



TOOL AND GAUGE MANUFACTURERS ASSOCIATION - INDIA

“By the members, of the members & for the members”.

FADMA AGM 2021

15th December

Serving since 1990, celebrated Silver Jubilee in 2015-16

Registered office – Bangalore | Secretariat - Mumbai

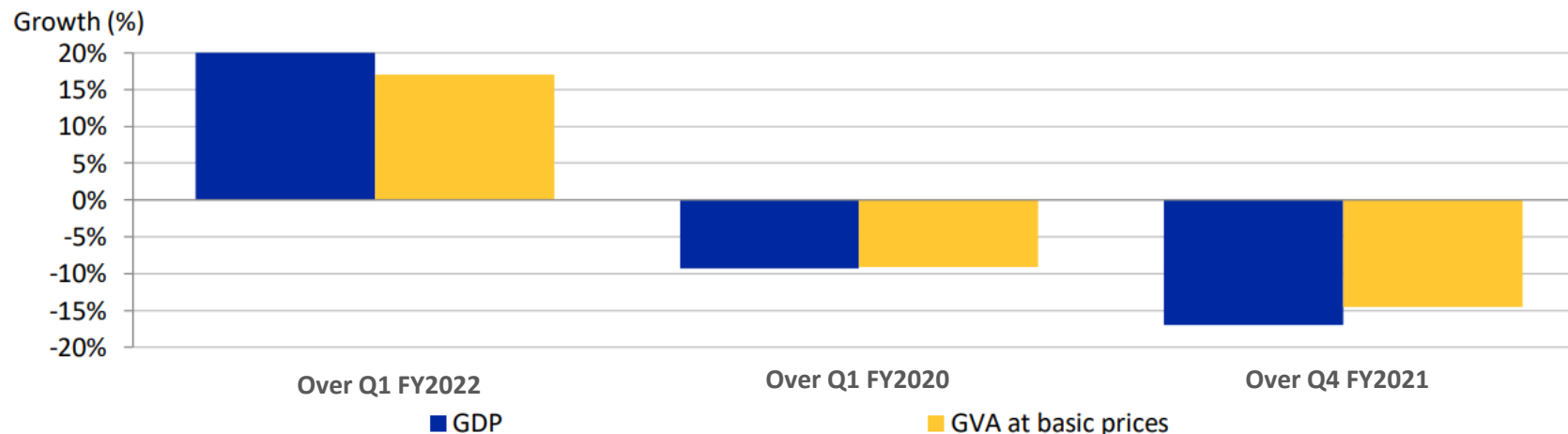
Chapters @ Bangalore ▪ Coimbatore ▪ Chennai ▪ Hyderabad ▪ Mumbai ▪ Gurugram, Manesar & Faridabad ▪ New Delhi, Noida and Ghaziabad

Indian Economy

India's economy **grew 8.4% in the July-September quarter FY22** from a year ago, going past the pre-pandemic level on strong consumer demand.

As per the data released by the National Statistical Office (NSO), the agriculture sector grew 4.5% while **manufacturing was up 5.5% in the September quarter, dented by a lack of parts, especially semiconductors**. Construction witnessed a 7.5% increase while spending on public administration saw the highest growth of 17.4%.

ICRA has forecast the year-on-year (YoY) growth of the **GDP and gross value added (GVA) at basic prices (at constant 2011-12 prices) at 20.0% and 17.0%, respectively**, in Q1 FY2022, benefitting from healthy Central and state Government capital spending, robust merchandise exports and resilient demand from the farm sector.



Q1 FY2022 is based on ICRA's projections; Source: NSO; CEIC; ICRA Research

ICRA's forecasts of real GDP and GVA growth in Q1 FY 2022* over Q1 FY2021, Q1 FY2020 and Q4 FY2021

Production Linked Incentive (PLI) Scheme

- Govt. of India designed PLI Scheme with a goal of making manufacturing in India **globally competitive, to attract global investments, generate employment opportunities, and increase exports substantially**. It is also likely to lead to investments in innovation, research and development, and upgradation of technology.
- The scheme was originally designed for FY20 for a few select industries such as **mobile phones and allied equipment manufacturing, pharmaceutical ingredients and medical devices**. However, it been expanded to accommodate an additional 10 'sunrise' sectors to boost the economy and India's self-reliance.

Sectors: ACC Battery, Electronic Products, Automotive, Pharmaceuticals, Telecom Equipment, Textiles, Processed Foods, Solar PV Panels, White Goods, Specialty Steels

Investments in auto technologies (source ICRA Report)

- The Ministry of Heavy Industries, Government of India, announced an **USD 3372.013 Mn** production-linked incentive for the **auto and auto components sector** on September 15, 2021.
- The Scheme will increase localization of auto components, accelerate investments towards a local EV ecosystem and has the potential to make India an export hub in the global auto supply chain. As tier-1s scale up, the tier-2s will also have growth potential, resulting in a multiplier effect.**
- The **OEM incentives** are only for **electric vehicles (EVs) and Hydrogen Fuel Cell Vehicles**, while those for **suppliers** are applicable for **advanced automotive technology components**.
- The incentives are sales-linked and are expected to range from **13% to 18%** on determined sales values for **OEMs** and **8% to 13%** of determined sales values for **auto component manufacturers**.
- An **additional 5%** is to be given for manufacturing components for battery electric vehicle₃ and hydrogen fuel cell vehicle components.

Manufacturing Outlook in Q2 of FY 2021-22

[Source: Federation of Indian Chambers of Commerce Industry (FICCI)]

- The overall capacity utilization in manufacturing was **72% in Q2 2021-22**, which again reflects signs of recovery in manufacturing.
- The **cost of doing business remains a cause for concern for the sector**. High raw material prices, high cost of finance, uncertainty of demand, shortage of skilled labour, and working capital, high logistics cost, low domestic and global demand due to imposition of lockdown across all countries to contain spread of coronavirus, excess capacities due to high volume of cheap imports into India, unstable market, high power tariff, are some of the major constraints., which are affecting expansion plans of companies.

Sector	Average Capacity Utilization					
	Q1 2021-22	Q3 2020-21	Q2 2020-21	Q-1 2020-21	Q-4 2019-20	Q-3 2019-20
Automotive	73	67	73	60	50	67
Capital Goods	75	72	72	64	53	67
Electronics & Electricals	60	85	72	66	60	67
Metals & Metal Products	78	84	82	75	73	80

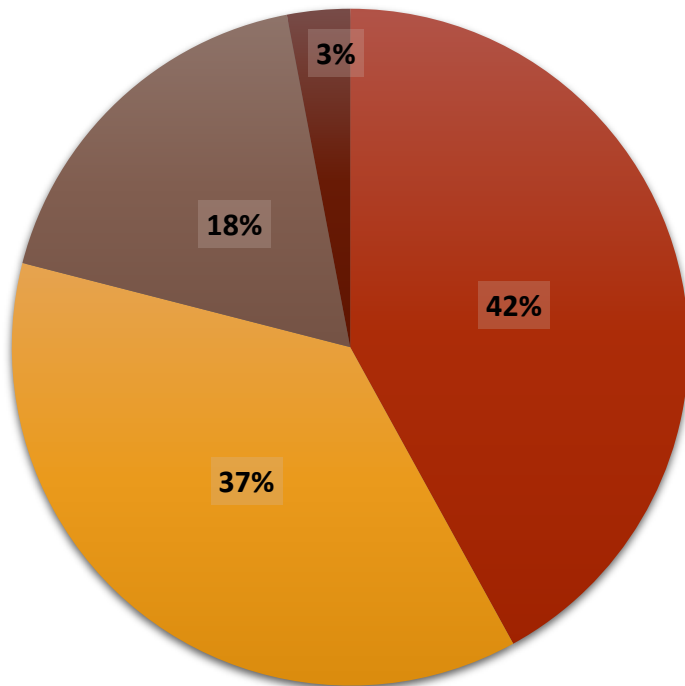
Table: Current Average Capacity Utilization Levels as Reported in Survey (%)

* The table below, gives average capacity utilization for Q1 2021-22 for various sub-sectors of manufacturing

Tooling Industry in India

Estimated Total Domestic market of Tooling for FY 2020-21 : USD 2300 Mn

Tooling Demand by Type of Tool

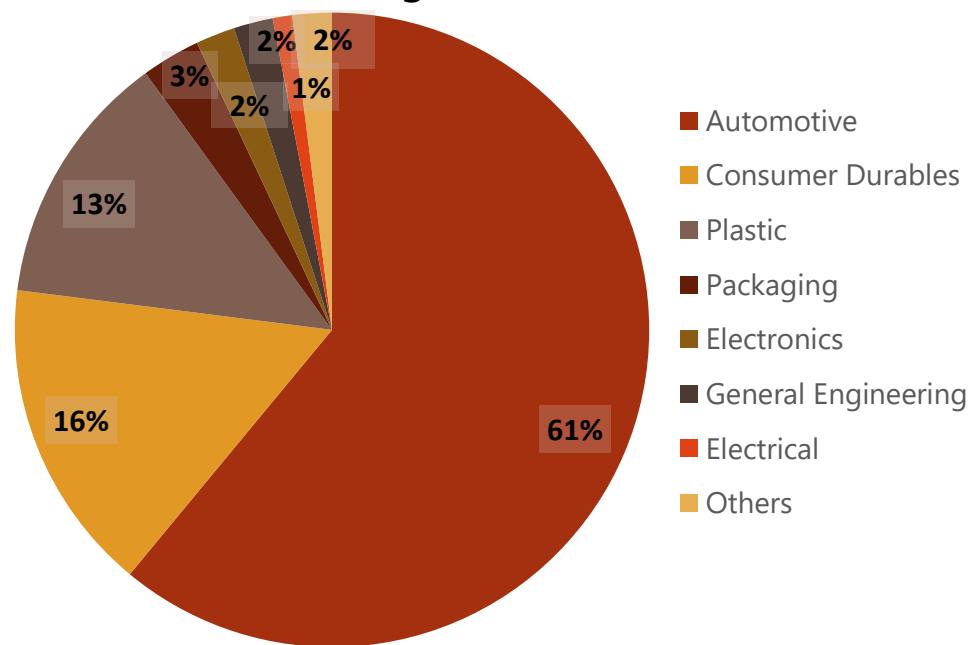


■ Plastic Moulds ■ Sheet Metal Dies
■ Die Casting Dies ■ Others

Note: Others includes forging dies, rubber moulds, jigs, fixtures and gauges

Tooling Demand Split by End User

Segments



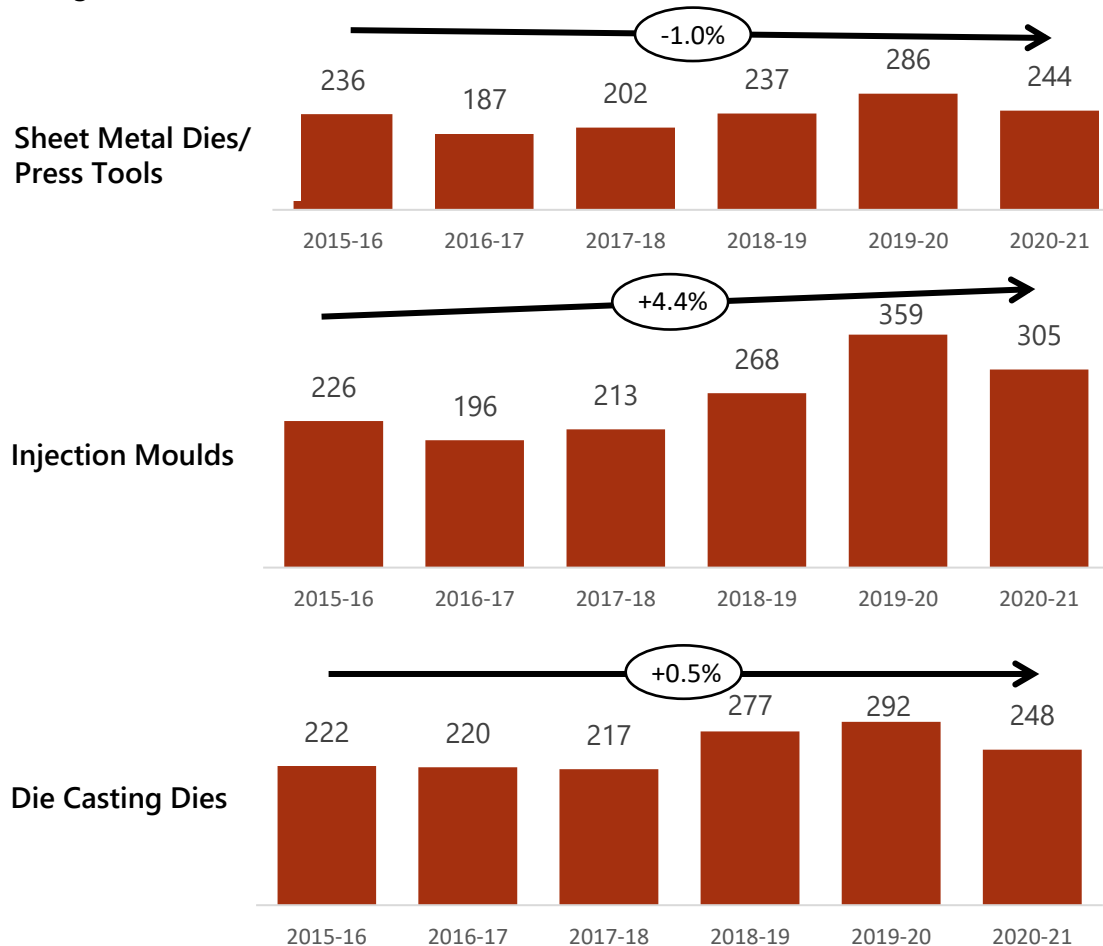
■ Automotive
■ Consumer Durables
■ Plastic
■ Packaging
■ Electronics
■ General Engineering
■ Electrical
■ Others

Note: Others includes general engineering, medical equipment, industrial machinery, railways, metro coaches, aerospace, defence, construction & mining equipment

Tooling Imports Trend in India

Imports in the injection moulds segment has increased at a steady rate in India on account of demand from automotive, consumer durables and other end users

All Figures in USD Millions

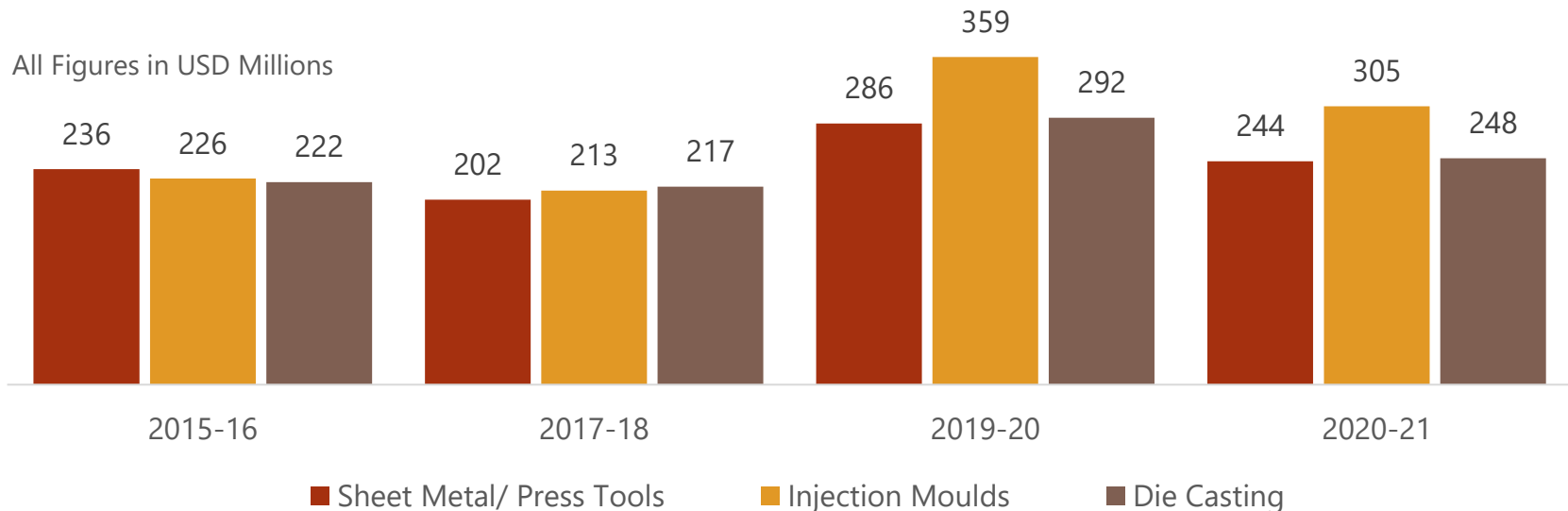


Key Observations

- Total imports of tooling in India have increased significantly, from ~USD 664 Mn to ~USD 929 Mn at ~8% CAGR between FY16 and FY20
- Sheet metal imports and die casting dies imports have remained relatively stable over the period from 2015-2021
- However, highest growth in imports has been witnessed in the injection moulds segment on account of high demand from automotive, plastic, consumer durables & other end user segments and imports being available at competitive prices

Tooling Imports Trend in India

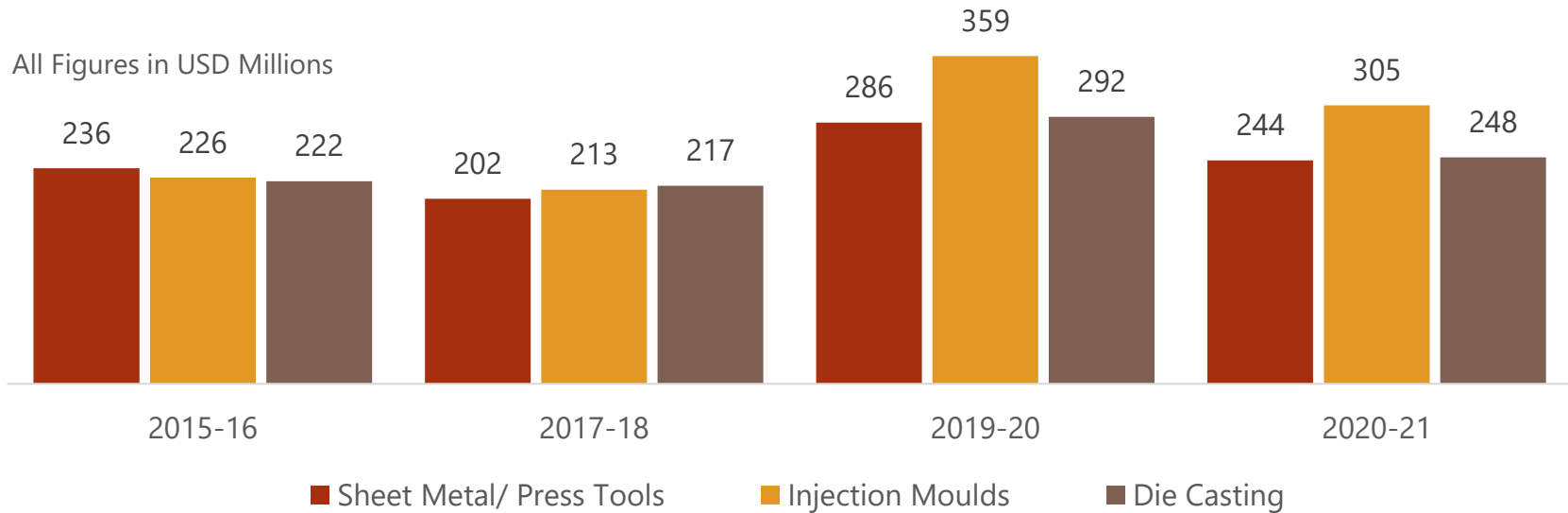
Sheet Metal Dies/ Press Tool - Imports Trend



- Korea, Japan, China, Thailand and Taiwan are major importers of sheet metal dies, importing >85% by value of **sheet metal**; imports since 2015
- Share of **sheet metal** imports from Korea has increased significantly since 2015-16
- Import share from Japan has reduced from 27% in 2015-16 to ~17% in 2019 20
- There has been reduction in import of **sheet metals** from China since 2015, however Imports from China in 2020-21 increased significantly

Tooling Imports Trend in India

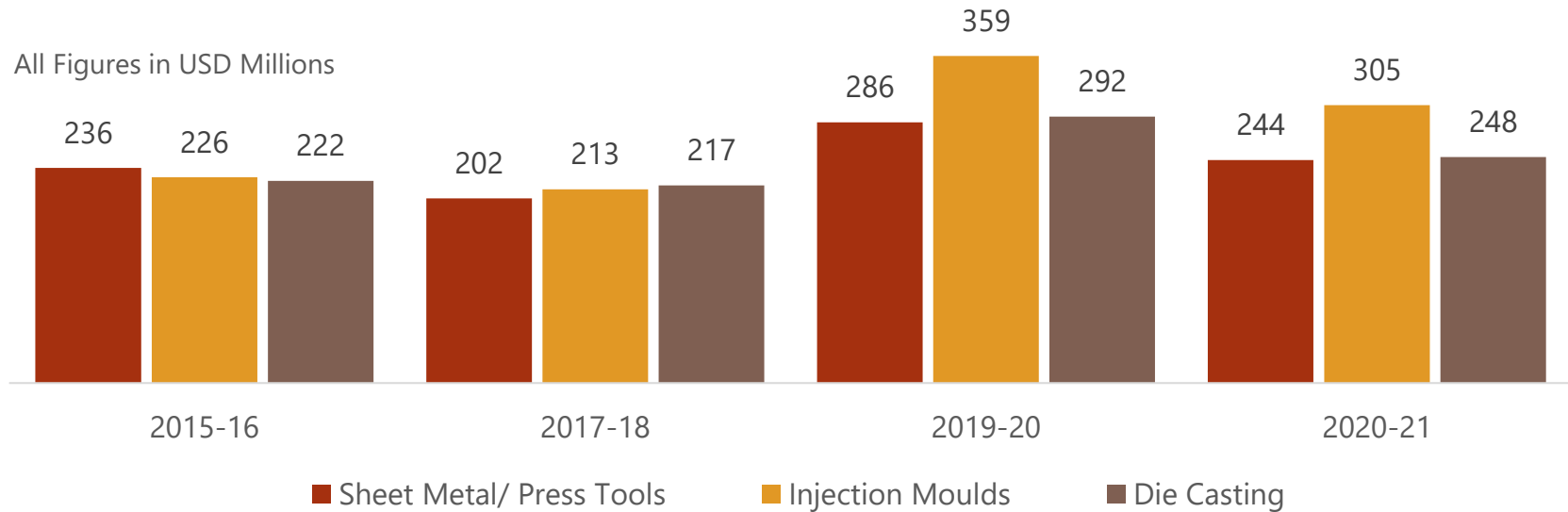
Injection Moulds - Imports Trend



- Korea, China, Japan and Taiwan are major importers of **injection moulds** by value, importing ~80 % by value of die casting dies imports since 2015
- Import share from China has increased steadily since 2015-16 and even in Covid hit market in 2020-21 and stands presently at ~40% of total **injection mould** imports by value

Tooling Imports Trend in India

Die Casting Dies - Imports Trend



- Korea , Japan, China are major importers of sheet metal dies, importing ~70% by value of **die casting dies** imports since 2015
- Reduction in import of **die casting dies** from China in 2019-20 compared to 2015-16, however imports from China in 2020 21 increased significantly
- Share of **die casting dies** from Hong Kong has increased significantly since 2015-16

ABOUT TAGMA

About us



Started in 1990 | 626 Members

Executive Council 2020- 2023

D M Sheregar– President

Akshay Kalyanpur - Member

Arvind Chawla – Member

Gopalakrishnan T. S. – Member

Parveen Satija - Member

D Shanmugasundaram – Vice President

Amit Kumar Parashar – Member

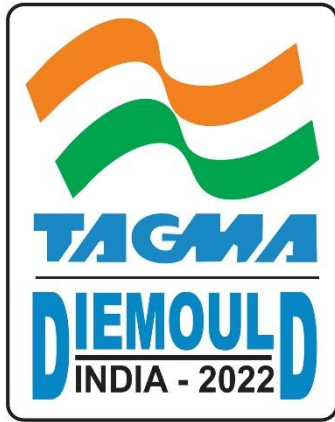
D Ravi – Member

Paresh Panchal – Member

Objectives:

- ☐ Promote and encourage improvements for competitive growth through Exhibitions, delegations, workshops, seminars, conference.
- ☐ Liaison with Govt. of India on Industry issues like Common Facility Centres covering Skills, Testing, Technology gaps to enhance competitiveness
- ☐ Organising Tool Makers Tech shows
- ☐ Periodically conducts survey/ study of the Indian Tool Rooms Industry

Initiatives towards objectives



**DIEMOULD INDIA
INTERNATIONAL EXHIBITION**



**INTERNATIONAL TOOLING
SUMMIT**



TOOL MAKERS TECH SHOW



TAGMA TIMES NEWSLETTER



NTTF – TAGMA LIBRARY

International Tooling Summit



Objective:

- Gathering of suppliers, tool manufactures & customers, the entire tooling fraternity
- Addressing the industry's growth challenges
- Meeting the skill gap through fellowships
- Focus on technologies in manufacturing Tools, Dies and Mould

1st edition @ Mumbai



26 - 27 Feb., 2016 | 280+ delegates

2nd edition @ Delhi



9 - 10 Feb., 2017 | 300+ delegates

Industry Segment:

- Aerospace
- Auto OEMs
- Auto Components
- Plastic
- Electrical
- Packaging
- Tractor OEMs
- Electronics
- General Engineering
- Others

3rd edition @ Chennai



1 - 2 Feb., 2018 | 360+ delegates

4th edition @ Pune

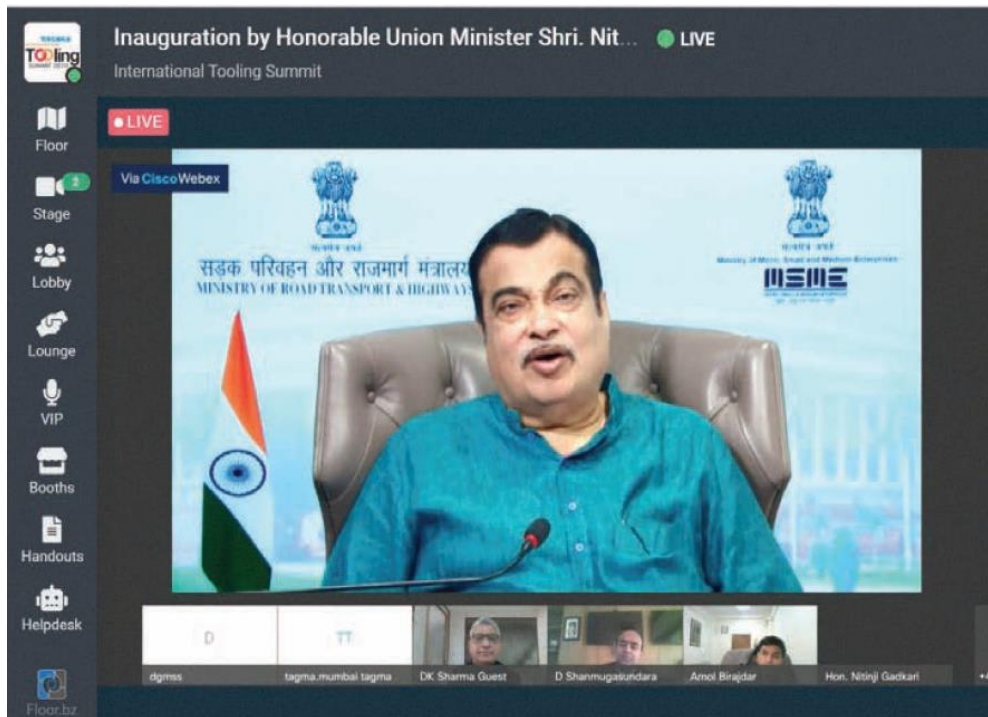


7 - 8 Feb., 2019 | 430+ delegates

International Tooling Summit

On November 27 and 28, 2020, TAGMA organised the first-ever **Virtual** International Tooling Summit to help toolmakers find their way through these challenging times.

Honourable Union Minister Shri. Nitin Gadkari; Mr MSR Prasad, Distinguished Scientist & Director General - Missiles and Strategic Systems (MSS), DRDO; and several other prominent personalities of the tooling world graced the two day event.



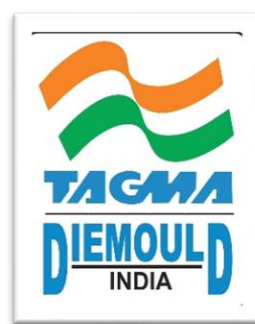
Major highlights of the Union Minister's speech

- » To make 'Atmanirbhar Bharat' a grand success, we will need lots of innovation, research, and commitment.
- » The Government of India is committed to increasing the share of the manufacturing industry in India's GDP. For that to happen, we need strong tooling support.
- » Indian toolmakers should invest in R&D to develop cost-effective, quality tools and aim for the exports' market.
- » India is going to witness a sharp rise in demand from industries such as automotive, agriculture equipment, defence and aerospace, among others. Indian toolmakers need to gear up to meet these demands.
- » There is a need to work in a collaborative manner. From the government's perspective, we are committed to make the necessary policy reforms in the coming days to help Indian toolmakers.

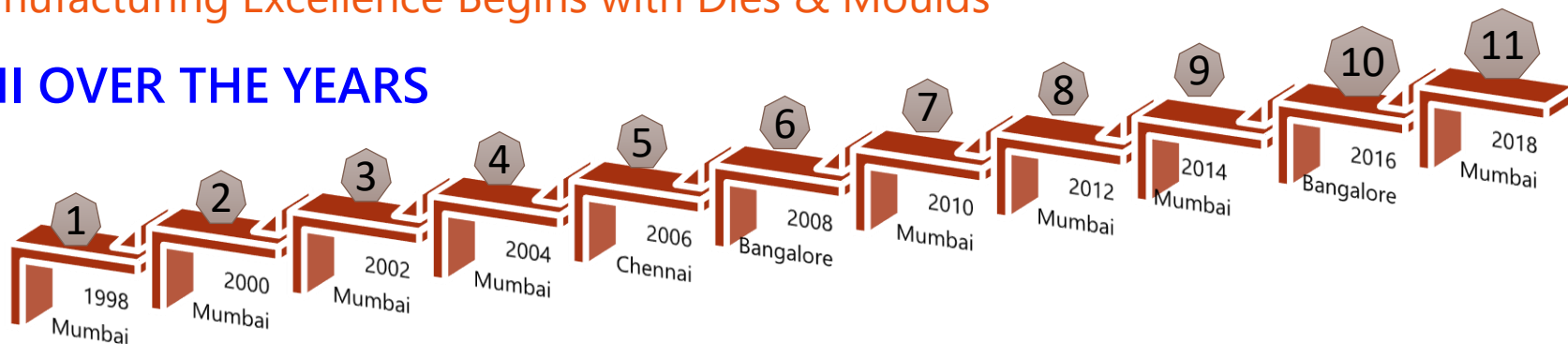
DIEMOULD INDIA INTERNATIONAL EXHIBITION

India's Largest International Diemould Show

Manufacturing Excellence Begins with Dies & Moulds



DMI OVER THE YEARS



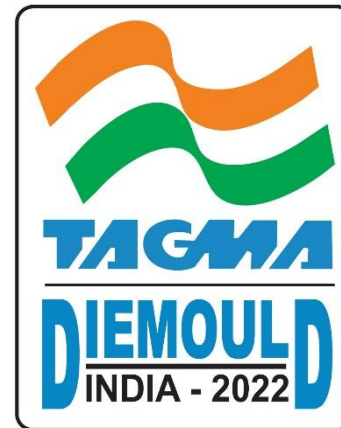
Highlight of Die Mould India 2018

- Total 31,256 visitors from industries like Automotive, Aerospace, Die Mould, Machine Tools, Heavy Engineering, Plastics, packaging, Consumer Goods, among others
- About 48% decision makers visited the show
- Exhibitor count increased by 20% from last edition and 30% increment in floor space
- 5847 foreign visitors from 16 different countries
- Delegation from PSUs and large OEMs



EXHIBIT RANGE :

- Additive Manufacturing / 3D Printing
- CAD / CAM System Related to Dies & Moulds
- CNC Milling / Machining Center, EDM, Etc.
- Coating
- Cutting Tools
- Digitizing
- Die / Mould Polising/ Die Spotting Machines
- Dies & Mould, Press Tools, Jigs, Fixture, Gauges
- Heat Treatment
- Hot Runner System
- Injection Moulding Machine
- Machine Tools & Accessories For Dies Moulds
- Measuring Machines, Quality Assurance / Metrology
- Mould Base & Standard Parts Of Dies & Moulds, Tooling
- Moulding Machines/Die Casting Machines Sheet Metal Presses & Ancillaries
- Precision Machining / Aerospace
- Rapid Prototyping & Tooling
- Surface Treatment
- Texturizing
- Tool Steel
- All Ancillary Materials Equipments, Accessories, Consumable, Services & Automation Covering Die & Mould Industry



12TH DIEMOULD INDIA INTERNATIONAL EXHIBITION

April 27 - 30, 2022

Bombay Exhibition Centre, Goregaon, Mumbai

Why to Participate?

- Unique industry event of Die & Mould Industry, once in 2 years to showcase their capabilities, innovation, new technology, process and equipments
- Consolidate business relationship
- Initiate and nurture new bonds/diversify

www.diemouldindia.org



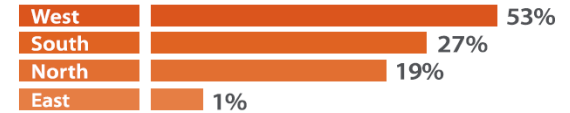
The official organ of the association, over the years, since inception in 1993. It has evoked spontaneous support and appreciation from the members & advertisers continuously.

It went thru a major revamp in November 2017 in terms of overall look, content and feel.

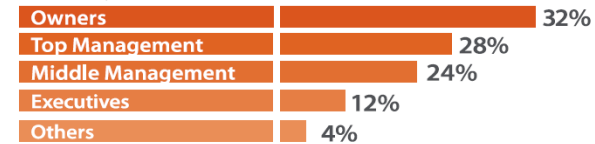


Readership

Region wise



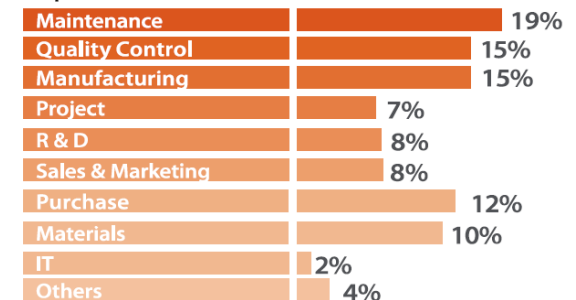
Hierarchy wise



Job Function wise



Department wise



Tool Makers Tech Show

TAGMA
INDIA



TAGMA launched **Tool Talk' powered by TAGMA TIMES** in April 2021, with an aim to promote and encourage improvements in the Tool Room industries, to achieve greater efficiency and competitiveness.

Month	Title	Speaker
Apr-21	Indian Tooling Industry - Trends, Challenges and Opportunities	Ashim Sharma - Partner & Group Head, Business Performance Improvement Consulting (Auto, Engineering & Logistics), Nomura Research Institute (NRI) Consulting & Solutions India Pvt. Ltd
May-21	Trends Shaping the Future of Indian Manufacturing	Rajesh Nath - Managing Director, German Engineering Federation (VDMA) India
Jun-21	Possibilities of Industry 4.0 (i4.0)	Dr. Asim Tiwari - Chair Proessor Department of Mechanical Engg, Indian Institute of Technology, Bombay
Jul-21	Role of MSME in Economic Development	Vinamra Mishra - Director (Tech & Projects), Ministry of Micro, Small & Medium Enterprises, Govt. of India
Aug-21	Additive Manufacturing and Tooling	Dr. Dheepa Srinivasan - Chief Engineer, Pratt and Whitney, R&D Center, Bangalore
Sep-21	OEMs Expectations from Tooling Vendors	V T Venkateshwara Rao - DGm, Tooling Cell, CDMM, Mahindra & Mahindra, Mumbai
Oct-21	Emerging Trends in Automotive Industry	Vinnie Mehta - Director General, Automotive Component Manufacturers Association of India (ACMA)
Nov-21	Importance of Strategic Thinking and Risk Management in Tooling Industry	Narendra Brahmankar - IRCA Regd. QMS Principal Auditor, Trainer, Business Coach and Consultant
Dec-21	Automotive & Tooling: Reimagining the Future	Mr. B.Thej Kumar - Associate Vice President Operations , Product Development and Quality, Toyoda Gosei South India Private Limited (TGSIN), Bengaluru

TAGMA DIGITAL INITIATIVE



Webinar with Industry Partner

Date	Subject	Host
06.10.2021	'How to progress in Tool Design & Manufacturing using Hexagon Solution?'	Hexagon
16.07.2021	"“DIFFUSION BONDING AND PULS-PLASMA NITRIDING PROCESS OF PVA TEPLA”"	PVA Industrial Vacuum systems GmbH & Nathan & Nathan Global Inc.
29.04.2021	'Tooling Experiences from 3DEXPERIENCE CATIA-From Design to Production '	Dassault Systèmes and TATA Technologies
08.04.2021	'Getting Defect free Plastic Components with early simulation using 3DTimon'	Design Tech
23.03.2021	Launch of 'Book My Tool' App'	Book My Tool
17.03.2021	'How to Streamline your design environment with PTC Creo CAD, Windchill PDM & Simulation'	Design Tech
12.03.2021	'Challenge the Constraints of Traditional Manufacturing using 3D Printed Tools'	Design Tech
12.02.2021	'Optimise your Injection Molding using Simcon German Technology'	CADBRO-ZW INDIA
02.02.2021	'Join the Next Manufacturing Revolution with Truventor'	Truventor.ai
19.01.2021	'Increasing Productivity with Siemens NX Integrated Tooling Solution'	Sapience TechSystems
22.12.2020	'Improve your ROI up to 40% over imported printers and get the most out of conformal cooling using India's First Metal 3D Printer iFusion Series'	Intech Additive Solutions

Thank you