



CONCURRENT SHOW



25 - 30 JANUARY 2018

SHOW DAILY

The official showdaily of IMTEX FORMING 2018

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Indian Machine Tool Manufacturers' Association

VENUE



Focusing on Future Growth

Leaping Ahead through Innovation

With the aim to focus on the breakthroughs in the field of metal forming, Indian Machine Tool Manufacturers' Association (IMTMA) has organized its highly awaited flagship event, IMTEX FORMING 2018 & Tooltech 2018, here at the Bangalore International Exhibition Centre (BIEC), from today until January 30, 2018. A sneak peek into the mega show before you head for it.



Source: IMTMA

The event is poised to be the largest demonstration of all aspects of forming technologies, predominantly in sheet metal forming, in South and South-East Asia.

To showcase the latest trends as well as technological refinements from India and other global players from the metal forming sector, IMTMA has taken this initiative of organizing IMTEX FORMING 2018 & Tooltech 2018, a premier exhibition for South and South-East Asia. The event is poised to be the largest demonstration of all aspects of forming technologies, predominantly in sheet metal forming, in the region. The biennial exhibition attracts visi-

tors from a wide range of manufacturing and ancillary industries including key decision and policy makers as well as industry captains who are keen to source latest technologies and manufacturing solutions for their product lines.

A wide array of exhibits

To thrive and succeed in any industry, it is imperative to stay abreast of the latest technology available. IMTEX FORMING, with its wide spectrum of exhibits, pro-

mises to provide a firsthand experience of technologies in the metal forming field that can put one in the lead. Organized in a gross area of 33,000 sq mt, this edition of the exclusive business-to-business event hosts 500 Indian and foreign exhibitors offering a range of technologically innovative manufacturing and engineering products and applications.

The show has participation from 23 countries: Austria, Belgium, China, Czech Republic, France, Germany, India,

Indonesia, Italy, Japan, Korea, Malaysia, the Netherlands, Poland, Singapore, Sweden, Switzerland, Taiwan, Thailand, Turkey, the United Kingdom, the United Arab Emirates and the United States of America; and group participation from 3 countries: China, Taiwan and Germany. The six-day affair serves as an important platform to the machine tool industry by showcasing innovations in metal forming technologies, robotics and automation, welding and joining, wire-forming and drawing, pres-

Continued on page 3. ▶



Ball Transfer Units

Hall 3A - Stall D110



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Continued from page 1. ▶



“The whole idea of IMTEX is to have a solution in place where you can demonstrate an actual working system to people for them to closely observe its working, see what it can do for their business and how it can make them more competitive.”

JAMSHYD N GODREJ

Chairman, Board of Godrej & Boyce Manufacturing Company Ltd & Chairman - Exhibitions, IMTMA

ses, die casting, hydroforming, sheet metal forming machines, presses for special applications, dies and moulds, hydraulic and pneumatic systems and elements, and testing machines.

More to look forward to

Apart from the display of path-breaking products and technologies, various other programs have been lined up to make the visitors aware of the global trends in the field and their applications.

TOOLTECH 2018

Tooltech will be held concurrent to IMTEX FORMING 2018, showcasing tools for Metalworking machine tools, Measuring machines and instruments, CAD/CAM etc.

INTERNATIONAL SEMINAR (January 24, 2018)

With a view to highlight, inspire and infuse adoption of the evolving trends in Forming technology, a



“I firmly believe that IMTEX FORMING 2018 & Tooltech 2018 exhibitions will provide a great platform for knowledge sharing and business development.”

P RAMADAS

President, IMTMA

one-day “International Seminar on Forming Technology 2018” has been organized. The seminar focuses on Metal Forming Processes, New Materials, Tooling & Design and Emerging Technologies and brings together renowned national and international companies and research institutes from Germany, Italy, Sweden, the USA and India to share their expertise and latest developments in the field of Forming Technology.

CONNECT (January 26 - 29, 2018)

It is an awareness program for imparting knowledge on the machine tool industry to young engineers during the event. Students from both mechanical and electrical engineering streams can avail of this opportunity to gather more knowledge on the opportunities in store for them in the manufacturing industry.

i2 ACADEMIA PAVILION

IMTMA provides an opportunity for Indian Academic / R&D Institutions to showcase their R&D capabilities in metal working field. Around 44 institutes have been selected so far.



“India’s Metal Forming sector is still evolving and IMTEX FORMING exhibition will give a boost to this segment.”

V ANBU

Director General & CEO, IMTMA

REVERSE BUYER SELLER MEET (January 26 - 29, 2018)

This is an interaction platform for machine tool manufacturers and international buyers.

Exceeding last edition’s success

IMTEX FORMING 2016 was a huge success and, understandably, the plans are to surpass it. The past edition catered to over 475 exhibitors who displayed over 500 live machines in 3 halls, covering an exhibition area of about 30,000 sq mt and hosted over 40,000 visitors during the 6-day event at BIEC. The event recorded confirmed business orders to the tune of ₹ 456 crore and generated a high potential of business enquiries to the tune of ₹ 4,304 crore. With organizers’ dedication and commitment towards the growth of the sector and the participants’ enthusiasm, there is absolutely nothing to doubt that the show will be receiving an unprecedented response.

EXHIBITOR PROFILE

A clearly structured exhibitor profile covers the entire metal forming technology chain.

IMTEX FORMING 2018

- ◆ Presses
- ◆ Presses for special applications
- ◆ Sheet metal cutting machines
- ◆ Sheet metal blanking, Punching machines
- ◆ Sheet metal forming machines
- ◆ Sheet metal working cells and systems
- ◆ Die Casting
- ◆ Forging
- ◆ Extrusion
- ◆ Metal spinning and flow forming
- ◆ Rolling
- ◆ Wire forming machines
- ◆ Bar, Section and Tube working machines
- ◆ Hydro forming
- ◆ Casting & Foundry
- ◆ Heat Treatment & Hardening
- ◆ Machines for the production of Bolts, Nuts, Screws and Rivets
- ◆ Joining & Welding
- ◆ Robotics & Manufacturing Automation
- ◆ Specialised Metal Forming Processes & Machines

TOOLTECH 2018

- ◆ Tools for metalworking machine tools including press tools and dies Attachments, accessories and fixtures for machine tools
- ◆ Measuring machines and instruments
- ◆ Sensors and diagnostics
- ◆ Portable electric or pneumatic tools
- ◆ CAD/CAM - hardware and software
- ◆ Testing and balancing machines
- ◆ Hydraulic and pneumatic systems and equipment for machine tools
- ◆ Lubricating oils and cutting fluids for machine tools

VISITORS PROFILE

The visitors to this year’s edition of IMTEX Forming belong to the following industries:

- ◆ Aerospace
- ◆ Aluminium Extrusion
- ◆ Auto Components
- ◆ Automobiles
- ◆ Capital Goods
- ◆ Defence
- ◆ Earthmoving Equipment
- ◆ Electrical and Electronics
- ◆ Food processing and Dairy Equipment
- ◆ Infrastructure Sector
- ◆ Job Shops
- ◆ Material Handling
- ◆ Medical Engineering
- ◆ Office Equipment and automation
- ◆ Oil & Gas equipment
- ◆ Pharma Equipment
- ◆ Plastics processing
- ◆ Process plant and machinery
- ◆ Railways
- ◆ Research and development organisations
- ◆ Space and Nuclear
- ◆ Telecom Equipment
- ◆ Textile machinery sector
- ◆ Tractors and farm equipment
- ◆ White and brown goods
- ◆ Windmill, power and thermal
- ◆ Academia and technical institutions
- ◆ Members of the Diplomatic corp
- ◆ Policy makers



IMTEX FORMING 2018 & Tooltech 2018, with its wide spectrum of exhibits, promises to provide a firsthand experience of technologies in the metal forming field that can put one in the lead.

Source: IMTMA

Knowledge Sharing

A Window into the Future

Presented by IMTMA, the International Seminar on Forming Technology 2018 held on January 24 turned out to be a key event that provided an insight into the giant leaps that will be made by the forming technology sector.

Given the fact that forming technology is poised for rapid technology transition and presents immense scope for transformations to bring a quantum leap in quality, productivity and performance of the entire manufacturing industry, the International Seminar on Forming Technology 2018 was indeed an in-depth and highly informative event. As the many speakers with years of experience in the industry said, there have been significant developments in processes, equipment, software, materials and tools, which bring various exciting possibilities in all aspects of forming technology applications across various industry sectors. Hosted by Indian Machine Tools Manufacturers' Association (IMTMA), the focus areas of the seminar included:

Changing trends in metal forming processes with the advent of increasing use of composites, electric vehicles and lightweighting;

Maturing of hot forming, tube hydroforming, roll forming and flow forming; Evolution of superlative performance improvements, automation and Industry 4.0 ready features in sheet forming equipment;

Refinements and innovations in predictive processes;

Developments in materials, tooling design and processing capability.

Knowledge sharing

Renowned national and international companies and research institutes from Germany, Italy, Sweden, the USA and India shared their expertise and latest developments in the field of forming technology. This included:

'Innovative Process Chains for Alternative Drive Concepts in E-Mobility' by Dr Andreas Sterzing, Fraunhofer IWU, Germany.

'Trends in Metal Forming: Press Shop of the Future' by Dr Apostolos Papaianu, AIDA, Italy.

'Hot Stamping Dies: Practical Case Study' by Jens Aspacher, Schuler, Germany.

'New Processes for Composite Production in Automotive and Aerospace Industry' by Markus Geier, Dieffenbacher, Germany.

'Hot Forming Presses' by Yogesh Saxena, ISGEC, India and Dominik Tazskin, AP&T, Sweden.

'Laser Die Hardening' by Michael Nagel, Laserline, Germany.

'New Manufacturing Concept (Monozukuri) for Machine Tools Cover' by Amarkant Jha, Amada, India.

'Recent Developments in Flow Forming and Spin Forming Machines'



Renowned national and international companies and research institutes from various countries shared their expertise in Forming Technology at the International Seminar on Forming Technology 2018 held yesterday.

by Carl Lorentzen, MJC Engineering & Technology, USA.

'Capability Building for Skin Panel Stamping Dies' by Parag Dandawate, Mahindra & Mahindra, India.

'Transforming the Ordinary into Extraordinary Through Tube Hydroforming' by Abhijit Chakravarty, Electropneumatics & Hydraulics, India.

'Driving Productivity in Stamping Through Technological Innovations' by Dr Bart Carleer, Autoform, Germany.

'Advanced Materials for Forming Applications' by Prof. K Narasimhan, IIT Bombay, India.

'A Case for IC Engine from Sheet Metal' by Prof. Prashant Date, IIT Bombay, India.

'Evolution and Innovations at Punch Press Machine' by Dominik Herrmann, Trumpf, Germany.

'Determining Formability of Sheet Metal' by Anil Kumar Gupta, APM Technologies, India.

'3D Roll Forming Center for Rapid Prototyping of Automotive Parts' by Albert Sedlmaier, Data M Sheet Metal Solutions, Germany.

'Process Chain Simulation to Investigate Functional Properties' by Syam Sunder Menon, Simufact, India.

'Adhesive Technology for Leak-Proof Sheet Metal Part Joining' by Dr Ratheesh Kumar, 3M, India.

Seminar highlights

The keynote session was on the latest trends in manufacturing technology for increasing use of composites in aerospace and the automotive sector, presented by Fraunhofer IWU, Germany. The session focused on the trends

and progress in developing new forming processes such as combination of hydroforming with injection molding and how continuous orbital wrapping and 3D printing will eventually replace sheet metal/metal parts with a combination of plastic and metal. The other sessions included:

Innovative process chains for alternative drive concepts in e-mobility that focused on automotive drive system components and their manufacturing processes for meeting specific demands of electric vehicles of the near future.

Future trends on increasing use of servo presses and digitalization of the press shop towards Industry 4.0, covering implementation of various sensors and data acquisition components within the presses to collect data from both, process and the press.

Illustrative and insightful case studies on design considerations, process and manufacturing of hot forming dies and their integration with hot forming presses.

Morphology of a hot forming line, along with illustration of complete project execution.

Elaboration of building blocks, including press, furnace and automation specification and features.

Fiberforge tape-laying system and the Fibercon Tailored Blank Consolidation System used for customizing differential properties within a part along with wet moulding of CFRP parts as cost-effective technology to produce high-quality parts with short cycle time and minimal production steps.

Robotized laser solution for die har-

dening, including specific features, operating parameters, performance and benefits in terms of extending die life and simplification of die manufacturing process.

Retrospective on how the simple punch press has evolved in recent times with addition of various innovations, augmentation and automation features such as Laser Blanking Tool.

Extraordinary cases of tube hydroformed parts, with inclusion of hydro piercing, hydro joining and bellow forming for reducing the steps in manufacturing process and lightweighting.

Evolution of features and facilities on flow forming and spin forming machines for productivity, quality and operational performance as well as for making them Industry 4.0-compliant.

Attendance

The seminar was attended by the users of forming technology equipment from diverse sectors such as automotive/auto parts, aerospace, defence, railways, heavy engineering, machine tools, die and moulds, white goods, consumer durables, utensils, furniture, medical implants, electronics and so on. Manufacturers and suppliers of metal forming related materials, machines, equipment, services, software and tools found the seminar particularly informative. Among the others, there were decision-makers and CEOs from diverse functional areas such as corporate planning, projects, research and development, design, simulation, CAD-CAM, quality, production, maintenance, planning, vendor management, and sales and marketing.

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Water



Air pressure



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Analysis, monitoring



OPC UA,
Database
Server

Energy management system



IoT

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New Automation Technology

BECKHOFF

Buyer-Seller Meet Interaction Time

IMTEX Forming 2018 offers a golden opportunity at the show for buyers and sellers from several countries to interact and strike deals.

Concurrently with IMTEX Forming 2018, Indian Machine Tools Manufacturers' Association (IMTMA) is organizing a Buyer-Seller Meet 2018 from January 26-29, 2018 by inviting potential buyers of metal forming machine tools and allied equipment from target overseas markets to explore mutual business opportunities. As per the schedule, buyers will arrive from various destinations on January

25 and stay in Bengaluru overnight. On the next day, there will be a 'Welcome Reception' at the International Lounge at Hall 4 of the show venue from 10.30 am to 11.00 am, following which the participants will be taken on a guided tour. Post-lunch, there will be a second guided tour and this will lead to networking at the International Lounge from 4.00 pm to 5.00 pm. A tour of the IMTEX Forming show has been

set for January 27 and this will lead to follow-up B2B meetings. There will be a repeat of this program on January 28 too. Participants will check out of their hotel on this day. IMTEX attracts major Indian machine tool manufacturers, besides bringing companies from several countries, thereby providing an apt platform for international buyers to look out for the most advanced technologies to meet their requirements.

DATES

January 26-29, 2018

VENUE

Bangalore International Exhibition Centre (BIEC), Bengaluru



Glimpses of IMTEX 2017 Buyer-Seller Meet Session



Source: IMTMA

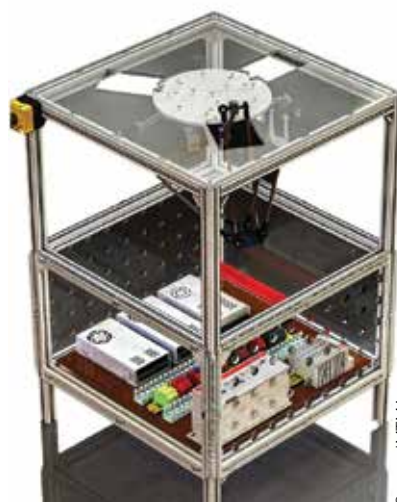
Industry-Academia Collaboration

Building the Future Together

Indian Machine Tool Manufacturers' Association (IMTMA) has always been in the forefront of forging Industry-Academia ties to create a strong pool of trained manpower. Industry - Institute Academia Pavilion at IMTEX Forming 2018 is a step towards achieving this goal.

To create the engineers of tomorrow, it is essential that the industry must work in tandem with the academia. This aids in imparting to the students the skills needed in real-life industry scenarios along with the basic fundamentals taught at academic institutions. To facilitate this interaction to happen in a structured manner, IMTMA offers a platform to Indian academic institutions in its prestigious IMTEX, Indian Machine Tool Exhibitions, every year. At IMTEX Forming 2018 & Tooltech 2018, IMTMA, through its i2 Pavilion initiative, is providing an opportunity to the Indian academic/R&D institutions to showcase their R&D capabilities in the metal working field. This participation is through the display of four posters and product demonstration from each institution. IMTMA is providing the display space to selected institutions free of charge. So far 44 institutes have been selected on the basis of their ground-breaking works in the field including the few listed below:

"Drilling induced delamination characterization and mathematical modelling of nano particles reinforced polymer matrix composites" -- Amrita



A flexible delta robot platform

School of Engineering, Bengaluru
The research presents delamination and its effects using image processing and acoustic techniques, development of mathematical models for drilling of composites reinforced with nano materials and blended resins.

"Cenospher - Experimental method"
-- Acharya Institute of Technology, Bengaluru

The research talks on dynamic mechanical analyzer (DMA), which is one of the techniques to find the exact solution in thermos-dynamic state.

"Influence of Cryogenic Treatment on tool wear prediction by online monitoring using ANN" -- Adhiyamaan College of Engineering, Hosur

The project presents how the cutting force authentically reflects changes in the tool during cutting with good accuracy, and thus the wear resistance can be improved with cryogenic treatment".

"Swarm Robots for Safety and Security in Manufacturing Industries" -- Amrita Vishwa Vidyapeetham, Kollam
The project presents a network of swarm UGV/UVAV robots collaborated together for surveillance, targeting and improved communications. These robots can be deployed at any area in need of surveillance. For other projects by Amrita

Vishwa Vidyapeetham visit Hall 4.
"Virtual Welding" -- Atria Institution of Technology, Bengaluru

The projects showcase the application of virtual reality technology in virtual welding and also focuses on the interaction of various types of sensors to communicate amongst virtual and real environment conditions.



Swarm robots for safety and security

Source: IMTMA

The proposed work is based on virtual based metal arc welding.

"A flexible delta robot platform for teaching & rapid prototyping of applications" -- B.V. Bhoomaraddi College of Engineering and Technology, Hubli

The research talks on the design and development of a delta robot platform which is flexible, reconfigurable and reprogrammable so that it can help student teams to rapidly build and test an application prototype.

To know about the various other projects by the above institutes, visit Hall 4.

Source: IMTMA

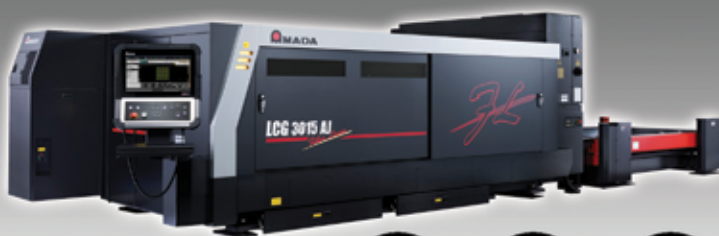
Amada India

Fiber Laser line-up



AMADA
Fiber Laser Lineup

Amada developed its own fiber laser oscillator as the laser machine manufacturer for the first time



3kW

6kW

9kW

AMNC 3

Global standard fiber laser cutting machine

LCG-3015AJ

*Also available as LCG-4020AJ



3kW

AMNC 3

Energy saving, v-lot production, wide range fiber laser machine

ENSIS-3015AJ

*Also available as ENSIS-4020AJ



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B108



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Taiwan-India Collaboration

“India was the 7th largest exporter for Taiwan in 2016”

Taiwan Association of Machinery Industry (TAMI) was founded in October 1945 and in recent years it has intensively hosted several machinery export promotion delegations as well as trade fairs in domestic and international marketplaces. On his visit to the IMTEX Forming 2018 & Tooltech 2018, CC Wang, President, TAMI, expresses his opinion about how India and Taiwan can pool their resources to take a measured step forward in developing industry collaborations.

Expectations from IMTEX Forming 2018

IMTEX Forming is a professional platform for technology trends and business trade. We are trying to collect more information about India's market to enhance cooperation between Taiwan's manufacturers and India's customers.

New metal forming technologies

Since Taiwan's machinery industry has more than 70 years' experience in manufacturing, the application of the most efficient forming and mass production technologies in both new material and composite material such as carbon fiber or aluminum alloy play a crucial role. We believe that the tech-

nologies and the efficiencies that are being developed by the Indian industry will play a critical role in the years to come and build a base for the Indian and global industry. For example, servomotors that meet the qualification of green manufacturing. This will allow the customers to catch up with the trend of environment conservation.

Taiwan is capable of providing intelligent manufacturing execution systems that can be of tremendous benefit to Indian manufacturers. The system allows the customers to receive information from the product line and make adjustments accordingly at any time through internet system protection. Meanwhile, the server system provides the multi-functions that decrease the cost of investing



“India and Taiwan can become the best partners in terms of manufacturing technology.”

**CC Wang
President
Taiwan Association of Machinery Industry (TAMI)**

in equipment. Given this emerging trend, India and Taiwan can become the best partners in terms of manufacturing technology.

Exports from Taiwan

India was the 7th largest exporter for Taiwan in 2016. The total export volume reached \$ 92 million, which was a 0.7 percent decrease compared with 2015. During the period January to August, 2017, the volume of machine tools exported from Taiwan to India reached \$ 66 million, which has been a 12.4 percent increase compared with the same period last year. The metal forming machinery is 22.4 percent, at the second position, in export items, which has posted a 46.7 percent increase compared with the same period last year. The increase of the demand for metal forming machinery was mainly benefited from the local automobile industry. On the other hand, the export volume of lathes has reached \$ 11 million, which has been a more than twice increase compared with the same period last year.

Taiwan's Machine tool Export/Import with India (Duration : 2017/01 - 2017/08)

USD (thousands)

		Export	Export	Ratio(%)	Import	Import	Ratio(%)
Total		59	66,679	12.411	74	55	-26.594
Code	Category	2016/01 - 2016/08	2017/01 - 2017/08		2016/01 - 2016/08	2017/01 - 2017/08	
8456	EDM, Laser Cutting M/C, etc.	4,682	4,147	-11.427	/	/	/
8457	Machining Centers	19,130	19,732	3.150	/	/	/
8458	Lathes	5,766	11,725	103.363	/	/	/
8459	Drilling, Boring, Milling M/C	4,314	6,534	51.466	/	/	/
8460	Grinding Machines	5,344	33,704	-36.931	/	/	/
8461	Shaping, Sawing, Gearing M/C	2,726	2,204	-19.161	20	30	45.46
8462	Presses & Shearing Machines	10,194	14,962	46.775	6	25	321
8463	Other Metal Forming MT	7,162	4,005	-44.084	/	/	/
/	Other	/	/	/	48	0	-100
Sub_Total		59,317	66,679	12.411	74	55	-26.594

Source: TAMI

Taiwan Association of Machinery Industry (TAMI)
www.tami.org
Hall & Stall: 3A / C-130

Forming Solutions

German Precision, Indian Production

With its wide range of forming solutions, Fibro India is all set to bring about revolutionary changes in the tool-making industry.

With a tag line 'German Precision, Crafted in India', it is easy to understand why Fibro India Precision Products Pvt Ltd has that air of self-assurance about it. Established in the year 2008, the company today is engaged in manufacturing a wide array of products including die set, die spring, cam unit, rotary table, bronze bushes, steel die spring, guide bushing ring and much more.

Raising awareness through IMTEX

With the whole world marching towards the adoption of Industry 4.0, Fibro India

too wants to gain insight into the latest in advanced technologies in the metal forming industry at IMTEX 2018.

“Our basic aim is to educate the toolmakers and penetrate the market. We want to reach out to the small toolmakers and make them aware that the use of the latest standard parts will help them to reduce the lead time and offer better reliability to their customers,” says Vivek Nanivadekar, Executive Director, Fibro India Precision Products Pvt Ltd. The company would be demonstrating its latest forming solutions including Fibro sensors, hydraulic cam unit



“With the whole world marching towards Industry 4.0, we are curious to witness and experience its adoption and of the other disruptive technology in the metal forming industry at IMTEX Forming 2018.”

**Vivek Nanivadekar
Executive Director
Fibro India Precision Products Pvt Ltd**

post with ball cages, etc. The company would also like visitors to know the fact that it has been the first to introduce gas springs (two-chamber system) for machines, equipment and tool construction. The nitrogen-filled gas spring has been revolutionary as it has simplified die design with much greater reliability while proving to be cost-effective in the long run. “The safety features incorporated in Fibro gas spring are most important and critical during the forming operation,” Nanivadekar adds.

Plans ahead

Continuous expansion with innovative products has been the vision and mission of Fibro India ever since its inception and this momentum will continue into this year as well. As Nanivadekar reveals, by mid-2018 the company will be ready with over 80 percent additional capacity.

Fibro India Precision Products Pvt Ltd
www.fibro.com
Hall & Stall: 3A / D-104



Hydraulic cam unit for flexible forming

Laser Processing Machine

Third Generation of Laser Technology from Mazak

Optimum cutting can be achieved by Mazak's next generation laser - the Direct Diode Laser OPTIPLEX 3015 DDL. It transmits shorter wavelength than a fiber laser for high speed cutting of thin worksheets including high reflective materials such as aluminum, copper and brass. The machine, with a laser power of 4.0 kW, has a New MAZATROL Preview G for high speed and high accuracy cutting. High rigidity machine construction plus high-speed acceleration performs high-speed cutting, thanks to the Direct Diode Laser and the MAZATROL Preview G CNC system. The multi-control torch and a variety of intelligent functions provide incomparable operator support for exceptional ease of operation and optimum machine efficiency. The OPTIPLEX 3015 DDL can be integrated into a compact manufacturing cell (multiple pallet changer) or extensible manufacturing cell (Laser FMS) to meet unique production requirements.

Specification		Values
Capacity	Maximum Cutting Size Right/Left	3050 mm / 120.08 in
	Maximum Cutting Size Longitudinal	1525 mm / 60.04 in
Feed Axes	Travel (X axis)	3110 mm / 122.44 in
	Travel (Y axis)	1595 mm / 62.80 in
	Travel ZX axis)	110 mm / 4.33 in

Yamazaki Mazak India Pvt Ltd
www.mazakindia.in
marketing@mazakindia.com
 Hall & Stall: 4 / B-102



Source: Yamazaki Mazak India Pvt Ltd

Highly advanced laser processing machine - Third Generation of Laser Technology.



IMTEX 2018 | B102 - HALL 3A
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 25 - 30 January 2018

MEASURE WITH CONFIDENCE



Accurate & Portable Tools for Part Inspection

- Quickly & Easily Verify Parts to CAD Model
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- Contact & Non-Contact Solutions
- Portability - Measure Where You Make It

In Appreciation

Why Being a Machine Operator is Awesome

Just like the operations of a ship remain incomplete without its captain, so do the industrial operations without a machine operator. He is the only one who understands the machine in the best way and who can provide maximum output with minimum project cost. SLTL Group takes this opportunity to thank all laser machine operators who use technology to create masterpieces.

I Have the Knowhow

You have the power and skills that nobody has. No one aside from you will operate that profitable expensive machine. You own an ability set that nobody owns. As a result of that specialization, you have got special recognition in your company. You are a pure person and actions by you speak in terms of the product that you and machine create.

I Am the Creator

This is the power to control power. Your machine is prepared to operate on the toughest material. However, it cannot move if you don't direct it. You have got the ability to regulate the power of your machine. You have the skills to make a chunk of sheet into a stunning product and also the power to form an extended mark.

I Am the Communicator

You communicate to superiors and juniors on technology. As an operator

you have to communicate design problems with your superiors and be able to point out where exactly you are facing a problem. You always have to be open

about sharing your learning with your juniors. So that one day when you are promoted, your shared knowledge will help the company to have your junior as a machine operator.

product or get the work done, you are the one who comes out, creates the machine work and sets the process to complete the task. It is your determination that gets things done through series of operations. And that is what makes you the most trusted member of your team.



I Am a Multitasking Expert

Once a company accepts a tough project with a deadline of a short period, it is you who gets into action, places the project and makes it look simple. The work has led you to some sleepless nights and progressive efforts over the project. No matter what the scenario or the pressure is, you and the machine take on the challenge head on to deliver the final result on time and within the parameters of cost and quality.

I Am Reliable

When they promise, you deliver. When a corporation sets a point to deliver a particular

“ SLTL Group takes this opportunity to thank all the machine operators. It is you who, with the use of technology, is able to create masterpieces.”

Sahajanand Laser Technology Ltd (SLTL)
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Bystronic Laser India Pvt Ltd | 7-C Tadiwala Road, Pune 411001 | 91 20 67294800 | www.bystronic.com | Hall 4 Stall No. B106

ByStar Fiber

Metrology

Measured for Success

It's the pioneering effort in the sector of 3D measurement, imaging and realization that has given FARO Business Technologies its worldwide reputation.

FARO is one of the world's most trusted sources for 3D measurement, imaging and realization technology. The company develops and manufactures leading-edge solutions that enable high-precision 3D capture, measurement and analysis across a variety of industries, including manufacturing, construction, engineering and public safety.

On the showcase

Of the firm opinion that IMTEX is an established platform for the metal forming and tooling industry, Beng Chieh Quah, Head, Marketing, Asia Pacific, FARO, adds that it provides the right space to witness close at hand the new trends in the market. "Now with the 'Make in India' campaign, the enthusiasm of the industry is at a high. FARO also expects to see how this transition will help Indian manufacturers who are eager to accept the latest technology in order to excel," Quah says.

For FARO, this is an opportunity to display its latest products, including:

FARO Quantum Arm: The ScanArm is a seven-axis contact/non-contact measurement system with a fully-integrated laser scanner. Combined with the best-in-class FAROBlu Laser Line Probe HD (High Definition), the QuantumS and QuantumMScanArm HD enable users to collect simple point variations with the FaroArm's hard probe, with laser scan sections requiring larger volumes of data.

FARO Laser Tracker: The FARO Vanta-



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Beng Chieh Quah
Head - Marketing, Asia Pacific
FARO Business Technologies

geS and VantageE laser trackers offer the next level in laser tracker productivity. With innovative features, these laser trackers make large-scale 3D measurement easy. The VantageS and VantageE enable the user to build and inspect products by measuring quickly, simply and precisely. They streamline processes, imparting confidence to the user in their measurement results.

FARO Cobalt Array Imager: It delivers fast and consistent measurements for dimensional inspection and reverse engineering applications. Compact and lightweight, the Cobalt Array Imager is easy to use across multiple applications. The combination of flexibility, portability, speed and accuracy makes Cobalt Array Imager an ideal solution for demanding metrology needs.

FARO Laser Projector: The TracerM allows factory operators to minimize costly non-conformances by imple-

menting a simple, reliable, and cost-effective solution to streamline production processes. The ability to guide an assembly process sequence, along with accurately locating and orienting components, increases manufacturing efficiencies.

What's next

As Quah puts it, FARO has always believed in innovation. "Our customers' feedback to FARO is very crucial as we constantly keep tabs on what's trending in the manufacturing set-ups in terms of individual regions. When they write their success stories with FARO's support and solutions, it gives us a great boost to serve them better for their future," he adds.

FARO Business Technologies
www.faro.com/india
Hall & Stall: 3A / B-102

Transfer Technology Die Loading Arms



Source: Guthle Pressenspannen GmbH

The Rollbloc die loading arms are used for safe and reliable transfer of dies

weighing up to 5kN to 100kN that are transported with the aid of a crane or stacker truck or fork lift.

The needle bearing-mounted load carrying rollers of the Rollbloc die loading arms ensure smooth, linear movement of the die from and onto the press bed. Different die loading arms' designs enable effective adaptation to the die weight and format while taking into consideration the space available.

Rollbloc die loading arms are always used in pairs.

Swivel die loading arms are flange-mounted. When not required they are simply swiveled to the side. The different versions ensure the space available in front of the press table can be used most effectively.

Rollbloc overhung and bridge version die loading arms are only attached in fixed mounting hooks directly when required. This mounting technology facilitates the use of die loading arms on several presses.

Advantages of Rollbloc die loading arms:

- ◆ Quick, safe and reliable die transfers;
- ◆ Ensure smooth linear movement with slight gentle push;
- ◆ In bridge version die loading arms, arms can be used on several presses with adjustable heights.

Guthle Pressenspannen GmbH
www.guthle.com
Hall & Stall: 3A / J-104



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Metal Forming Simulator

Getting Industry and Academia Together

Known globally as MFRC, the Korean organization has been doing yeoman work in getting experts from the engineering research and education sector to find solutions to challenges faced by the forging and other industries.

Korea-based Metal Forming Research Corporation (MFRC) has unceasingly developed the metal forming simulator of AFDEX, standing for Advisor for Metal Forming Process Design Experts, based on rigid-elastothermoviscoplastic finite element method with intelligent re-meshing technology embedded. MFRC also supports and consults its customers in various ways, both through online and offline education, by sharing application experiences and useful findings from annual conferences on metal forming CAE technologies, which covers special short-term or long-term lectures and publication of books and papers as well. MFRC's policy is to organize and network full-time professionals and specialists from the academic side in fulfilling its customers with engineering achievements and satisfaction.

Given this synergy that MFRC develops between the academia and the industry, IMTEX Forming & Tooltech 2018 are quite high on its list of priorities. "MFRC would like to meet and interact with the Indian forging community and forgers. AFDEX, the multi-purpose metal forming simulator, has been the backbone of many forging companies

for around 25 years. We are, therefore, eager to listen to your industry's simulation requirements and add value to the best extent possible based on our experience and expertise. With an ever-increasing demand for optimized and lightweight products, simulation technology is inevitable for any company which desires to be globally competitive," says Dr Man Soo Joun, Professor, Gyeongsang National University and CEO & President, MFRC.

Showcasing key technologies for metal forming

MFRC is quite keen to showcase its technologies and expertise at the show. As Dr. Soo Joun puts it, "Computationally efficient grain flow prediction and visualization in the complicated forging processes, including crankshaft hot forging process are of great importance. Because AFDEX is very special in this context, it will not disappoint Indian forgers. Process design optimization together with user-friendliness is also one of the key technologies that will play a huge role in metal forming as this will have a direct impact in terms of reducing the cost as well as product development time. New and innovative material iden-

tification techniques could be another highly value-adding technology for the Indian metal forming market."

Plans ahead

The interaction at IMTEX will, as Dr Soo Joun hopes, will create a base for further collaborations between MFRC and the Indian forgers. In particular, MFRC is looking at bonding with small- and medium-scale forging companies that are eager to become globally competent players with the help of cutting-edge technology. "We are keen on building bridges with steel manufacturers who are in the pursuit of identifying and developing innovative materials for their customers," Dr Soo Joun says.

A long-term association with India is definitely on the list, given the fact that MFRC has already entered in various such collaborations across the world. Purdue University (USA), Seoul National University of Science and Technology (South Korea), Altair (USA), JSOL (Japan) and BRIMET (China) are some of the reputed entities participating in MFRC's collaborative research activities. "We are clearly aware of the enormous engineering manpower and expertise available in India in academic



“With an ever-increasing demand for optimized and lightweight products, simulation technology is inevitable for any company which desires to be globally competitive.”

Dr Man Soo Joun
Professor, Gyeongsang National University and CEO & President, MFRC

as well as industrial spheres. As such, we positively look forward to collaborating with the Indian forging community in the future," adds Dr Soo Joun.

Metal Forming Research Corporation
www.afdex.com
Hall and Stall: 4 / L-104

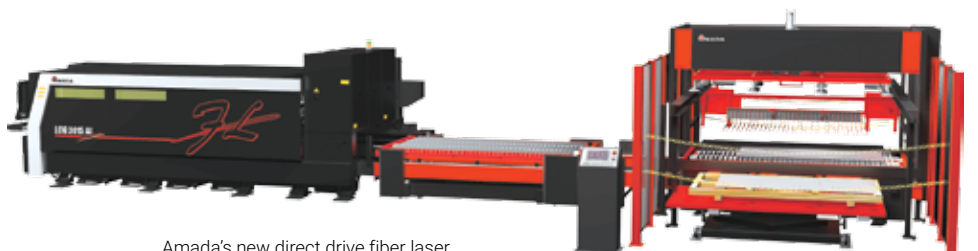
Fiber Laser Cutting Machine

Amada's Cutting Solution for Highly Reflective, Exotic Materials

Amada, a leading global laser machine manufacturer, has introduced its new direct drive fiber laser cutting machine, the LCG3015AJ. The machine delivers higher speed and faster acceleration processing by utilizing a carriage with a lower centre of gravity and the latest motion system, incorporating high torque motors and helical rack drives. Combined with an Amada designed oscillator, the LCG3015AJ enhances processing speeds and productivity along with the ability to process highly reflective, exotic materials with ease.

A high-power output 6kW oscillator is mounted on LCG3015AJ, enabling the expansion of the processing area and high speed processing of mid-thick plate.

The machine's functions have been expanded for continuous stable processing and workability improvement. It is equipped with automatic sheet loading and unloading system MPL3015SG that can load sheet up to 12 mm for uninterrupted operations.



Amada's new direct drive fiber laser cutting machine, the LCG3015AJ, with MPL3015SG auto sheet loading / unloading system.

Source: Amada India Pvt Ltd

Amada India Pvt Ltd
www.amadaindia.co.in
Hall & Stall: 4 / B-108



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Basics of Cutting, Bending and Forming Operations

Presses and Press Lines

Type of Dies

Manufacturing process for Dies

Tryout of Dies

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Metal Marking

Hitting the Mark

Metal marking can be anything from a simple V.I.N. number on a car to an intricate design on a gift. Gravotech has spent the last 78 years developing new technologies specifically for metal marking. Each of these marking types has special qualities that are noticeable in the final result.



Source: Gravotech Engineering Pvt Ltd

Laser Technology

Currently celebrating 20 years of laser innovation, Gravotech manufactures 4 different laser types for metal marking. **CO₂** – This is the most common laser solution currently available in the market. This laser source can mark on a wide range of both organic and man-made materials. However, with a CO₂ laser, a special coating must be applied to the uncoated metal surface to create the desired dark mark.

Fiber – Utilizing fiber optics to stimulate

the laser, this long lasting laser source has a lower maintenance cost over the life of the machine. Higher than average power, it allows text and graphics to be applied faster. Uncoated metals are marked in one step, not requiring an extra coating like the CO₂ solutions. This is a great benefit for high-volume production plants.

Hybrid – This unique laser solution combines the properties of the Diode Pumped Solid State source (DPSS) with the proven monobloc design of the fiber range.

The MTT of the pumping diodes of our DPSS sources are greater than 120,000 hours, which guarantees reliability and returns equivalent to fiber technology. The 'Plug & Mark' feature allows you to integrate a compact and independent, turn-key system.

Green – It operates at a shorter wavelength than a Hybrid laser. The Green laser features a new type of marking - cold marking. Minimal heat is applied to the material which reduces the mechanical stress and distortion to parts. This machine marks precious metals such as gold, silver, copper, and more with precision and elegance.

Rotary Technology

Rotary machines have been used for metal marking since the creation of the first engraving machine in 1938. A rotating cutter removes a small layer of material, permanently etching your desired characters, designs, or logos. The rotary engraving machine can be a versatile tool in your shop. Simply by changing the cutter, your machine is able to mark on any type of material. From small ring and bracelet engravers to high production 2'x4' engraving/routing tables, Gravotech has a solution just for you.

Dot-Peen Technology

Dot-peen is a type of micro-percussion technology that leaves a round indentation on the material. These series of dots mark the surface without removing any

material. Since this machine requires a hard strike to the surface of a part, it is not recommended for sensitive and delicate parts.

Originally designed for marking Data-Matrix codes, Dot-Peen technology can mark text, logos, static and variable text, clearly and precisely. All Dot-Peen machines from Gravotech can be integrated into a production line in any orientation. This reduces integration costs and boosts productivity. The latest innovation is the 3D stylus. This stylus can follow the shape of the part with no additional rotary devices or accessories. A distance of 2 mm to 18 mm can seamlessly mark a metal part with no repositioning or adjustments required. Hard to reach areas are the thing of the past with the 3D stylus.

Scribing Technology

Similar to the Dot-Peen technology, Scribing leaves a continuous carved mark opposed to individual round indentations. Much quieter than Dot-Peen marking, scribing removes the need for sound-proof plating or enclosures. Scribing is powerful enough for deep marking in hardened metals before and after treatment (painting, sandblasting, shot-blasting and more). Simple and cost-effective to integrate, Scribing machines from Gravotech are another well-known technology in the metal marking industry.



Source: Gravotech Engineering Pvt Ltd


Gravotech Engineering Pvt Ltd
www.gravotech.com
Hall & Stall: 2A / E-102



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Cutting and Bending Solutions

Moving Ahead, Intelligently

With the sheet metal processing industry across the world shifting towards Industry 4.0, Bystronic Laser India finds itself in an interesting space to help industries make the transition.

As a leading global provider of high-quality solutions for the sheet metal processing business, Bystronic Laser's focus lies on automation of the complete material and data flow of the cutting and bending process chain. Its portfolio includes laser cutting systems, press brakes, and associated automation and software solutions. The company's headquarters are located in Niederörsz, Switzerland. Three additional development and production locations are located in Gotha (Germany), Tianjin (China) and Shenzhen (China). Bystronic Laser is actively represented by its sales and service subsidiaries in more than 30 countries and has agents in numerous other countries. Since 1994, the company has been a part of the Swiss industrial holding company Conzozeta. In 2016, with more than 2,240 employees, the company achieved revenues of € 598 million. It is a wholly-owned subsidiary of Bystronic Laser AG, Switzerland, and has a demonstration center at Pune.

important exhibitions for sheet metal processing industries, Sanjay Kulkarni, Managing Director, Bystronic Laser India, said, "The event provides an ideal opportunity to present the latest trend in fiber laser cutting technology, Industry 4.0 smart technology and press brakes. It is a showcase for technological development on economic and trend barometer as well as a marketplace for business on a global scale." As such, the company will present its innovations that will highlight the advantages of implementing intelligent automation solutions. "We are presenting the Bystar 3015 3kW Fiber Laser, Bending Xpert 40 Press Brake, and a preview of the BySoft software," he shared.

Future forward

With Industry 4.0 gradually becoming the norm across global industry standards, integrated automation and new software solution for laser cutting and bending will take the lead. "Given such a scenario, Bystronic Laser India will continue its strong commitment in order to provide innovations that meet the requirements of the



Bystronic Laser India will continue its strong commitment in order to provide innovations that meet the requirements of the Indian sheet metal industries."

**Sanjay Kulkarni
Managing Director
Bystronic Laser India Pvt Ltd**

Indian sheet metal industries and, in particular, our customers," stated Kulkarni.

Bystronic Laser India Pvt Ltd
www.bystronic.com
Hall & Stall: 4 / B-106

Deburring and Finishing Machines

Grinding Master's Solution for Deburring Flame Cut Parts

Grinding Master Group is strategic partner with Timesavers Inc from USA for promoting a range of Deburring and Finishing Machines for Sheet Metal Parts. Timesavers Inc has specially developed slag grinding machine Model 42-Series-900-WWB-top in combination with model 42-series-900-W bottom working machine for deburring flame cut components.

These machines use combination of brush and belt heads which can remove primary and secondary burrs in single pass. Machine is also capable of taking away sharpness from the sides which is desired in many applications.

Timesavers has installed over 55,000 machines worldwide using its experience of over 55 years in developing deburring and finishing technology.



Source: Grind Master Machines

Grind Master Machines Pvt Ltd
www.grindmaster.co.in
Hall & Stall: 2A / B-110

Leveraging the IMTEX platform

Absolutely convinced about the fact that IMTEX Forming is one of the most

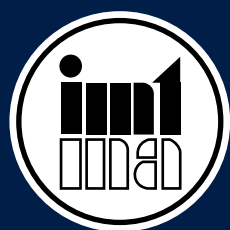


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Fiber Laser Cutter

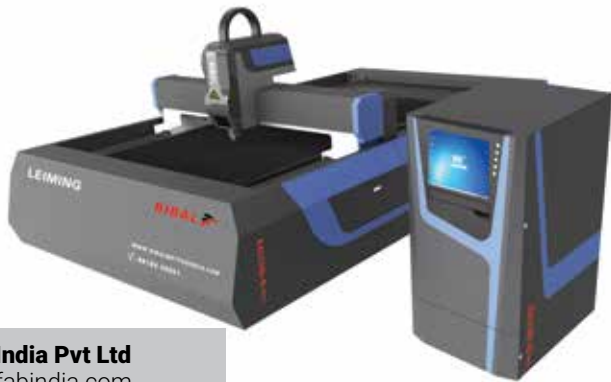
Ribal Metfab India Displays Leiming Laser

Ribal Metfab India Pvt Ltd has showcased a Leiming Laser Fiber Laser Cutter of 1000 W with a table size of 3000 mm x 1500 mm, which is one of the best in its class and a good value for money. The machine's running cost is very low at 250 - 500 per hour (including electricity, gas, consumables cost) with low initial investments, which is highly needed in today's competitive environment. Following are its features:

- ◆ German design appearance and ease of operation;
- ◆ Well heat treated frame for high-speed reliability;
- ◆ X axis adotos dual – servo and double gear drive – for high speeds,

high accelerations;

- ◆ Original laser fiber source to ensure a life span of 1,00,000 hours;
- ◆ Assembly and debugging is as per the standards of forging machine tools for high reliability;
- ◆ Best available bought outs with strict testing standards;
- ◆ Perfect circuitry, little electromagnetic interference, cable drag chain imported from Germany;
- ◆ Lowest energy consumption with reduced processing costs;
- ◆ Long term 2-year warranty with CE ISO 9001 certification;
- ◆ The machine is debugged before delivery, and also put for 72 hours of operation before the dispatch.



Ribal Metfab India Pvt Ltd
www.ribalmetfabindia.com
Hall & Stall: 4 / C-126

Source: Ribal Metfab India

Space Management Solution

Limited Space, Unlimited Creativity

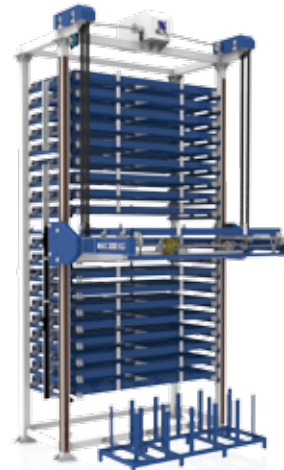
The age of modern technology has brought great accuracy, speed and convenience to the manufacturing industry. The SLTL Group, the manufacturer of the world's first fiber laser cutting machine, has come up with an innovative machinery, which by its nature will take the productivity beyond the barriers.

The Opti-Store machine, designed by the SLTL Group, is here to manage and store all the sheets on work floor. With customized manual and automatic stocking options such as 5, 10, 15, 20 floors, it makes for a remarkable space management solution for huge warehouses and factories. It saves more than a significant 80 sq mt of floor space. Elevator with dual linked chain allows strong holds over the sheets while transportation. A sophisticated space management leads to the streamlined process and inventory management and ultimately saves humongous area cost.

User-friendly and compatible

SLTL's Opti-Store is effectively compatible with any sort of metal forming system such as laser cutting, turret punch, water jet etc. By installing sheet data into software, the machine accurately recognizes the sheet by its thickness measures from the inputs and makes the inventory tasks smoother. The operation panel is user-friendly and enables all types of machine users to start operating the machine in no time. With Opti-Store, the inventory is smartly managed over a small area in a highly efficient manner.

With a personalized software interface, it enables a holistic integration with ERP. Apart from impressive usability, the machine demands significantly low service and maintenance costs, thanks to a highly durable pallet transfer system, which makes it a long-term asset worth possessing.



Source: SLTL

Sahajanand Laser Technology Ltd (SLTL)
www.sltil.com
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