

SHOWDAILY™

The official showdaily of IMTEX 2019

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MOTUL TECH
THE INDUSTRIAL
LUBRICANTS DIVISION
OF THE **MOTUL** GROUP

**VISIT US
IMTEX
2019**

**24TH-30TH
JANUARY
BIEC, BANGALORE
HALL 3-B
STALL C-105**



THE ECONOMIC TIMES
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BEST
METAL
CUTTING
BRANDS
2018

MACHINING CENTER FIXTURES

RV Forms & Gears LLP
www.rvformsandgears.com
Hall 6, Booth B107

Innovating for Growth

Asia's leading fixture builder, RV Forms & Gears LLP has been providing complete fixture solutions across the globe for the last 45 years. The company is here at IMTEX 2019 to showcase its latest innovation that has brought in a revolution in its core area of expertise.



Team RV Forms & Gears at the company booth in IMTEX 2019 show.

Started in 1972 by RT Varghese, an Engineer from IIT Kharagpur, RV Forms & Gears LLP started off supplying precision fixtures to

companies in the South of India. It has come a long way making wide strides and is now engaged with most complex and large-scale

projects related to the auto, tractor and truck segments in the country. "In addition to India, we now supply fixtures to companies in

Indonesia, Thailand, Turkey, the UAE, Qatar, Japan, Germany and Singapore," informs Reji Varghese, RV Forms & Gears LLP.

To be continued on 2 ➡

Asia's Leading
Fixture Builder
Presents
SmartFix4.0

For over 45 years Forms & Gears has been supplying Precision Machining Centre Fixtures to the world's leading Auto OEMs and Machine Makers in Japan, Germany, UAE, Qatar, Thailand, Turkey, Indonesia and all over India.

- ☑ IoT enabled Industry 4.0 fixtures for High Performance Machining.
- ☑ Cloud based application that monitors readings from sensors on fixtures.
- ☑ Fixture level analytics to help isolate and troubleshoot faster.
- ☑ Graphical data with robust analysis.



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Innovation is the key

With the aim to further evolve and expand its offerings, the fixture building company did a JV with ASM Technologies, a Bangalore-based public limited company in the Engineering IT and design space. The yoking of the two companies has led to the adoption of Industry 4.0 technologies in Workholding and Fixtures area and has brought in a “revolution” with the name Smartfix 4.0.

“The Industry 4.0- and IoT-enabled Fixtures are being introduced for the first time in India and they are probably among the first few in the world. This is a landmark product launch at IMTEX 2019 that will give the auto and machine makers access to component level analysis using data analytics and Artificial Intelligence that would help them to optimize their processes, make better products, increase shop floor efficiencies and also enhance safety,” shares Varghese.

“The merger of the physical and cyber worlds leads to new opportunities for innovation that optimizes the entire manufacturing industry to create better products, improve productivity, increase energy efficiency, and increase safety on the shop floor.”

REJI VARGHESE
Managing Director
RV Forms & Gears

The company is displaying two products in its own stall and one in the Mazak stall.

Changing the face of fixtures

Smartfix 4.0 is a Precision Workholding Device with the ability to collect, transmit and analyze data in a useful format to the end user. Developed for the first time in the world, SmartFix 4.0 takes the world of Workholding and Fixtures into the digital and cyber world. As the fixture is in continuous contact with the component, it is



(L-R) Reji Varghese, Managing Director, RV Forms & Gears LLP and Rabintra Srikantan, Managing Director, ASM Technologies Ltd taking pride in showcasing India's first Smart Fixture at the booth.

Source: Magic Wand Media

the ideal device to collect and analyze data at a component level. Sensors to monitor vibration, pressure, and component sensing are mounted on the fixture. And sensors to monitor oil levels and temperature are mounted on the powerpack.

The high volume of data collected from these sensors are continuously transmitted wirelessly to the cloud where it is parsed and stored for analysis.

The raw data is then analysed using Data Analytic and Artificial Intelligence tools and sent back to a custom built Dashboard of the end user, that resembles their factory floor, showing all the machines in action as well as a quick summary on the health of each machine, fixture and powerpack.

User-friendly device

The user can click on each machine to get a more detailed understanding of the analysed data per fixture. Data per sensor is visualized graphically with an ability to go back and see historical performance of the machine, the fixture and the powerpack.

For example, an analysis of data collected from vibration could reveal a wide variety of information like casting tolerances, vibration level comparison between tools and vibration comparison across machines in the plant. This real time data could result in productivity increases, optimizing tool life and increasing safety.

If the vibration crosses a set upper threshold limit, the system can be designed to shut the machine off remotely through the emergency switch of the machine.

Sensors to monitor pressure would alert the operator via their phone or any smart device and this can again be linked to the machine emergency switch if

required to ensure that in case of a sudden pressure drop the machine is switched off.

By monitoring the clamp / decamp cycles, alerts for maintenance of fixtures, ordering of spares and seal kits would also be automatically generated by the system and alerts will be sent via smartphone to the concerned people.

With Artificial Intelligence and Machine Learning, SmartFix 4.0 can also help the user be more proactive on machine, fixture and tool performance as well as how machines are performing compared to each other.

Historical data can be analyzed and a comparison of various parameters can be made across all machines in the plant giving the management useful information to reduce costs, increase efficiencies and improve quality. Smartfix 4.0 can be installed on even existing fixtures running in the plant. Industry 4.0 is commonly referred to as the Fourth Industrial Revolution. It is the ability of machines, devices, sensors and people to connect and communicate with each other via the Internet Of Things. Smartfix 4.0 is that revolution in the fixture building business.



Make it possible

IMTEX FORMING 2020
International Forming Technology Exhibition

Concurrent Show
Tooltech 2020
International Exhibition of Dies & Moulds, Forming Tools, Machine Accessories, Metrology and CAD / CAM

23 - 28 January 2020, BIEC, Bangalore

For stall bookings contact
IMTMA camp office at Hall No. 1

Organiser



Indian Machine Tool
Manufacturers' Association

Venue

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