motto ‘Innovate Manufacturing’, this year’s event is scheduled for September 22-26 at Hannover Exhibition Grounds. Building on its suc-

cess in 2023—where it attracted 92,000 visitors and 1,850 exhibitors from 140 countries—the event is packed with exciting activities and is poised to break all previous records, driven by the EMO Hannover 2025 World Tour’s global promotions.

India’s Ascent in Motion

India’s Machine Tools and Manufacturing sector is on an aggressive growth path, with annual growth rates projected at 7 per-

cent over the next few years. “As the country strengthens its position as a global manufacturing hub, platforms like EMO Hannover become crucial in driving international collaborations,” adds Rajesh Nath, Managing Director, VDMA India Services Pvt Ltd—India representation of the German Engineering Federation (VDMA).

Similarly, Dr Markus Heering, Executive Director, VDW, provides historical context to India’s re-

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For 2025, industry estimates suggest that between 120 to 150 companies will participate. On the visitor front, interest from Indian businesses continues to grow, driven by the need for advanced automation, digital manufacturing, and precision engineering solutions to stay competitive globally.

Source: VDW



“As the country strengthens its position as a global manufacturing hub, platforms like EMO Hannover become crucial in driving international collaborations.”

Rajesh Nath
Managing Director
VDMA India Services
Pvt Ltd

markable journey, stating, “Overall, the development of India’s participation at EMO reflects the country’s rise as an industrialized nation. In the past 50 years of EMO, Indian companies participated in the event for the first time in 1977 in Hannover.”

Heering shares that there were no Indian exhibitors in 1987 and 1995, but the breakthrough came in 2005, when for the first time, 20 Indian machine tool manufacturers occupied more than 1,000 sq mt of net exhibition space. “Since then, there have never been fewer than 25 exhibitors in Hannover,” he reveals. “On the visitor side, India ranked second among EMO guests from overseas in 2023 with around 2,000 visitors.”

Implying that the country’s presence at EMO Hannover has been on an impressive growth trajectory, Nath shares, “From 31

exhibitors in 2019 to 45 in 2023, the numbers have steadily risen, reflecting the country’s expanding role in global manufacturing.” On the visitor front, interest from Indian businesses continues to grow, driven by the need for advanced automation, digital manufacturing, and precision engineering solutions to stay competitive globally.

Big Leaps, Bold Moves

The exact number of Indian exhibitors for EMO Hannover 2025 is yet to be finalized, notes Nath. However, industry estimates suggest that between 120 to 150 companies will participate. This increase reflects India’s booming manufacturing sector and its growing ambitions in championing mega trends and smart manufacturing.

“The event will see strong representation from machine tool manufacturers, component suppliers, and technology providers looking to expand their global footprint,” he mentions further. “With Europe being a key export destination, EMO Hannover offers Indian companies unparalleled networking and business opportunities to engage with global decision-makers.”

Against this backdrop, Heering follows up by stressing, “We currently have 40 registra-

**EMO World
 Tour 2025 Press
 Conference in India**

- April 21: Pune**
- April 22: Chennai**
- April 23: Bangalore**
- April 24: Ahmedabad**
- April 25: NCR (Delhi region)**

Source: Magic Wand Media



“Accordingly, Indian exhibitors who want to serve the global market meet visitors from 140 countries there. Three quarters come from Europe, and they are all potential customers.”

Dr Markus Heering
Executive Director
VDW

tions from Indian exhibitors. In 2023, there were 37 manufacturers. So, there is already a rise in participation. India is increasingly proving itself to be a competent supplier of production technology.”

EMO Matters

India is undoubtedly one of the most important growth markets for the German Machine Tool industry, with machine tool exports currently standing at around 15 percent, leaving ample room for expansion. Last year exports rose by 23 percent to more than €300 million. Adding to this, Heering explains, “Although orders from India were down again in the same period, falling by 14 percent, in the medium term, however, we expect very good prospects in the Indian market.” Emphasizing that for Indian



Source: VDW

India ranked second among EMO guests from overseas in 2023 with around 2,000 visitors. Exports of German machine tools to India rose by 23 percent for the same year to over €300 million, signaling strong bilateral industrial ties and market potential.

companies, EMO Hannover is more than just an exhibition; it's a gateway to global markets, Nath stresses, "The event provides direct access to European buyers, technology partners,

and industrial leaders, helping Indian manufacturers expand their export bandwidth beyond Germany into the wider European market." As the world's leading trade

fair for production technology, reiterates Heering, EMO is a unique platform for acquiring new customers from all over the globe and the only metal-working trade fair in the world that attracts an international audience. "Accordingly, Indian exhibitors who want to serve the global market meet visitors from 140 countries there," he goes on. "Three quarters come from Europe, and they are all potential customers."

In addition, Indian exhibitors have the opportunity to find new suppliers and partners. "The event fosters collaborations, joint ventures, and technology transfers, essential for scaling international business," adds Nath. With the demand for cost-effective, high-quality engineering solutions rising, Indian companies are well-positioned to showcase their strengths in precision manufacturing, automation, and digital technologies to a global audience.

"They also can evaluate and

EMO World Tour 2025 in India: Where Global Meets Local

The EMO World Tour 2025, as part of its global engagement strategy, is bringing the spirit of the world's leading trade fair for production technology straight to key manufacturing regions across the globe. Already making waves, since February 2025, the roadshow in motion spans nearly 30 countries—from Brazil to Japan—through a mix of digital and in-person formats.

The tour makes a critical pit stop within India. A week-long media conference series will take place in five major cities as part of EMO Hannover 2025 preparations in April, to present Indian suppliers, manufacturers, and press members with key information about the upcoming event in September.

The sessions will share insights about this year's event theme, while exploring emerging industry trends and featuring voices from exhibitors and stakeholders across the Indian ecosystem. The exhibition provides a valuable opportunity to local companies that want to develop international business contacts.



Source: VDW

With the world watching and India rising, the event promises to be more than just another trade fair. It's a celebration of the past, the present, and the thrilling potential of what's yet to come.

strengthen their own market position in comparison with market competitors. Incidentally, Germany is one of the top 5 export markets for Indian manufacturers," says Heering. "More than 350 German exhibitors at EMO 2025 alone offer outstanding buyer potential."

Taking the Show on Road

To build momentum for EMO Hannover 2025, curtain raiser events will be organized in key Indian manufacturing hubs. The EMO Roadshow will take place from April 21-24 across multiple cities, including Pune, Chennai, Bangalore, and Ahmedabad. These pre-show gatherings will feature top industrialists, thought leaders, and Government representatives discussing India's role in the global manufacturing landscape. "VDMA and VDW will play a crucial role in facilitating these discussions, ensuring Indian companies are well-pre-


pared to leverage EMO Hannover for business expansion and technological collaborations," says Nath.

With increased focus on Industry 4.0, automation, and AI-driven production, Indian companies are looking at EMO as the perfect launchpad to showcase innovations, explore new markets, and solidify their presence in the European manufacturing ecosystem. "The 2025 edition is expected to be a landmark event for Indian participation," the VDMA MD underscores.

More Than Just Machines

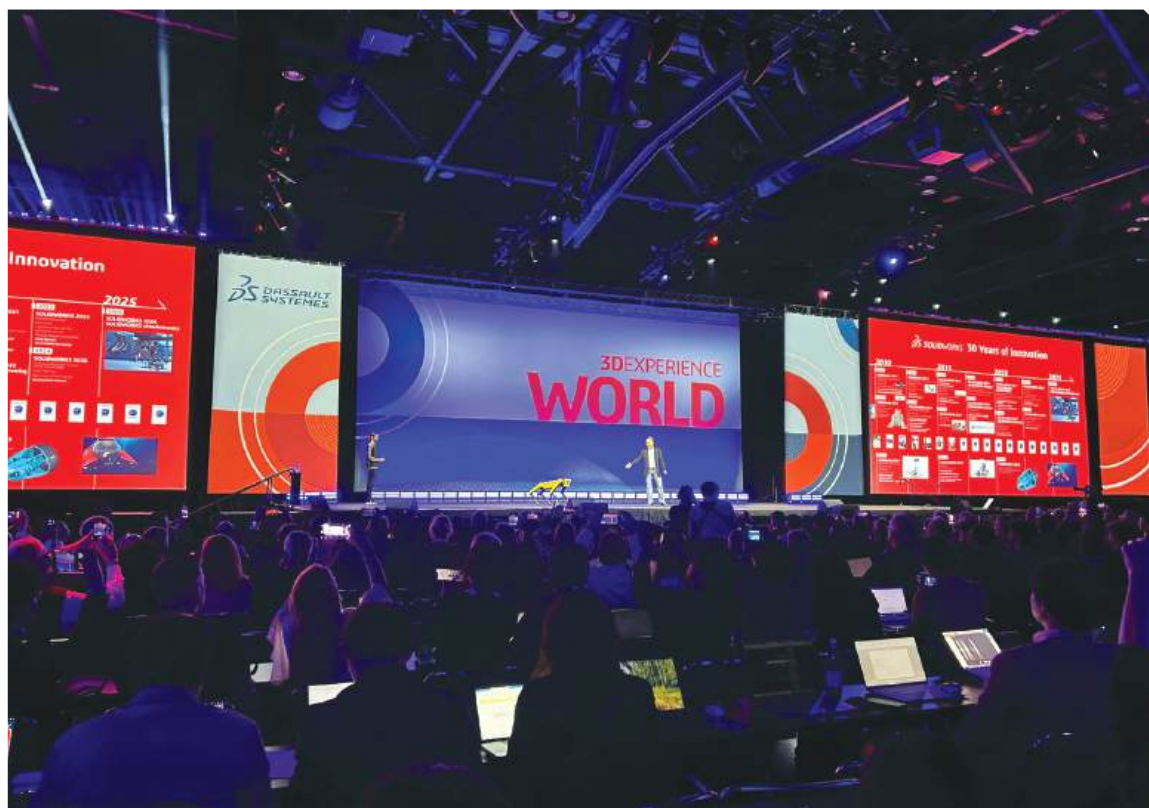
What makes EMO special isn't just technology—it's the people and stories behind it, as the present and future success both derive from the narratives which showcase human achievement coupled with advancement. That's why, in this 50th edition, EMO is inviting participants to share their memories and milestones. Some compelling

questions in mind are: "What were your first impressions of the EMO? What highlights do you remember? What makes a visit to the trade fair special for you every time?"

The upcoming anniversary edition celebrations will include a retrospective of five decades of progress. These human stories, from first-time exhibitors to seasoned veterans, will bring a personal dimension to the otherwise high-tech environment. Looking ahead, as the countdown to EMO Hannover 2025 begins, another important mention under the backdrop of the building global interest is how, through its showcase and presence, India readies its strongest-ever contingent, building around this golden anniversary. With the world watching and India rising, the event promises to be more than just another trade fair. It's a celebration of the past, the present, and the thrilling potential of what's yet to come. 

CHARTING THE FUTURE COURSE OF DESIGN

Celebrating three decades of transforming the world of 3D design from February 23–26, 2025, at George R Brown Convention Center in Houston, Texas, the much-anticipated 3DEXPERIENCE World 2025 was a powerful reminder of how far the software and its community have evolved and changed the world for the better.



Source: Magic Wand Media

Dassault Systèmes' SOLIDWORKS set itself the mission three decades ago to deliver 3D design capabilities for universal use and to make it 'accessible to everyone'. The celebration served as more than the company's historical remembrance because it focused on charting the future course of design.

"Witnessing the growing number of startups as well as all our customers utilizing SOLIDWORKS proves that our dream is turning into reality. And that's

thanks to you—your feedback, support, and enthusiasm that drive our vision," noted Gian Paolo Bassi, SVP, Mainstream Innovation and Customer Role Experience, Dassault Systèmes, during his opening address.

Manish Kumar, CEO, SOLIDWORKS, presented a transformative outlook for the software following his recollection of its initial development stage. "I bring exciting news about SOLIDWORKS starting a fresh chapter. SOLIDWORKS is expanding its brand to run

the entire manufacturing enterprise," Kumar declared with enthusiasm. The brand expansion extends from design operations to supply chain management, thus emerging as 'the ultimate solution for manufacturers seeking to streamline, enhance optimization, and lead in the industry'.

To commemorate this three decades of design revolution, attendees tried SOLIDWORKS 95 at the Playground area dedicated booth titled '30 Years of SOLIDWORKS' where they

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Dassault Systèmes announced the 3D UNIV+RSES initiative, powered by the 3DEXPERIENCE platform, to leverage spatial computing for virtual twins. As part of this vision, the company partnered with Apple Inc to integrate Apple Vision Pro into the next-generation 3DEXPERIENCE platform.

Source: Dassault Systemes



“The SOLIDWORKS brand is expanding to power the entire manufacturing enterprise. This expansion would extend from design to production, supply chain to operations and beyond, making SOLIDWORKS ‘the ultimate solution for manufacturers looking to streamline, optimize, and lead in the industry.’”

**Manish Kumar
CEO
SOLIDWORKS**

could model parts. The annual gathering brought together 4,000 in-person visiting participants together with numerous virtual guests, which included engineers, designers, makers, students, and manufacturers.

The AI Edge in Engineering

Pascal Daloz, CEO, Dassault Systèmes, emphasized the company’s commitment to the ‘Generative Economy’—a design approach that takes inspiration from nature to ‘design smarter and waste less’.

This means creating virtual twins of everything for everyone, leading to gains in knowledge and know-how in design, engineering, and manufacturing for attendees and users, which also is the users’ intellectual property (IP), the currency of this new economy. “To achieve this, we are combining the best modeling, simulation, data science, and AI-assisted content, which we call 3D UNIV+RSES,” Daloz explained. “This new generation places artificial intelligence (AI) at the very core of everything we do.”

In line, SOLIDWORKS introduced two groundbreaking AI-powered services:

- Generative Experiences – AI-driven automation for assembly, requirements, and design validation.
- Virtual Companions – AI-powered assistants that enhance users’ skills and accelerate workflows.

Pascal added, “We are committed to protecting all our customers, small and large, and their IP. We are committed to protecting you. We are set to

Source: Dassault Systemes



“These stories remind us that the future is not just shaped by the tools, but by the people who use them to bring ideas to life.”

**Suchit Jain
Vice President, Strategy & Business Development
SOLIDWORKS**

become data-centric and content-centric. We are committed to making AI accessible and expanding the SOLIDWORKS experience, keeping it intuitive, powerful, and connected.” Similarly, Kumar introduced three AI-driven generative features such as automatic drawing generation along with Generative Stacked Dimensions for sketch constraint automation and AURA features to convert images into 3D

Source: Magic Wand Media



Source: Magic Wand Media



Source: Magic Wand Media



Source: Magic Wand Media

test-ready models. “With AURA, one can experience a completely new way to work. AURA stands as the only AI tool that operates within the SOLIDWORKS model framework, offering deeper, regulatory insights, as well as generating 3D solutions automatically,” he shared.

Milestones and Recognition

The SOLIDWORKS community has grown to impressive proportions over three decades. “We are nearing a huge milestone—1 million certified users—with over 900,000 and counting!” Suchit Jain, Vice President of Strategy & Business Development, Dassault Systèmes, announced to enthusiastic applause. He also highlighted that the broader SOLIDWORKS community now encompasses over 8 million designers, engineers, students, makers, and entrepreneurs worldwide.

The event celebrated outstanding community contributors with several prestigious awards: Michelle Pillers Community Award (lifetime achievement) – Kirby Downey (London SWUG); User Group Leader of the Year – Stephanie Hayna (NYC SWUG); and SOLIDWORKS Champion of the Year – Sanket Patil.

Stronger Together, Smarter Tomorrow

Major partnership announce-

ments showcased during the event indicate upcoming changes for the platform. One of the most significant announcements was the collaboration between Dassault Systèmes and Apple Inc, an American multinational technology giant, to integrate Apple Vision Pro into the next generation 3DEXPERIENCE platform. “Our engineering collaboration with Apple represents a bold advance that reveals the power of 3D UNIV+RSES, where 3D is a universal language for a new world combining real and virtual,” said Elisa Prisner, Executive Vice President, Corporate Strategy & Platform Transformation, Dassault Systèmes.

Also, the partnership announced between Dassault Systèmes and KUKA, a global industrial automation and robotics company, is aimed at providing manufacturing industries a full range of robotic and automated solutions. The agreement brings Dassault Systèmes into ‘mosaixx’ which represents KUKA’s digital ecosystem of industrial software offerings. “As we collaborate with KUKA, we enable customers with streamlined access to the 3DEXPERIENCE platform together with our applications, which include CATIA, DELMIA, and SOLIDWORKS,” Bassi confirmed. “This will open up new possibilities for customers to benefit from the

virtual world and collaborate and innovate in diverse sectors such as Automotive, Aerospace, Electronics, Metalworking, Logistics, Healthcare, and more.” With over four million industrial robots in factories worldwide and an expected 718,000 new installations in 2026, this collaboration couldn’t have come at a better time.

Another key product announcement was SOLIDWORKS CPQ (Configure, Price, Quote), a new solution on the 3DEXPERIENCE platform that will be made available to customers. This tool uses generative AI technology, which accelerates the order and delivery of customized products. “SOLIDWORKS CPQ builds upon the 30 years of innovation that have made 3D design simple and powerful,” said Kumar. “With this new business solution, we’re expanding our scope and reaching new audiences by introducing a complete software ecosystem for manufacturing with next-generation technologies that work together in an integrated, effortless way.”

Customer Spotlights

Brilliant minds and SOLIDWORKS users unveiled remarkable innovations during the three-day duration of the event. Boston Dynamics’ SPOT robot, an agile four-legged robot that can be used for sensing and in-

SOLIDWORKS introduced two ground-breaking AI-powered services. ‘Generative Experiences’, an AI-driven automation for assembly, requirements, and design validation, and ‘Virtual Companions’, an AI-powered assistants that enhance users’ skills and accelerate workflows.



Source: Magic Wand Media



Source: Magic Wand Media

spection, capturing limitless data, and exploring without the limitations of traditional robots. It serves around the world in multiple capacities, including offshore facility inspection for inspecting dangerous oil rigs; assessing Puerto Rico’s hurricane damage; helping restore Notre Dame Cathedral; and examining Pompeii’s ancient ruins. Marc Raibert, Executive Director, The AI Institute and Founder, Boston Dynamics, in his keynote addressed Dynamic Intelligent Robots, the current state of humanoid robots—presenting the Atlas autonomous robot—and shared that currently around 2,000 mobile robots are already in use. ColdSnap, which is revolutionizing the frozen treat industry with AI-driven SOLIDWORKS designs, was showcased by Matt Fonte, who revolutionized frozen treats

with a Keurig-like ice cream machine born from his daughter’s imagination. He went on to give a presentation featuring a live demonstration of ColdSnap’s two-minute ice cream-making process. Another notable mention is OneWheel, which is redefining personal mobility with intelligent 3D modeling. Its inventor, Kyle Doerksen, shared how he translated his snowboarding passion into groundbreaking personal mobility technology. From India, Dr Sriharsha S, one of the founders of Bengaluru-based Bullwork Mobility Pvt Ltd, whose electric tractors are transforming the landscape of agriculture in India, has also benefited from SOLIDWORKS support. Similarly, Shubham Singh, Co-Founder & CEO, CRASTE.CO, a company which made waves with innovative sustainable materials at the event, remarked, “We use SOLIDWORKS for designing our patented blending machine that coats each particle of straw with glue. Plus, designers who work with our materials rely on SOLIDWORKS for creating furniture designs.”

Shaping the Next Generation

Education and workforce development were prominent themes throughout the event. Jain spotlighted initiatives that empower the upcoming gen-

erations of engineers, creators, and inventors. He announced ‘SkillsForce’, a new program that extends free SOLIDWORKS licenses to both co-ops and internship students who need unfettered industrial experience. Students will access opportunities through this program that launches on April 15, 2025 with the aim to help companies access skilled talent.

The Future is Taking Shape

The final message of the event established that SOLIDWORKS provides more than basic CAD functionality and is a powerful platform for the future. The combination of AI-driven automation, cloud-powered collaboration, and immersive spatial computing technologies makes SOLIDWORKS the forefront leader of emerging design and manufacturing innovation. Perfectly capturing the spirit of the milestone celebration, Jain noted, “These stories remind us that the future is not just shaped by the tools, but by the people who use them to bring ideas to life.” The SOLIDWORKS community now looks to the future as 3DEXPERIENCE World 2025 ended with an invitation for everyone to return to Houston for 3DEXPERIENCE World 2026, where the next and evolving chapter of SOLIDWORKS historical legacy will undoubtedly emerge. 

Education and workforce development were key focuses, with initiatives like ‘SkillsForce’, providing free SOLIDWORKS licenses to co-ops and internship students, and ‘Jumpstart Fellowship Program’, empowering young female students to pursue robotics and technology careers.



Source: Magic Wand Media

TAIWAN'S MANUFACTURING MAGNUM OPUS

Taipei International Machine Tool Show (TIMTOS) in its 30th edition came to a successful conclusion on March 8, 2025, leaving a lasting impression on the dynamic global manufacturing landscape. The six-day event, co-organized by Taiwan External Trade Development Council (TAITRA) and Taiwan Association of Machinery Industry (TAMI), highlighted smart manufacturing innovation in Taiwan, the amalgamation of AI and robotics, and sustainability in today's industrial practices.

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The 'Integrate to Innovate' theme of TIMTOS 2025 united over 1,000 exhibitors who occupied 6,100 booths at Taipei Nangang Exhibition Center Halls 1 & 2 and Taipei World Trade Center Hall 1. The exhibition received 4,163 international buyers from 90 countries, representing a 5.1 percent rise from the previous

edition, particularly garnering significant interest from India, Japan, China, South Korea, and Malaysia—the top five buyer countries.

Leaders Chart the Course

The opening ceremony established a strong tone for the event through the attendance of distinguished guests, including Lai

Ching-te, President, the Republic of China (Taiwan); Kuo Jyh-huei, Minister of Economic Affairs of Taiwan; Raymond Greene, Director, American Institute in Taiwan (AIT); Jörg Polster, Director, German Institute Taipei; and Danielle Tarnanidis, Director, Swiss Trade Office Taipei. They were joined by the leadership of orga-

Distinguished guests from around the world gathered as President Lai Ching-te of the Republic of China and TAITRA Chairman James Huang jointly inaugurated TIMTOS.



Source: TAITRA

TIMTOS 2025 welcomed 4,163 international buyers from 90 countries, marking a 5.1 percent increase from the previous edition, with strong interest from India, Japan, China, South Korea, and Malaysia.

nizers—James Huang, Chairman, TAITRA and David Chuang, Chairman, TAMI.

Huang, in his opening address, stressed how AI and smart manufacturing are pushing the Machinery industry of Taiwan toward transformation. “The advancement of industry depends equally on technological capabilities and the next generation of AI talent, who are the industrial pioneers of the future,” the TAITRA Chairman said. “The current global power shifts together with evolving supply chains enable Taiwan to emerge as a critical player in worldwide manufacturing through its advanced technological capacity.”

Similarly, with the stage set as such, Chuang highlighted Taiwan’s Machine Tool sector’s resilience amidst economic uncertainties in 2024. “Taiwan is leading the industry supply chain in adopting AI applications and advancing the transition to net-zero emissions, shifting the competition from price to value,” the TAMI Chairman noted.

Possibilities in New Light

The exhibition floor buzzed with cutting-edge technologies across six major industry trends: precision machine tools, key compo-



Source: Magic Wand Media

“The advancement of the industry depends equally on technological capabilities and the next generation of AI talent who are the industrial pioneers of the future.”

James Huang
Chairman
TAITRA



Source: Magic Wand Media

“Taiwan is leading the industry supply chain in adopting AI applications and advancing the transition to net-zero emissions, shifting the competition from price to value.”

David Chuang
Chairman
TAMI

nents, full-scale automation and smart manufacturing, digital twin-driven integration, additive manufacturing, and expanded cross-industry applications. Building on this year’s theme, ‘AI & Robotics’, AI and robotics took center stage, with

leading manufacturers like HIWIN Technologies Corporation, Chieftek Precision Co., Ltd (CPC), and Main Drive Corporation introducing innovative solutions for humanoid robots, including harmonic reducers and joint modules.



Source: Magic Wand Media

The keynote featured two industry visionaries—Akihiro Teramachi, CEO & Chairman, THK Co., Ltd, and Haw Chen, President, Techman Robot Inc.—in the presence of James C F Huang, Chairman, TAITRA Global (Taiwan External Trade Development Council).



Source: Magic Wand Media

Industry leaders discussed the evolving landscape of Taiwan’s machine tool sector, during an exclusive media conference.

TAIWAN EXCELLENCE

'Taiwan Excellence' made a remarkable debut at TIMTOS 2025, bringing together leading Taiwanese companies such as CHMER, HIWIN MIKROSYSTEM, Honor Seiki Co., Ltd, Yeong Chin Machinery Industries Co., Ltd (YCM), Accutex Technologies Co., Ltd, Gifu Enterprise Co., Ltd, Campro Precision Machinery Co., Ltd, and Techman Robot Inc. to collectively showcase Taiwan's innovation in manufacturing and its commitment to sustainable development.

Several groundbreaking products were showcased to demonstrate Taiwan's strength in smart manufacturing, including:

CHMER UA432L Green and Compact Linear-Driven Wire Cut EDM: Equipped with 48 patented technologies, this machine enhances precision and efficiency, making it ideal for the Electronics, Automotive, and Medical Manufacturing industries.

HIWIN MIKROSYSTEM APM Series Absolute Position Measurement System: Featuring real-time monitoring capabilities, this system ensures safety while its waterproof and dustproof magnetic sensing technology maintains high accuracy, widely applied in Panel, Semiconductor, and Precision Machining industries.

Honor Seiki VL-100CA Intelligent Vertical Lathe for the Aerospace industry: Specially designed for the Aerospace sector, this machine integrates smart CNC technology, significantly reducing processing time and costs while greatly improving production efficiency.

YCM T11 Green Smart Machine: Incorporating AI smart control technology, this machine balances energy savings with high-efficiency machining and has earned Taiwan's first ISO14955 international certification.



Source: Taiwan Excellence

The event's theme, 'AI & Robotics', highlighted cutting-edge solutions from leading manufacturers like HIWIN Technologies Corporation, Chieftek Precision Co., Ltd (CPC), and Main Drive Corporation, emphasizing automation and smart manufacturing.

Maurice Chang, Senior Director, HIWIN Technologies, explained the company's comprehensive approach: "We shared with the audience our vision on ESG, green manufacturing, smart solutions, and AI integration. HIWIN offers high-efficiency products across numerous industries, from traditional machine tools to cutting-edge semiconductor manufacturing."

Displaying their proprietary control technology at the expo, Brad Wang, General Manager, Ching Hung Machinery & Electric Industrial Co., Ltd (CHMER), Taiwan's largest EDM manufacturer, said, "We have developed a smart, user-friendly HMI system that incorporates functionality of AI,

simplifying machine operation." He also emphasized India as a significant strategic market for the company by pointing out, "With India becoming the world's most populous nation, it is inevitable for domestic demand to surge, primarily in the Automotive segment and related sectors."

Strategic Pivots Pay Off

In an exclusive media conference dedicated to Taiwan machine tool companies showcased their systematic and strategic approaches for handling global challenges. Taiwanese manufacturers—despite geopolitical tensions, economic turmoil, and intensified competition—are choosing to focus on three

essential areas: high-end applications (such as precision machining, high-speed cutting, and multi-axis control), smart manufacturing, and green machinery systems. With these adaptations, Taiwan has established leadership in developing high-tech manufacturing technology solutions that serve some of the most critical industries, such as Semiconductors, Aerospace, Electric Vehicles, Medical Devices, and Renewable Energy. During an interview, Richard Wang, Chairman, EARTHCHAIN Enterprise Co., Ltd, a company that has served the market for more than four decades, emphasized Taiwan's industrial evolution and shared



Source: TAITRA

The TIMTOS Keynote address brought world-class lectures to Taiwan's machine tool industry, attracting a full house.

Several exhibitors, including HIWIN Technologies Corporation, Syntec Group, and Palmary Machinery Co., Ltd, emphasized India's growing role as a key manufacturing hub, with discussions on potential investments and expansion in the region.

his insight into global markets. "India is the future world factory, just like China before," he noted. "There's tremendous potential in the Indian industrial market."

Commerce in Full Swing

The show demonstrated strong business outcomes, with Fair Friend Group (FFG) reporting more than 100 successful orders spanning Automotive, Aerospace, Semiconductors, Rail Transport, and Energy sectors. Quaser Machine Tools Inc. secured NT \$1 billion in orders for

hydrogen energy and medical devices, while Tongtai Machine & Tool Co., Ltd entered the semiconductor market with ultrasonic machining and additive manufacturing technologies.

The procurement matchmaking event by TAITRA enabled 315 sessions between 75 international buyers from 22 different nations and 102 exhibitors. Buyers represented diverse markets, including US, Canada, Mexico, Brazil, Germany, France, Italy, Spain, Japan, Poland, Vietnam, India, Israel,

and Ukraine. Furthermore, a Cutting Tool sector-based specialized networking event brought together buyers from 14 countries. Where exhibitors like Mega Machine Co., Ltd reported a 70 percent order placement rate, with instant orders from Middle Eastern and Bulgarian customers.

Chris Chou, General Manager, Overseas Sales Department, Chin Fong Machine Industrial Co., Ltd, Taiwan's largest mechanical power press manufacturer, highlighted their strategic pivot toward electric vehicle (EV) components. "In China, we have become the go-to supplier for battery cases, and we see tremendous potential to bring that expertise to India's growing EV sector," he asserted.

India: The Next Manufacturing Frontier

During TIMTOS 2025, a notable trend was the emphasis on India, which is gradually shifting to become a major target market for Taiwanese manufacturers. The subcontinent's current industrial expansion, together with its vast domestic supply, creates a compelling opportu-



Source: TAITRA

TIMTOS showcased the latest Smart Manufacturing technologies, allowing international buyers to experience the products firsthand.

nity for businesses and firms to expand their operations.

CR Raguramachandran, CEO, AceMicromatic International Pvt Ltd—AceMicromatic Group's export wing—made its inaugural appearance at TIMTOS with a clear strategy. "Like all exhibitions, TIMTOS is quite unique," he stated. "We feel that participating here will help us reach the dealers and distributors we are targeting globally."

Framed by these developments, Tiger Wang, General Manager, Palmary Machinery Co., Ltd, noted the strong Indian presence, commenting, "We have many customers from India visiting us at this TIMTOS. We are already well established in the Indian market." Hinting at future possibilities, he added, "We are exploring ways to reduce costs, including potential manufacturing investment in India."

Emphasizing India's strategic importance, Chang said, "India is a very important market globally for HIWIN." The HIWIN Senior Director continued, "Our foundation there began with machine tools, where we have established long-term partnerships with key customers. Medical applications and smart automa-



Eye-catching robotic arms drew the attention of international buyers.

tion are very important for us in India. With Apple Inc's supply chain now entering India, it's an excellent starting point for collaboration."

Similarly, describing their expanding Indian operations, Otis Siah, Global Director, SyntecGroup, elaborated, "We have an office in Bangalore and service partners across different regions of India—Delhi, Pune, Gujarat, Coimbatore, and Chennai. SyntecGroup is offering an alternative. When I entered the Indian market, I found that machine makers had limited choices and were essentially controlled by their suppliers.

Syntec brings more balanced options to the market."

Engineering a Sustainable Future

The exhibition showcased environmental consciousness through numerous manufacturers and stakeholders who promoted green technologies together with sustainable industrial practices. Joey Lee, Deputy Manager, Overseas Department, Gifu Enterprise Ltd, stressed the company's green approach towards manufacturing, citing, "Green is the future." The company showcased an automatic tool changer (ATC), which combines sustainable manufacturing technology with advanced manufacturing solutions.

During the keynote session, key executives like Akihiro Teramachi, CEO & Chairman, THK Co., Ltd, and Haw Chen, President, Techman Robot Inc., shared crucial insights about the future of manufacturing. AI automation together with precise engineering are modernizing production workflows but simultaneously solving workforce shortage issues, according to Teramachi. Chen, on the other hand, during his presentation, demonstrated how intelligent robotic solu-

TIMTOS 2025 underscored the industry's shift toward eco-friendly solutions, with companies showcasing sustainable technologies, including advanced automation tools and energy-efficient manufacturing processes.



International buyers attentively listened to exhibitors' product presentations.



Source: TAITRA

Buyers from India attended TIMTOS 2025

tions are transforming cost-effectiveness and efficiency across varied industries.

Blueprints for Tomorrow

The very closure of TIMTOS 2025 revealed to the world an unmistakable future and positive direction for manufacturing that perfectly unites AI, robotics, smart technologies, and sustainable practices. The exhibition also revealed Tai-

wan's unique position in the field of precision manufacturing and intelligent automation as a global leader, as it employs innovative strategies combined with strategic international partnerships and alliances to overcome geopolitical changes. TIMTOS 2025's overwhelming success fortifies the island nation's pivotal role in shaping the next industrial revolution while continuing to advance

the integration of cutting-edge technologies into real-world and practical manufacturing solutions. As the global industry looks forward to TIMTOS 2027, the benchmark has been set high for continued innovation and collaboration in the pursuit of smarter, more sustainable manufacturing processes, backed by its previous editions' success and experience. 

The procurement matchmaking event by TAITRA enabled 315 sessions between 75 international buyers from 22 different nations and 102 exhibitors.



Source: TAITRA

A continuous stream of visitors at the TIMTOS exhibition.

TECH WITH A PURPOSE

In a strategic move to deepen its roots in India and power the next wave of industrial advancement, Italian global leader in precision measurement and quality control solutions, Marposs SpA, has launched a state-of-the-art Technology Center in Bengaluru.



Source: Marposs India Pvt Ltd

With a legacy in India since 1981, Marposs has steadily transitioned from a commercial presence to a robust network of six offices and service centers. The latest addition, the Bengaluru Tech Center, is a bold step toward reinforcing the company's long-term vision. Located in the bustling Peenya Industrial Area, the 400 sq mt facility will double up as a gateway for innovation, local engagement, and industry collaboration tailored to the demands of India's fast-growing high-tech sectors. Currently employing 120 professionals and generating €20

million in revenue (projected 2024), Marposs India has set its sights on expanding into the Semiconductor, Consumer Electronics, Aerospace, and EV Batteries sectors over the next five years. Capturing the spirit of the initiative, Francesco Possati, HQ General Manager and Vice President, Marposs, shared, "We see great potential for Marposs in India for the reasons shared by the President of the European Commission and the Prime Minister of India to develop a reliable and secure value chain with a focus on the Semiconductor, E-Mobility and

Space sectors. The opening of our tech center responds exactly to this need. This center will be the second in the world—after the one in California—focused on specific R&D activities on semiconductors and consumer electronics, leak testing on batteries, and the latest technologies for quality control of aerospace components."

Local Touch, Global Impact Beyond hardware and systems, the Tech Center is about cultivating partnerships and nurturing innovation in India. Luca Matteucci, Managing Director, Marposs India Pvt Ltd, explained the

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larger vision—driving innovation, enhancing R&D, and developing local talent—and commented, “This facility aims to strengthen technological capabilities to meet market demands and support business growth.”

“The center will drive innovation through focused R&D, helping customers adopt advanced technologies to improve manufacturing efficiency and product quality,” he elaborated. “With a local presence, Marposs can provide faster support, training, and service, ensuring customers’ evolving needs are met. It will also foster collaboration with local industries and research institutions, strengthening customer relationships and enhancing market competitiveness.”

Inside the Tech Core

The facility is fully equipped with cutting-edge solutions to cater to a wide range of manufacturing needs. Nitika Sharma, Marketing Head, Marposs India Pvt Ltd, offered an insight into the center: “The Marposs Technology Center in Bangalore features state-of-the-art mea-

“The center will drive innovation through focused R&D, helping customers adopt advanced technologies to improve manufacturing efficiency and product quality.”

Luca Matteucci
Managing Director
Marposs India Pvt Ltd

surement and inspection technologies. Key solutions include probing systems, in-process gauging, and tool monitoring for machine tools like grinding, metal cutting, stamping, and presses.” It also offers dimensional gauging systems (manual and automated), leak testing, assembly solutions, and non-destructive testing to ensure product reliability. “Additionally, the center houses gauging components, computers, and statistical process control (SPC) systems to support quality control and production efficiency,” she shared.

“Marposs plans to hold open houses this year, focusing on key sectors such as Semiconductor, Consumer Electronics, Aerospace, and EV Batteries.”

Nitika Sharma
Marketing Head
Marposs India Pvt Ltd

Gearing Up for Industry Showcases

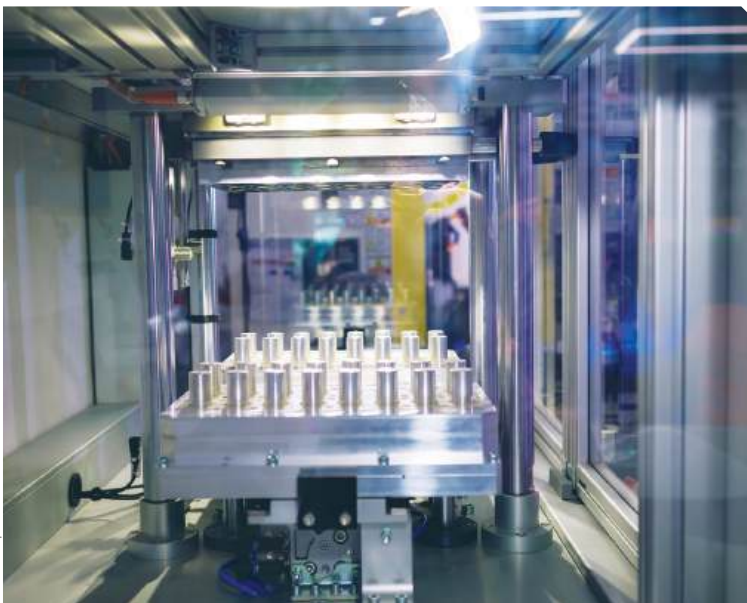
The center is not just about R&D—it will also serve as a platform for knowledge-sharing and engagement. “Marposs plans to hold open houses this year, focusing on key sectors such as Semiconductor, Consumer Electronics, Aerospace, and EV Batteries,” revealed Sharma.

The facility will emphasize innovation and knowledge-sharing, aligning with India's vision to become a global leader in these industries. “The center will help professionals understand the importance of quality and cutting-edge technologies in manufacturing,” she continued. “These events will provide valuable insights into Marposs’ advanced solutions and industry best practices.”

A Glimpse into the Future

Against the backdrop of growing global compliance standards and precise requirements, the Marposs Bengaluru Tech Center is all set to deliver world-class tools and expertise to Indian manufacturers. The hub is to play a critical role in advancing digital manufacturing while supporting local businesses to establish India as a world leader in quality-focused production as the country picks up pace in its industrial and technological transformation. 

Marposs’ new Bengaluru Tech Center serves as a global R&D hub, focusing on semiconductors, EV battery testing, and aerospace quality control.



Source: Marposs India Pvt Ltd



Indian Machine Tool
Manufacturers' Association

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POWERING THE FUTURE OF MANUFACTURING

Indian Machine Tool Manufacturers' Association (IMTMA) is all set to host the fifth edition of Delhi Machine Tool & Manufacturing Technology Expo (DMTX 2025) and the second edition of Factory Equipment Expo (FACTEQ 2025) from May 8 - 11, 2025 at Bharat Mandapam in Pragati Maidan, New Delhi. Here's a reminder to stay ahead of the curve and be part of North India's premier manufacturing event...



Source: IMTMA

Throw back from DMTX 2023 opening ceremony

Organized by Indian Machine Tool Manufacturers' Association (IMTMA), the apex body representing India's Machine Tool industry, Delhi Machine Tool & Manufacturing Technology Expo (DMTX 2025) and Factory Equipment Expo (FACTEQ 2025) will serve as a key platform for manufacturers, suppliers, and industry professionals located in the northern region of India to explore cutting-edge technologies and solutions poised to shape the future of manufacturing in India.

DMTX is a focused platform for showcasing the latest technologies in the field of metalworking machinery together with their accessories and components.

While FACTEQ serves as an exclusive exhibition showcasing modern factory equipment, material storage, sustainable and environmental solutions, etc. for the factories of tomorrow.

A Grand Showcase of Manufacturing Excellence

Approximately 250 exhibitors are set to showcase their innovations at North India's premier machine tool expo, DMTX 2025 and FACTEQ 2025. The event will take place across two halls at Bharat Mandapam, spanning an exhibition space of around 15,000 sq mt, with an expected footfall of 15,000 visitors. These expos are designed to provide a focused environment for businesses to enhance their

technological capabilities and competitiveness in the ever-evolving Manufacturing sector.

DMTX 2025 will feature a diverse range of cutting machines, forming machines, welding machines, Industry 4.0 hardware and software, 3D printing and additive manufacturing technologies, and many other products and services. Concurrently, FACTEQ 2025 will highlight innovations in material handling, logistics, sustainable manufacturing solutions, and factory automation to address the demands of modern industrial setups.

Boosting North India's Manufacturing Ecosystem

The northern region has a sig-

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nificant presence of industrial segments including Automobile, Die & Mold, General Engineering, Tractor, Energy, and two-wheeler manufacturing companies. The presence of major OEMs and their vendors also makes the region quite significant. Delhi Machine Tool & Manufacturing Technology Expo is a benchmark event in north India for technological and industrial innovations.

DMTX 2025 and FACTERQ 2025 aim to support the growing industrial landscape of Delhi NCR, Haryana, Uttar Pradesh, Uttarakhand, Rajasthan, Punjab, and other northern states. The events will play a significant role in addressing the numerous requirements of OEMs and component manufacturers in Tier 2 and Tier 3 regions. By facilitating knowledge sharing and fostering business collaborations, they will also empower micro, small, and medium enterprises (MSMEs) to enhance their market presence and productivity.

Rajendra S Rajamane, President, IMTMA, emphasized the significance of these expos, stating, "DMTX 2025 and FACTERQ 2025 offer significant networking opportunities for industries in the region to familiarize themselves with the latest technologies and solutions that will drive the Manufacturing industry in the years to come."

"IMTMA is committed to empowering MSMEs and driving technological innovation, and the expo will pave the way for advancements in manufacturing," he added.



"DMTX 2025 and FACTERQ 2025 offer significant networking opportunities for industries in the region to familiarize themselves with the latest technologies and solutions that will drive the manufacturing industry in the years to come. IMTMA is committed to empowering MSMEs and driving technological innovation, and the expo will pave the way for advancements in manufacturing."

Rajendra S Rajamane
President
IMTMA

Adding to this, Jibak Dasgupta, Director General & CEO, IMTMA, noted, "In the fast changing manufacturing landscape achieving technological superiority is paramount for each player, and expos like DMTX and FACTERQ are great enablers for addressing this requirement. Delhi, NCR, and the entire northern region have a significant advantage in Auto,



"In the fast changing manufacturing landscape, achieving technological superiority is paramount for each player, and expos like DMTX and FACTERQ are great enablers for addressing this requirement. Delhi, NCR, and the entire northern region have a significant advantage in Auto, Heavy Engineering, and many other industries. IMTMA, by organizing this expo, aims to bring the latest technologies to the doorstep of the various industries in the region."

Jibak Dasgupta
Director General & CEO
IMTMA & BIEC

Heavy Engineering, and many other industries, and IMTMA by organizing this expo aims to bring the latest technologies to the doorstep of the various industries in the region."

A Must-Attend Event

DMTX 2025 and FACTERQ 2025 will bring together industry professionals, entrepreneurs, policymakers, and technology enthusiasts to explore the future of manufacturing, forge strategic partnerships, and drive innovation. Ensure your presence at this pivotal event, where industry leaders converge to shape the future of manufacturing. 

DMTX 2025 and FACTERQ 2025 will bring together industry professionals, entrepreneurs, policymakers, and technology enthusiasts to explore the future of manufacturing, forge strategic partnerships, and drive innovation.



Source: IMTMA



A PLATFORM FOR TRANSFORMATIVE SOLUTIONS ON AUTOMATION & ROBOTICS FOR INDUSTRY

Indian Machine Tool Manufacturers' Association (IMTMA) is set to host the eighth edition of Symposium on Automation & Robotics, themed 'Trends & Insights for Tomorrow: Shaping the Future', on June 4-5, 2025, at Auto Cluster Exhibition Centre in Pune.



Source: IMTMA

With over 1,500 visitors, including potential buyers and industry professionals, this Symposium will witness first-hand the latest advancements in automation and robotics.

This pivotal event will serve as a platform for industry leaders to explore and implement transformative automation and robotics solutions, with a special emphasis on empowering Micro, Small, and Medium Enterprises (MSMEs). The Symposium will feature both conference and exhibition besides fostering knowledge-sharing discussions and presentations on cutting-edge topics such as artificial intelligence, machine learning, industrial automation, and smart manufacturing techniques. Attendees will gain insights into the latest technological trends and collaborate on strategies to enhance manufacturing efficiency and productivity. In addition to the insightful conference sessions, the event will showcase innovative solutions and readily adoptable, cutting-edge products. With over 1,500 visitors, including potential buyers and industry professionals, this Symposium

Key Highlights:

- Focus on cost-effective automation solutions for MSMEs.
- Exhibition Showcasing of Robotics and AI technologies.
- Expert-led discussions on smart manufacturing and digitalization.
- Networking opportunities with industry leaders and potential buyers.


will witness first-hand the latest advancements in automation and robotics.

"Modern factories rely on automation and robotics for activities that are repetitive in nature and hazardous," said Mr Rajendra S Rajamane, President, IMTMA. "Digitalization is gaining traction for quicker decisions, remote maintenance, installation, and commissioning of machines, and online training of the workforce. This Symposium will give partic-

Event Details:

Symposium on Automation & Robotics 2025
Dates: June 4-5, 2025
Location: Auto Cluster Exhibition Center, Pune

ipants a clear understanding of such concepts, enabling them to leverage these technologies for enhanced productivity."

Addressing the challenges faced by smaller enterprises, Mr Jibak Dasgupta, Director General & CEO, IMTMA, stated, "While larger companies are steadily moving towards fully automated production facilities, MSMEs find it challenging to implement automation and robotics due to various factors. Yet, adopting automation would help MSMEs bring out large volumes at a lower cost, benefiting OEMs. The upcoming Symposium will shed more light on attaining excellence using economic solutions, specifically tailored for MSMEs." 

Source: IMTMA

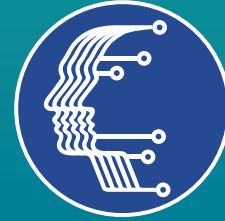


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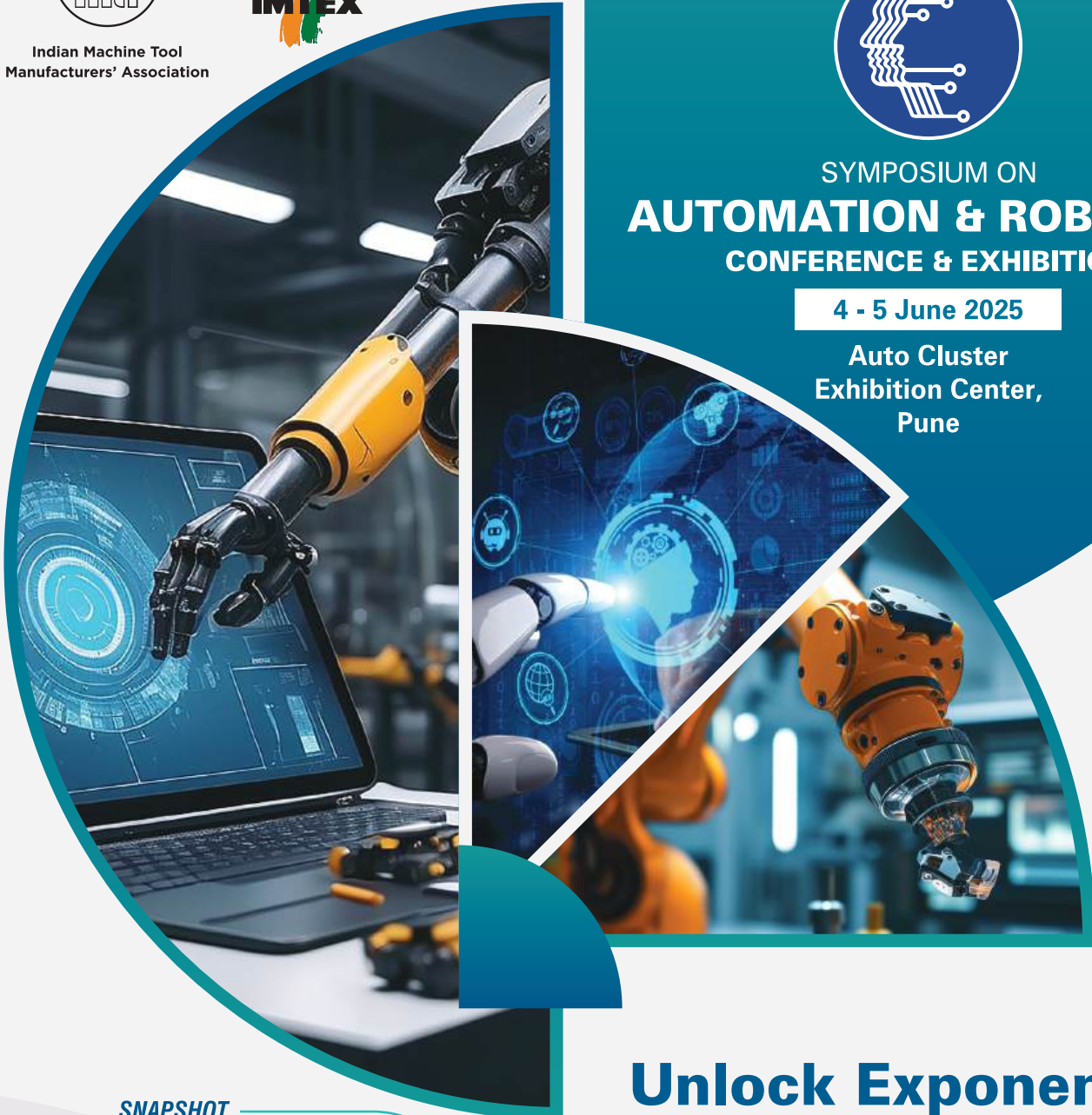
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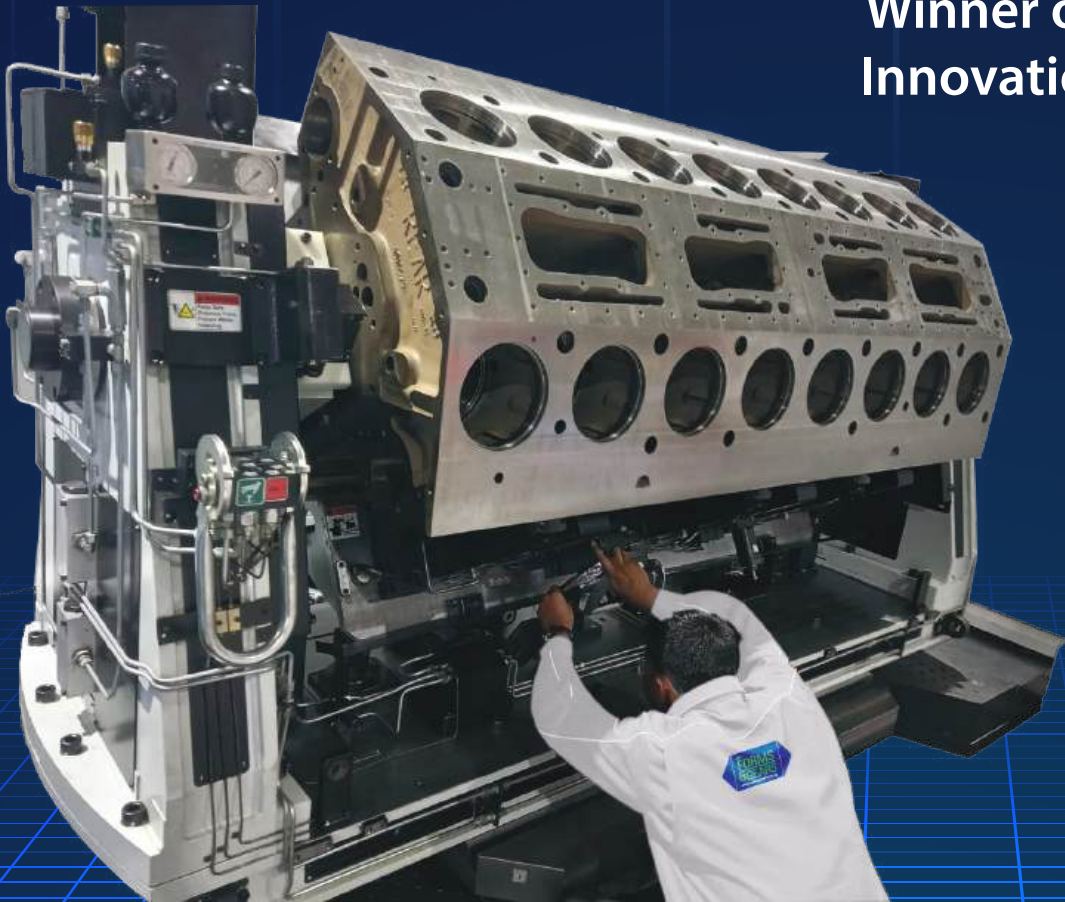
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