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■ **GARGI HA Develops Innovative Foundry Solutions**

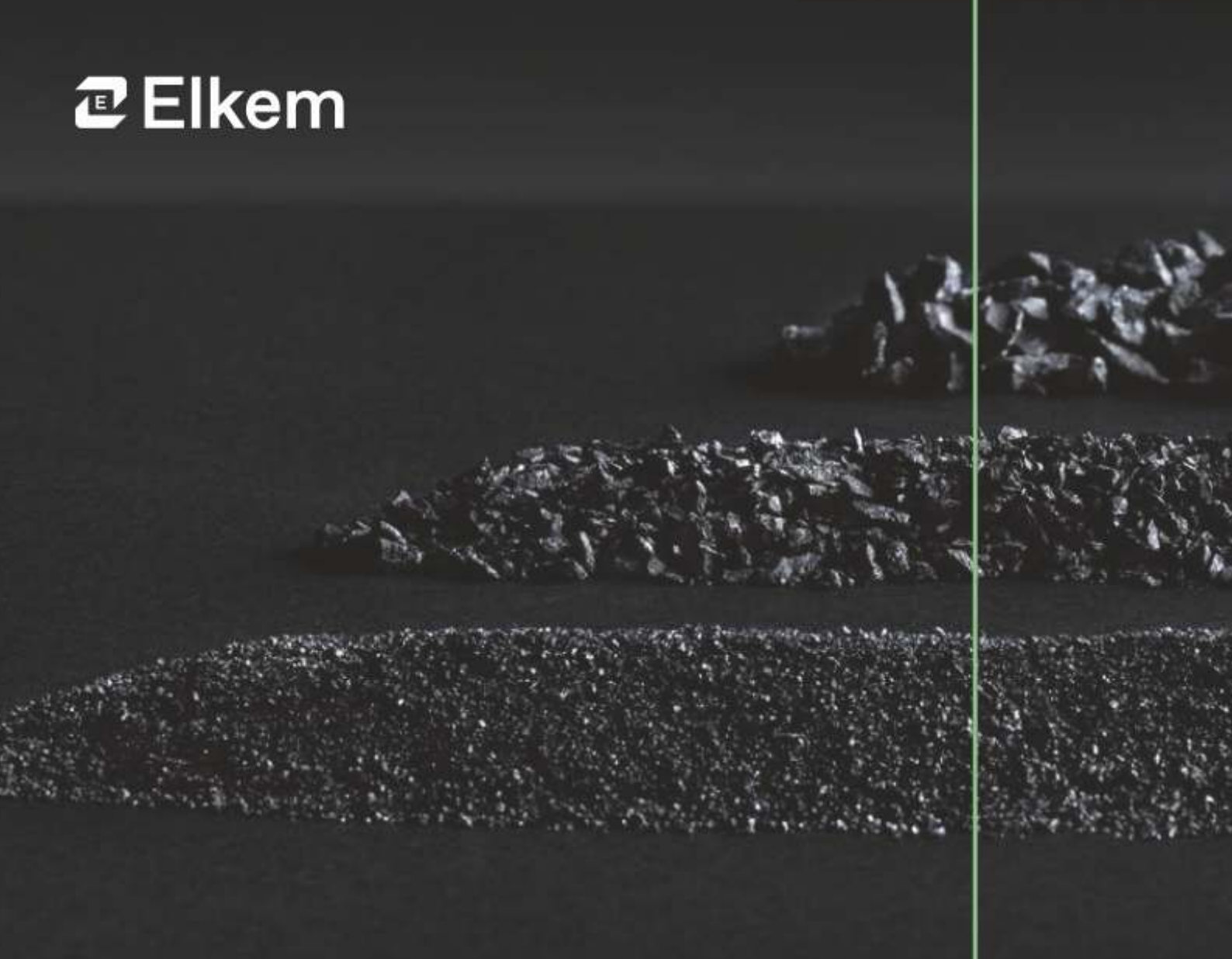
Chandan Panda

Director, Sales and Marketing,
Gargi Huttenes Albertus ,
Mumbai



■ **'Beneficiation – Technology, Process & Value Addition'**

■ **Overview of Digitalization in Mining, Metals & Material Industry**

The background of the top half of the page features three distinct piles of grey iron castings, arranged horizontally from top to bottom. The top pile is the most irregular and jagged, the middle pile is more uniform, and the bottom pile is the most densely packed and granular. The lighting is dramatic, highlighting the metallic textures against a dark background.

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D. A. Chandekar Editor

Dear Readers,

As you know, 'Metalworld' magazine is devoted to metals industry and politics is never a part of our magazine or even a part of the discussions during our conferences. We as a business media have consciously kept away from it and have always focussed on the issues related to the industry. Having said this, we all must admit that the events in the global geopolitics do have a substantial and sustained effect on the international trade and thus need to be discussed here on this platform. We have seen how Ukraine – Russia war had impacted the exports from these countries, the effect on logistics due to non operational sea routes within war zone, direct as well as indirect involvement of many countries in this war, all these factors significantly influenced the metallurgical industry. We did discuss this from time to time in this column itself.

What is true for international politics is also true for domestic politics. We must understand that there is a sustained and bilateral relationship between any industry and the government. This relationship changed a bit in 1992 when India adopted liberal and open format of the economy and the government's control over the industry reduced drastically along with the abolition of licence raj. Still there are few regulations and the government still has few strings in its hand. It does

Editorial Desk



control and monitor the industry to some extent by enforcing land acquisition laws, environment clearances, levying taxes, controlling export-import duties on raw materials and finished products etc. Thus in today's liberalised economy model too, there are few checks and balances in place.

Who constitutes the government ? Obviously politicians and the beurocrats. The industry through its representative bodies and also on the individual company basis, has to continuously deal with these politicians and the bearocrats to protect and further its interests. It surely has certain specific demands and expectations from the government. To that extent and for this purpose, the industry should be and will be interested in the national politics and would naturally try to install the government which will cater to its interests.

What does the minerals & metals industry want from the government ? As we all know, our industry consists of many sub industries and what is profitable for one may not be so for the other. For instance, if the government reduces import duty on refractories, it may help the melting units but will be against the interests of domestic refractory manufacturers. Thus the demand from the entire metallurgical sector can only be 'spend maximum on infrastructure development which will generate huge demand for metals'.

I hope the new government will be concerned about the economic growth of the country and would give enough emphasis on infrastructure projects. I am sure this will give a big boost to the metals demand in the country. What more our industry wants ?

Write your comments :

<https://metalworlddac.wordpress.com>

Content

Face to Face



- 6** **GARGI HA Develops Innovative Foundry Solutions**
Chandan Panda
Director, Sales and Marketing,
Gargi Huttenes Albertus ,
Mumbai

Feature



- 18** **'Beneficiation – Technology, Process & Value Addition'**

Technology



- 24** **Overview of Digitalization in Mining, Metals & Material Industry**
Sadguru Kulkarni

Industry Update



- 30** **Base Metals Surge: Copper and Aluminum Prices Hit Highs**
Ravi D Souza

News Update

- 32** **Copper output from Chile's Codelco slides 6% in April**

Rio Tinto to buy Mitsubishi's nearly 12% stake in Boyne Smelters



EGA's GAC signs term sheet with Government of Guinea for development of an alumina refinery



- 33** **India's renewable energy projects face financial headwinds from copper volatility**

China's zinc imports reflect shifting market dynamics: Andy Home

Statistics

- 34** **Passenger vehicle sales up 4%, two-wheelers 10% on-year in May: SIAM**

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GARGI HA Develops Innovative Foundry Solutions

Chandan Panda

Director, Sales and Marketing,
Gargi Huttenes Albertus ,
Mumbai

Chandan Panda holds an Honors Degree in Chemistry, B.Tech in Chemical Engineering with a specialization in Polymer Science and Technology, M. Tech in Production Engineering, and an MBA in Marketing. With 24 years of experience in foundry binders, coatings, special RCS, and auxiliary chemicals, he has achieved numerous milestones in this field. His career has taken him to numerous foundries across South Africa, Turkey, Poland, Germany, Southeast Asia, Saudi Arabia, and the UAE. He regularly attends foundry exhibitions worldwide and has presented technical papers at notable events such as the Metal Casting Conference in South Africa, IFC, Foundry Conclave, Sourecon, NFD, GDC Tech, and CFER and he is National Council member of IIF. Currently, he serves as the Director of Sales and Marketing at Gargi Huttenes Albertus Private Ltd in Mumbai.

D.A. Chandekar, Editor & CEO of Metalworld had an exclusive interaction with Mr. Chandan Panda to understand status of Indian economy, how is foundry Industry placed in the current scenario, which are the emerging markets, main goals and tasks of the HA Center of Competence, etc.

1. What is your opinion on status of Indian economy and your estimates of its Future?

India is currently the 5th largest economy in the world by nominal GDP and is expected to become the world's 3rd largest economy

by 2027. India is on the threshold of major growth and transformation with a vision to be a \$7 trillion economy by 2030-31. The Indian economy is anticipated to experience a consistent growth of 6.7% from 2024-2031, as per the

latest report by CRISIL. This projection slightly surpasses the pre-pandemic average of 6.6%.

Diverse economic structure: India's mixed economy is a complex of private and public sectors with clusters of agriculture, manufacturing, and a rapidly growing service industry. Many initiatives under 'Atmanirbhar Bharat' and 'Make in India' programme to enhance India's manufacturing capabilities and exports across industries. India exhibits both resilience and progress despite all global risks and uncertainties. India withstands domestic and global challenges. Through timely and effective policy actions aimed at achieving macro stability and repairing the balance sheets of financial and non-financial sectors, as well as by investing significantly in building world-class physical and digital public infrastructure, India's been able to withstand the challenges, both domestic and global, and ensure that the economy continues to progress on a steady path. With the policy

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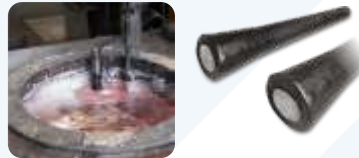
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Face to Face

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Reduction of carbon foot
prints

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Defence, Aeronautics, Space
exploration

Non-Ferrous Castings –
Aluminium, Magnesium &
Copper

Foundry growth in India for the next 7 years

Agriculture – CAGR 10.5% - 2024-2032

The need to use modern
technologies to increase
productivity and profitability
has therefore led to the
adoption of Agriculture 4.0 in
India. Soil mapping, Internet
based software, Big Data,
GPS, Agro-tech startups,
Artificial intelligence,
Robotics, breakthrough
technological solutions, etc.,
are set to boost the
Agricultural economy of
India. Tractor & Tiller
industry to get a big boost.

Automotive Industries – CAGR 6.8%

The Auto & Auto
Component industry has
significant contribution of
the total casting production
and ~7% to the country's
GDP and GDP growth by
12%. Good demand for
vehicles due to increased
affordability of the people.

General Engineering & Machine Tools – CAGR 6.35% & 12.6% respectively

The Gen engineering
services market size in India
was valued at USD 65.3
billion in 2023. It is expected
to reach USD 88.77 billion by
2028. The market is growing

in the country due to the
digital transformation and
the growth of chemicals,
petrochemicals, and
pharmaceutical industries.
Machine tool sector is a
basic capital good industry.

Mining & Infrastructure

The vast resources of
numerous metallic and non-
metallic minerals that India is
endowed with serve as a
foundation for the expansion
and advancement of the
nation's mining industry. The
mining industry production
growth rate in comparison to
the previous year, 4.7%. The
2024 Budget expected to
have a holistic agenda for
India's infrastructure sector.
Where the government focus
on infrastructure to develop
ports, airports, railways, and
highways play a pivotal role in
advancing the nation's
economic development.
Infrastructure to grow by 25-
30% as compared to
previous year.

Transportation – CAGR 9.4% - 2024-2029

The India Road Freight
Transport Market size is
estimated at USD 140.26
billion in 2024, and is
expected to reach USD
217.84 billion by 2029, and
would grow up to 563 billion
dollars in 2030.

Pumps & valves – CAGR 4.8% - 2024-2030

The India Industrial Pump
Market size is estimated at
USD 0.93 billion in 2024 and
is expected to reach USD
1.19 billion by 2029.

4) What is the present product & services profile by HA Group?

Delivering superior

customer value and building a
bridge between the customer's
needs and our products and
services - that's the aim of our
global sales and marketing
team. As close and personal
partners we accompany our
customers with information,
advice, and active support at
every stage of the sales
process.

Focus on each customer

- Global Product Management
- Key Account Management
- Segment Management
- International Sales
- Marketing
- Technical Service
- HA Center of Competence

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We Also Manufacture Foundry Machinery, Metal Testing Equipment.



Face to Face



Feeding systems



Metallurgical and NF products



Other auxiliaries

Industry Segments

Our customers come from a wide variety of industries. To gain valuable market insight we defined identifiable segments with similar market or demand characteristics.



Energy:
-Wind
-Water
-Powerstation (Gas, Coal)



Agriculture, Mining:
-Offroad Vehicles
-Agricultural Vehicles
-Pumps For Mining
-Spare Parts For Mining
-Pulp & Paper Industry



Engineering:
-Electrical Engg.
-Machine Building
-Air Conditioning Technology



Other Foundry Products:
-Electronic industry
-Furniture industry
-Food packaging
-Household appliance
-Clothing



Construction:
-Infrastructure
-Housing
-Chemical Industry



Non-Foundry Products:
-Impregnation
-Grinding
-Friction
-Compregnated
-Surface protection



Automotive: Parts for
-Power train
-Transmission
-Suspension
-Safety



Mobility:
-Rail Parts
-Cable Rail Parts
-Engine Parts for Ships and Rails
-Ship Parts

Gargi HA exhibits resilience and is capable to withstand the challenges, global risks, and uncertainties that ensures sustainable progress over a period of 35 years. We wish to share here a token of an appreciation of our efforts from the society. Gargi HA was awarded a Jamnalal Bajaj

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Trophy for 'Fair Business Practices' in 2023.



cooperation and allows us to bring solutions to market quickly and effectively. As a producer of foundry chemicals, we are the link between foundries, with their casting requirements, and machine manufacturers, with their technical possibilities. In the past, customers often started by creating a new production line design for their new product in close collaboration with the machine manufacturer. Only once the new plant was ready did the foundry approach HA to find the right chemical products to produce the casting. This was often too late to provide customers, on time, with



5) What are the main goals and tasks of the HA Center of Competence (COC)?

Nowadays, the HA Group is present in over 30 countries, serving, with its about 1800 dedicated employees, all important foundry communities in the world. Generally speaking, the CoC facilitates

solutions tailored to their processes or castings, which then still had to be put into commission. As a result, valuable time was lost. By working together with the foundry, machine manufacturer and other partners at an early stage in product and process development, we aim to reduce the time required for this phase.

Going further into details, the CoC is based on four main pillars:

(a) Pilot foundry plant:

- Analyse and optimise the foundry process chains,
- Promote new technologies in metal-casting and metal-forming
- Test of new products and technologies

(b) Project collaboration:

- Support for customer's and partner's projects, from the concept to application phase,
- Active participation for the core and tool design,
- Commissioning of tools, cores, and castings,
- Partnership and support for projects developed with universities and research institutes around the world

(c) Optimising the process chain

- Cooperation with best class industrial partners involved in the project development,
- Optimising the interaction between chemistry and machine & process engineers.

(d) Training for HA employees worldwide.

- HA employees worldwide,
- For customers and partners (including Universities) from the whole world



Innovative Foundry Solutions

Modern castings need cores of all complexity. **Gargi Hüttenes-Albertus** products combine excellent performance, consistency and environmental compatibility to add value to your casting.



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Face to Face



- 10 research locations worldwide
- 170 R&D employees
- Basic research & development



- Unique cooperation platform
- Almost 5.000 m²
- Consistently application-oriented

6) What are the new initiatives at Gargi HA?

Keeping in view of the doubling of foundry growth to \$32 billion, in the next seven years GARGI HA has geared up to meet customer expectations by incorporating innovative technical solutions through superior and robust products and problem-solving techniques.

1. Training of a dedicated Project Team with adequate foundry processes knowledge to work closely with key customers, understand their requirements and offer the right solutions – First time Right.
2. Capability to map the process and find out the inadequacies, fine tuning and adding value to customers & showing the economic viability through the

3. Introduction of Casting solidification simulation and offering the best solutions vide regular slurry sleeves and CB Shot sleeves.
4. Introducing innovative 3 D Resin for printing of Cores and Molds.
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CCU: Compact Coating Unit





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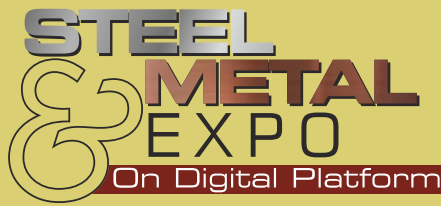


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Feature



'Beneficiation – Technology, Process & Value Addition'

The Asian Metallurgy Show, originally a physical exhibition since 1997, transitioned to a digital platform in 2021 due to Covid. The virtual Steel n Metal Expo held from 18th to 31st December, 2023, featured online stands and webinars covering topics like digitalization, commodity trading, green steel production, role of zinc, sustainability. A notable webinar titled 'Beneficiation – Technology, Process & Value Addition'



The expert panel featured **N.S.Rathor**, Consultant, Priya Ranjan Prasad, Director, Steel Making, Lloyds Metals & Energy Ltd and **Dr. Suresh Ch. Khattoi**, Managing Director, Minmet Consultants Pvt.Ltd. This webinar was hosted by **D.A. Chandekar**, Editor, Steelworld.

D.A.Chandekar - Over the

past decade, there has been a growing focus on beneficiation, with many companies adopting this process to make the ore usable for various industrial processes, including blast furnaces. Now, let's delve into the discussion on beneficiation. We have esteemed dignitaries and experts present, including Rathor. Rathor, could you please share your initial thoughts on this matter? Where does India stand in terms of beneficiation, and are we moving in the right direction? These are the questions I'd like to pose to all of our participants, starting with your opening remarks.



N.S.Rathor - India has neglected its rich iron ore resources, leading to a lag in this area compared to other nations. The adoption of new

technologies is also hindered by the economic considerations of small and medium-sized enterprises. Despite successful ventures in beneficiation, there's a lack of understanding in adopting these technologies due to differing economic calculations between users and sellers. Improving iron ore grade even slightly can significantly reduce the cost of liquid metal production. Another challenge lies in processing weak magnetic materials like hematite and limonite, where companies are exploring methods such as washing and partial reduction to convert them into usable magnetite. These are just initial thoughts, and I'm eager to hear from others for further discussion.



Dr. Khattoi - The urgency to reduce greenhouse gas emissions, particularly

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- Smart manufacturing equipment
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- Other auxiliary materials and equipment

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Feature

highlighted at the recent Glasgow Summit, is driving the need for upgrading iron ore for steel production to mitigate emissions. Mineral conservation through reduction roasting and other established technologies is crucial in this regard. Reduction roasting has been successfully implemented commercially, significantly improving efficiency and quality. With a shift towards higher-quality products, such as through advanced beneficiation techniques like gravity and magnetic separation, we aim to meet the increasing demand for iron ore while reducing emissions.



Priya Ranjan Prasad -

The concept of utilizing lower-grade iron ore and fines for steel production is gaining traction, emphasizing the need for responsible resource utilization. Other countries, like China, efficiently process lower-grade ore, demonstrating its feasibility. India is also making strides in beneficiation, with some projects underway. However, challenges remain, particularly in managing tailings and securing land for

disposal. Innovative solutions and research are crucial to scaling up beneficiation efforts and maximizing resource utilization for national development.

D.A.Chandekar -

Beneficiation, coupled with pelletization, is indeed the way forward, as you mentioned. China's leadership in this area is evident, despite their significant reliance on imported iron ore. They've managed to export steel efficiently, even with low-grade ore. This raises the question of whether we should explore using low-grade iron ore in our furnaces and develop processes accordingly. While beneficiation and pelletization are essential, innovation towards accepting low-grade ore in furnaces, as China has done, should also be considered to reduce energy and time in steelmaking.

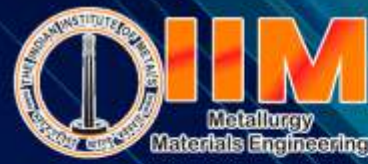
Dr. Khattoi - China does possess magnetite reserves, although they're not fully utilizing them at present and are relying on imports. It's crucial for us to strategize and capitalize on such resources rather than relying solely on imports. Additionally, directly reducing low-grade ore is technically feasible. However, we need to focus on minimizing energy consumption, especially when dealing with impurities like silicon and alumina, which can significantly affect economic viability. Our policies need to

evolve to incentivize beneficiation and discourage transporting unnecessary impurities. Royalties should be levied based on the actual grade of the ore to encourage efficient resource utilization.

N.S. Rathor - In China, beneficiation plants primarily process low-grade magnetite and hematite ores, upgrading them to higher grades for steelmaking. They also utilize fines efficiently by converting them into pellets, optimizing furnace operations. Despite the effectiveness of these methods, India faces challenges in adopting similar practices, including regulatory hurdles and reluctance to embrace new technologies. Additionally, there's a shortage of skilled manpower in the beneficiation industry, exacerbated by the lack of relevant education and training programs. Efforts to address these issues, such as establishing training centers within industries, are essential for the sector's growth and competitiveness.

Priya Ranjan Prasad -

There's potential in processing high-grade dumps into pellets, enhancing commercial viability. Standalone pellet plants could also increase viability by integrating beneficiation units, improving recoveries and yields. It's essential to adopt a broader perspective, focusing on utilizing various grades of iron ore effectively, including lower grades like BMQ and BHQ, which can be upgraded to high-grade products with considerable silica content, suitable for construction



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Feature



purposes.

D.A.Chandekar - In discussing the challenges, it's evident that technological, commercial, and policy hurdles exist. Addressing policy challenges requires government intervention, such as establishing pilot plants through institutes like the National Institute of Secondary Steel Technology. Additionally, soft financing should be made available for projects aimed at converting low-grade ores into valuable resources. Government-backed initiatives could include postgraduate courses in beneficiation and pelletization, fostering industry growth and national benefit.

N.S.Rathor - On the manpower front, there's a pressing need for proper evaluation of degrees, as the current system often produces graduates whose qualifications don't align with their actual skills. The

declining quality of education, exacerbated by various examination processes, is a policy issue that must be addressed nationally. Soft financing for beneficiation and pelletization projects is crucial for industry development, yet there's a lack of interest from companies. Technologies like direct reduced iron (DRI) plants, which efficiently utilize heat energy and boost productivity, are available but underutilized in India, despite their economic viability. Despite China's successful adoption of such technologies, India has been slow to follow suit, highlighting the need for greater attention to technological advancements and industry uptake.

Priya Ranjan Prasad - There are some positive policy changes underway regarding beneficiation, with a team of experienced individuals working on draft recommendations. Soft financing is available for projects like mine

development, as seen in my own experience. Despite the availability of technology, funding, and supportive policies, there seems to be a lack of interest or disinterest in investing in beneficiation projects. This could be due to a preference for shortcuts or a reluctance to embrace necessary changes. However, the reality is that high-grade resources are becoming scarce, and investing in beneficiation is crucial for sustainable development.

Dr, Khattoi - Exporting minerals without value addition should not be the norm; instead, any exports should be balanced with imports to meet India's strategic needs. Compelled exports must be done cautiously, considering environmental implications like carbon footprint. China imports due to lack of resources, while India needs to prioritize domestic beneficiation for infrastructure and employment generation. Unlike resource-rich countries like Australia, India's focus should be on domestic steel production, with only a fraction available for export.



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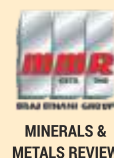
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Overview of Digitalization in Mining, Metals & Material Industry (Part 2)



Tools and techniques for digitalization in manufacturing

Digitalization in manufacturing involves the adoption of various tools and techniques to enhance efficiency, productivity, and innovation. Here are some key tools and techniques for digitalization in manufacturing:

1. Manufacturing Execution Systems (MES): MES software enables real-time monitoring and control of manufacturing operations on the shop floor. It provides visibility into production processes, collects data from machines and sensors, and helps optimize production scheduling, resource allocation, and quality management.
2. Internet of Things (IoT): IoT devices, such as sensors, actuators, and connected machines, enable the collection of real-time data from

manufacturing equipment and assets. IoT data can be used for predictive maintenance, process optimization, quality control, and supply chain visibility.

3. Advanced Robotics and Automation: Robotics and automation technologies, including robotic arms, automated guided vehicles (AGVs), and cobots (collaborative robots), improve manufacturing efficiency, flexibility, and safety. These technologies automate repetitive tasks, increase throughput, and enable agile manufacturing processes.
4. Digital Twin Technology: Digital twins are virtual replicas of physical assets, such as machines, production lines, and entire factories. Digital twins enable simulation, modeling, and analysis



Sadguru Kulkarni
Technology Retired President - Technology, Hindalco Industries Ltd Corporate, covering Research and Technology, Technical.

of manufacturing processes, allowing for predictive maintenance, optimization of operations, and virtual prototyping.

5. Additive Manufacturing (3D Printing): Additive manufacturing technologies, such as 3D printing, enable the production of complex geometries and customized parts with reduced lead times and material waste. 3D printing is used for rapid prototyping, tooling, and low-volume production in various industries.
6. Augmented Reality (AR) and Virtual Reality (VR): AR and VR technologies enhance manufacturing processes by providing immersive training, maintenance support, and remote assistance to workers. AR and VR applications improve workforce skills, reduce downtime, and enhance collaboration across geographically dispersed teams.
7. Artificial Intelligence (AI) and Machine Learning: AI and machine learning algorithms analyze manufacturing data to identify patterns, predict equipment failures, optimize processes, and improve quality control. AI-powered systems can automate decision-making, enhance



predictive maintenance, and enable self-optimizing manufacturing systems.

8. Supply Chain

Digitization:

Digitalization of the supply chain involves implementing digital platforms, blockchain technology, and data analytics to optimize procurement, inventory management, and logistics processes. Digitized supply chains improve visibility, traceability, and collaboration among suppliers, manufacturers, and customers.

9. Cloud Computing and

Edge Computing: Cloud computing platforms and edge computing technologies provide scalable computing resources and data storage for manufacturing applications. Cloud and edge computing enable real-time data analysis, remote monitoring, and collaboration among stakeholders in distributed manufacturing environments. Cloud computing has made large scale integration of data and knowledge, irrespective of geographic location, and speeds of local computation, while maintaining the secrecy and integrity of data.

By leveraging these tools



and techniques, manufacturing companies can achieve digital transformation in monetary terms, improve competitiveness, and adapt to the evolving demands of the Industry 4.0 era.

Utilization of digitalization in downstream metal manufacturing processes:

Metal industry is characterized using large number of mechanical manufacturing processes which bring primary metal a step closer to the end customer. The capital intensity of these machinery, intense reliability needs, and uptime demands and stringent quality control requirements especially for automobiles, electronics, and other end applications, have made the downstream processing industry an adapter of digitalization, as seen in rolling, extrusion, casting, forging industry. The main applications include IOT, advanced robotics and automation, digital twins for live experimentation to enhance the chances of success of any changes, additive manufacturing/3D printing for rapid prototyping and customer samples generation, die-design and

integrated CNC manufacture of dies to support Just-in-Time production, augmented reality and VR for training and testing, AI & ML for developing insights into hidden features such as trends-short & long terms, self-optimizing processes, etc.

Advanced processing machinery with these features are now available.

Safety, Environment and Sustainability through digitalization:

Mining, metals and materials manufacturing industry is generally considered as a high-risk manufacture, prone to unsafe work practices, high temperature, high exposure, high dust, mechanical accidents, excessive use of earth movers, forklifts and production vehicles. Safety and environmental performance has so far been heavily dependent on manual supervision. Digitalization has opened doors to enhance the performance in this key aspect of work using sensors (e.g. Sick Industries), integrated machinery (e.g. siemens), digital factories etc.

The approach to digitalization requires a careful planning, and prudent execution. It requires careful development of digitalization strategy (often offered by the big four of management companies) , jointly with experts in the area of building blocks such as sensors, machinery, modeling tools, statistics and data analytics, training and workforce adaptation etc. Interestingly, there is no time to stop the manufacture and the changes



Aluminium Extruders' Council (ALEX)

Aluminium Extruders' Council (ALEX)

Announces

Conference On Aluminium in Ship Building

14-15 (Thu-Fri) November 2024
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Appeal

With increasingly pressing needs of light weighting, environmental concerns, design and availability constraints with conventional materials such as wood, steels and FRP, alternative material are being considered by shipbuilders most prominent amongst them is Aluminium.

Major shipyards have already started building Aluminium boats, mostly catering to Government, Naval and Defence needs. There are now, however, many emerging applications such as leisure boats, fishing boats, sports and ambulance to name a few, which can be of great interest to smaller and medium scale ship-builders. These ships in Aluminium are well established in countries like South Korea, Netherlands, Austria, Japan, etc. We, however, need to acquire knowledge on design, Aluminium alloys, shapes and forms, fabrication and

joining technologies, various standards, certification process and so on.

Encouraged by the enthusiastic response to our maiden conference on 'Ship building.... In April 2022 and subsequent feedback received from various companies during further visits and interaction, we realized that there is a definite need for a focused conference on 'Aluminium in shipbuilding'

We are there pleased to announce the conference in Goa during November 2024. We believe that this conference on "Aluminium in Ship building" will provide a great value to the participants and open new doors in coming year.

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Technical Papers (Topics to be covered)

1. Aluminium and Sea Water
2. New opportunities and growth of shipbuilding Industry
3. Plate nesting / cutting
4. Welding methods and machines
5. Case study on welding
6. Welding fillers, wires and consumables
7. Aluminium foam products
8. Ship architecture and designs
9. Ship designs technology
10. Navel designs and engineers
11. Use of renewable energy in modern ships (solar)
12. Ship painting
13. Marine architecture (Interior Design)
14. Construction and fabrication of shipbuilding
15. Classifications societies (IRS/LRS)
16. Ship design accommodation and outfits
17. Aluminium extrusions in shipbuilding industry
18. Capsizing boat design and construction

*(papers Subject to change)

Who Can Participate

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have to be implemented in a running plant, while maintaining full production on. This requires specific capability for integration.

Cases of successful application of digitalization in mining, metals & material industry:

Several successful cases of digitalization in the manufacturing of the metal industry demonstrate how digital technologies have improved efficiency, quality, and competitiveness. Here are a few notable examples:

Siemens Digitalization in Steel Production: Siemens has implemented digitalization solutions in steel production to optimize efficiency and reduce costs. By integrating IoT sensors, data analytics, and automation technologies, Siemens helps steel manufacturers monitor and control production processes in real-time. Their solutions enable predictive maintenance, quality control, and energy management, leading to improved productivity and sustainability in steel manufacturing.

ArcelorMittal's Smart Factory Initiative: ArcelorMittal, one of the world's leading steel producers, has launched a

Smart Factory initiative to digitalize its manufacturing operations. The company utilizes IoT sensors, AI-powered analytics, and robotics to optimize production processes, enhance product quality, and reduce energy consumption. ArcelorMittal's digitalization efforts have resulted in increased efficiency, reduced downtime, and improved competitiveness in the global steel market.

GE Digital's Predix Platform in Metal Fabrication: GE Digital's Predix platform is used in metal fabrication to enable predictive maintenance and optimize equipment performance. By collecting and analyzing data from manufacturing equipment, Predix helps metal fabricators identify potential equipment failures before they occur, allowing for proactive maintenance and minimizing unplanned downtime. GE Digital's digitalization solutions have helped metal fabricators improve productivity, reduce maintenance costs, and enhance overall equipment effectiveness.

ABB Ability™ Solutions for Aluminum Smelting: ABB, a leading technology company, offers digitalization solutions for aluminum smelting operations through its ABB

Ability™ platform. ABB's solutions utilize advanced process control, predictive analytics, and digital twins to optimize the performance of aluminum smelters. By monitoring and controlling key process parameters in real-time, ABB helps aluminum smelters improve energy efficiency, reduce emissions, and enhance product quality. Voestalpine's Digitalization in Metal Processing: Voestalpine, a global steel and technology company, has implemented digitalization initiatives in metal processing to streamline operations and enhance customer service. Voestalpine utilizes digital twins, automation, and data analytics to optimize production planning, inventory management, and logistics. These digitalization efforts have enabled Voestalpine to offer customized solutions, shorten lead times, and improve customer satisfaction in the metal processing industry.

These successful cases highlight how digitalization is transforming the manufacturing of the metal industry by leveraging advanced technologies to improve efficiency, quality, and sustainability across the entire value chain. ■





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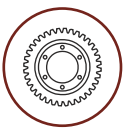
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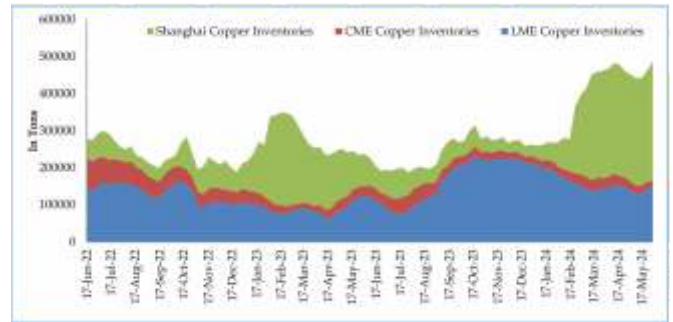




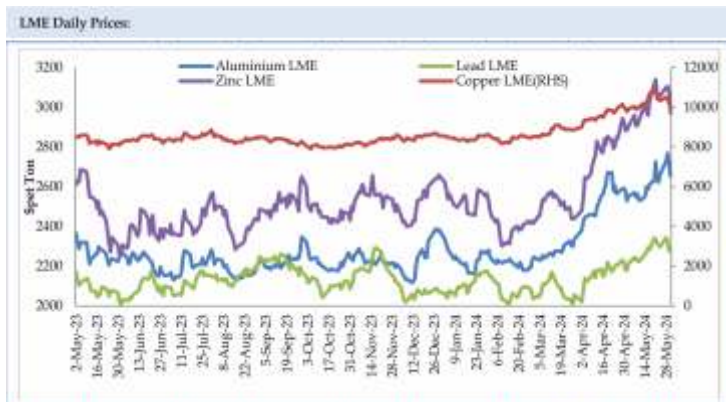
Base Metals Surge: Copper and Aluminum Prices Hit Highs

Copper prices broke beyond the \$11,000 barrier, as base metals maintained their remarkable ascent. Copper prices were driven by a short squeeze on the New York futures market. Aluminium prices also saw a dramatic increase, climbing more than 10% due to a restriction on Russian metal and capacity limits imposed by China, while zinc prices reached a one-year high. Further more, various support measures announced for the Chinese real estate sector in the recent month boosted the bullish sentiment. However, base metals have reversed most of these gains as strong demand expectations for metals have yet to translate into higher consumption.

China due to waning demand from the construction sector. Copper stocks generally start to decline during the second quarter of the year as it is seasonally the strongest period for Copper demand. However, SHFE stocks at the end of May 2024 were at 3,21,695 the highest since the peak seen in 2020 indicating the lack of demand in China. Refined stocks have also surged due to a rise in smelting capacity in China. However, the Copper market has witnessed a sharp rise in prices in spite of mounting supplies which has led to demand destruction in China. According to the latest data from China Copper wire plants were operating at 73% of capacity last month, down 14 percentage points from a



Source: Bloomberg, NB Research



Source: Bloomberg, NB Research

Global Copper Stocks:

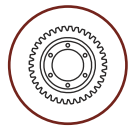
Global Copper inventories are at a seasonally elevated level as peak season demand continues to disappoint. Bulk of the inventory built up is seen in

year ago. Runs at bar manufacturers declined to 57% of capacity, five percentage points lower than a month ago.



Ravi D Souza
Sr Research Analyst,
Nirmal Bang Securities

Copper smelters have continued to maintain near record levels of production in spite of a scarcity of raw materials. As prices have skyrocketed Copper scrap supply has increased and acted as feed stock to keep smelters running. In March Chinese smelters had pledged to cut output as TC/RC charges slumped to near zero. However, these cuts haven't been implemented as evident in the output data and excess supplies have been mounting up at the SHFE warehouses. Following a spike in copper prices, scrap from discarded pots, pipes, and wires has become more readily available. Fabricators have been turning scrap into blister Copper and feeding it back to smelters to replace ore which is in short supply.



LME copper's cash versus 3-month spread has remained in contango this year, suggesting there's ample supply in the near term. Cash metal at the end of May 2024 was trading more than \$126/ton cheaper than benchmark three-month futures on the London Metal Exchange. That's the widest contango on record. Prices for copper have risen due to expectations of a shortage, but the physical market suggests there is plenty of supply available for

immediate delivery.

Market Outlook:

Analysing the key market indicators we are of the view that Copper prices have ran ahead of its fundamentals. In spite of the increasing supply disruption coupled and a rise in demand from the green transition physical supplies are abundant. Moreover on the macro front economic data from United States suggest that the FED is still not in a comfortable position to cut interest rates

immediately. In the short term, the upside to copper prices is likely to be capped as mounting inventory in china and lack of demand in the spot market indicated by the widest contango in history will weigh on Copper prices in the near term. We expect Copper to trade lower this month with the upside capped at Rs 875 on MCX for the June Contract and on the down side we expect prices can test Rs 840-835.





Copper output from Chile's Codelco slides 6% in April

Copper production from Chile's state-run miner Codelco, the world's largest producer of the metal, dropped 6.1% in April compared to the same month last year to total 95,100 metric tons, data from copper commission Cochilco showed on Friday.

Copper output fell more sharply at the BHP-controlled Escondida mine, with production during the month shrinking 6.8% to settle at 98,000 tons.

At the Collahuasi mine, which is jointly run by miners Glencore and Anglo American, the data showed copper production inched up 1.9% to a reach 42,300 tons.

Overall, the country's copper output slipped 1.7% from a year earlier to total 405,600 tons, according to Cochilco.

Rio Tinto to buy Mitsubishi's nearly 12% stake in Boyne Smelters

Rio Tinto has agreed to acquire Mitsubishi Corporation's 11.65% interest in Boyne Smelters Ltd (BSL), which owns and operates the Boyne Island aluminium smelter in Gladstone, Australia.

On completion of this transaction, and the recent agreement to acquire Sumitomo Chemical Company's 2.46% interest in BSL, Rio Tinto's interest in BSL will increase to 73.5%.

The acquisition, which is for an undisclosed price, is subject to various conditions precedent, including approval from Australia's Foreign Investment Review Board, and is expected to be finalised in the second half of 2024.

Rio Tinto looks forward to continuing to work with its remaining BSL joint venture partners and other stakeholders on securing a competitive low-carbon future for its Gladstone operations.

After completion of the two transactions, the BSL joint venture partners will be: Rio Tinto (73.5%), YKK Aluminium (9.50%), UACJ Australia (9.29%) and Southern Cross Aluminium (7.71%).

EGA's GAC signs term sheet with Government of Guinea for development of an alumina refinery

Emirates Global Aluminium's (EGA) subsidiary Guinea Alumina Corporation has signed a term sheet with the Government of Guinea for the development of an alumina refinery. The signing of this preliminary agreement is a decisive step forward in the development of the project.

The signing of was presided over by Djiba Diakité, Minister



and Chief of Staff at the Office of the Presidency of the Republic, and Chairman of the Strategic Monitoring Committee for the Simandou project, at the Petit Palais of the Presidency in Conakry, and attended by Government officials including Bouna Sylla, Minister of Mines and Geology, and the members of the Strategic Committee.

GAC's delegation was led by EGA's Chief Executive Officer Abdunnasser Bin Kalban and included Zaher Al Habtari, EGA's Executive Vice President of Bauxite, Alumina & Capital Projects, Saif Al Qubaisi, EGA and GAC Board member, GAC CEO Steeve Tremblay, GAC's Director General Youssuff Sylla, and GAC's Deputy Director General René Désiré Morel.

The alumina refinery project is expected to be built on GAC's concession near Tinguilinta in Boké province, with an initial production capacity of one million tonnes of alumina per year. GAC is planning to work with other companies in a joint venture to progress the project.

The Government of Guinea will have a shareholding in 15 per cent in GAC, to strengthen the partnership between GAC and the Government. This shareholding will convert into a 10 per cent share of the mining operation and a 7.5 per cent share of the alumina refinery company when alumina production begins. The Government will also have the right to two positions on GAC's Board, including the Chair.

Abdunnasser Bin Kalban, Chief Executive Officer of Emirates Global Aluminium, said: "Driving sustainable economic growth in the countries where we operate is a priority for EGA. We are now looking forward to advancing the alumina refinery project, which will further grow our contribution to the local economy and build local capability in the aluminium value chain."

Youssuff Sylla, Guinea Alumina Corporation's Director General, said: "The development of an alumina refining industry is a national priority to further increase the economic benefit of Guinea's rich natural endowment of bauxite resources. We are working closely with the Government to develop a project that is technically and commercially robust, and that can create value for Guinea and its people, and our company, for decades to come."



The signing of the term sheet is an important step as it provides a framework for our negotiations for the way forward for this important project, and we now look forward to the next stage of our discussions with the Government.”

Last week, EGA signed a framework agreement with Aluminium Corporation of China in Beijing progressing cooperation between the two companies on the project. The development of GAC was the largest greenfield mining investment in Guinea in four decades. The company began production in 2019.

The GAC employs some 3,200 people on its sites in Boké province as employees and contractors. In 2023, GAC spent some \$283 million in Guinea in local procurement, payments to governments and social contributions.

India's renewable energy projects face financial headwinds from copper volatility

The recent surge in copper prices is posing significant financial challenges for India's renewable energy sector, leading to increased project costs and budgeting issues. In the face of escalating copper prices, a key material in



manufacturing of power equipment, India's renewable energy sector is confronting rising costs and budgeting challenges, industry sources say. Copper, crucial for manufacturing power equipment, has seen a price surge over recent months, influenced by heightened manufacturing activity in China and the US, alongside new US sanctions on Russian copper imports.

“Over the last year, copper prices have increased by 20 per cent, driven primarily by increased manufacturing activity in China and the US, along with fresh sanctions from the US on copper sourcing from Russia... These high copper prices adversely affect project costs,” Kannan Krishnan, joint managing director, Jakson Green, Jakson Green, a energy transition platform.

China's zinc imports reflect shifting market dynamics: Andy Home

China's imports of zinc concentrates fell sharply over the first four months of this year in response to a tightening raw materials market.

Spot treatment terms for imported mine concentrates are currently trading at levels that are uneconomic for many Chinese smelters, forcing them to rely more on domestic mine supply.

It's probably no coincidence that flows of refined zinc into the country have been much stronger than this time last year.

Such is the current dynamic of the global zinc market.

There is plenty of metal around but an ongoing squeeze on raw materials due to weak global mine production.

TIGHT CONCENTRATES MARKET

China imported 1.18 million metric tons of zinc concentrates in the first four months of this year, down 24% on last year's equivalent tally of 1.54 million tons. This is a pronounced change of trend after raw materials imports increased by 13% and 14% in 2022 and 2023 respectively.

The cause is the collapse in treatment and refining charges, which are paid by miners to smelters for processing raw materials into refined metal.

Chinese smelters looking to buy on the international market are facing rock-bottom terms of \$30-50 per ton, according to price reporting agency Fastmarkets.

This year's annual benchmark terms, set by Canadian miner Teck Resources TECKb.TO and Korea Zinc 010130.KS in the first quarter, came in at \$165 per ton.

That marked a hefty discount from the 2023 benchmark of \$274 but is already looking very generous to smelters in light of the bombed-out spot market.

The underlying problem is weak global mine output. The world's zinc mines saw production fall by 2% in 2022 and another 1% in 2023. There has been no recovery so far this year, output sliding another 3% year-on-year in the first quarter, according to the latest assessment by the International Lead and Zinc Study Group (ILZSG).

The squeeze on raw materials has been accentuated by restarts of idled smelter capacity in Europe, reducing the amount of concentrates available on the spot market.

PLENTIFUL METAL SUPPLY

While Chinese smelters are struggling to source concentrates at economically viable prices, the country's imports of refined zinc are trending higher.

Inbound volumes totalled 143,000 tons in the first four months of this year, compared with just 35,000 tons in the same period of 2023.

China turned a net exporter of zinc in 2022, a rare phenomenon caused by multiple smelter outages in Europe due to super-high energy prices.

Trade patterns reverted to historical norms around the middle of last year with the export tap largely turned off ever since and imports accelerating.



Passenger vehicle sales up 4%, two-wheelers 10% on-year in May: SIAM

Passenger vehicle wholesales in India increased 4 per cent year-on-year in May to 347,492 units, as compared to the same month last year, industry body SIAM said on Tuesday. Overall passenger vehicle (PV) dispatches from companies to dealers stood at 334,537 units in May 2023.

"Passenger vehicles have only witnessed a moderate growth, primarily owing to a high base effect of the previous year," the Society of Indian Automobile Manufacturers (SIAM) President Vinod Aggarwal said in a statement.

Two-wheeler sales rose 10 per cent to 1,620,084 units last month, as compared to 1,471,550 units in the year-ago period. Three-wheeler dispatches rose 15 per cent to 55,763 units in May, as against 48,610 units in May 2023.

Vinod Aggarwal, President, SIAM said, "All the segments viz. passenger vehicles, commercial vehicles, two-wheelers and three-wheelers have posted growth in May 2024, compared to May 2023. Passenger vehicles have only witnessed a moderate growth, primarily owing to a high base effect of the previous year."

Aggarwal said that with expectations of above-normal monsoon and continued emphasis on economic development by the new government, the auto industry is optimistic of steady growth in 2024-25 as well.

Rajesh Menon, Director General, SIAM said, "Sales of passenger vehicles of May 2024 has been the highest ever in May again, although returning a moderate growth of 3.9 per cent, compared to May 2023."

As per SIAM data, the total production of passenger vehicles, three-wheelers, two-wheelers, and quadricycle in May 2024 was 24,55,637 units.

Meanwhile, according to FADA, domestic passenger vehicle retail sales dipped 1 per cent year-on-year in May.

FADA said that the blistering summer heat and elections impacted demand. Two-wheeler sales rose 2 per cent to 15,34,856 units, and three-wheeler sales rose 20 per cent year-on-year to 98,265 units in May. Commercial vehicle sales witnessed an increase of 4 per cent at 83,059 as compared to 79,807 units the previous year, said FADA.

Aggarwal said that with expectations of above-normal monsoon and continued emphasis on economic development by the new government, the auto industry is optimistic of steady growth in 2024-25 as well.

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As per SIAM data, the total production of passenger vehicles, three-wheelers, two-wheelers, and quadricycle in May 2024 was 24,55,637 units.

SIAM is also seeking the GST rate for low-carbon emission technologies like CNG and flex-fuel to drop from 28 per cent to 18 per cent, and then to 12 per cent when the base rate for all two-wheelers hits 18 per cent.

The industry body also wants the removal of the 3 per cent additional cess on higher cubic capacity bikes.

According to SIAM, one of the ways of overcoming cost barriers that are inherent in the development of new technologies is by lowering taxes to boost patronage among users.

However, despite being the largest two-wheeler market globally, India's market has faced some adversity due to aspects such as safety regulations and price hikes.

According to SIAM, the reductions in taxes could assist in increasing the GDP due to increased vehicle utilisation.

SIAM									
Segment wise Comparative Production, Domestic Sales & Exports data for the month of May 2024									
Category Segment/Subsegment	Production			Domestic Sales			Exports		
	May			May			May		
	2023	2024	% Change	2023	2024	% Change	2023	2024	% Change
Passenger Vehicles*									
Passenger Cars	1,63,619	1,42,367	-13.0%	1,20,364	1,06,962	-11.1%	35,806	28,802	-19.6%
Utility Vehicles	1,09,179	2,13,462	26.8%	1,55,474	1,82,883	17.6%	16,274	24,490	50.5%
Vans	13,770	13,819	0.4%	12,821	10,960	-14.5%	1,157	699	-39.6%
Total Passenger Vehicles	3,45,567	3,69,648	7.0%	2,88,659	3,00,795	4.2%	53,237	53,991	1.4%
Three Wheelers									
Passenger Carrier	61,754	63,637	3.0%	38,454	45,445	18.2%	25,442	22,448	-11.8%
Goods Carrier	8,027	9,918	23.6%	7,545	8,863	17.5%	196	292	49.0%
E-Rickshaw	1,552	1,108	-28.7%	2,314	1,203	-48.0%	0	0	-
F-Cart	370	218	-41.1%	297	252	-15.2%	0	0	-
Total Three Wheelers	71,703	74,879	4.4%	48,610	55,763	14.7%	25,638	22,740	-11.3%
Two Wheelers									
Scooters	4,90,007	6,05,114	23.5%	4,46,583	5,40,838	21.1%	40,687	50,844	25.0%
Motorcycles	11,77,673	13,64,299	15.8%	9,89,120	10,38,824	5.0%	2,19,204	2,61,310	19.2%
Mopeds	38,974	41,033	5.3%	35,637	40,394	12.7%	54	264	388.9%
Total Two Wheelers	17,06,654	20,10,446	17.8%	14,71,550	16,20,054	10.1%	2,59,945	3,12,418	20.2%
Quadricycle	365	664	81.9%	35	32	-8.6%	312	656	110.3%
Grand Total	21,24,289	24,55,637	15.6%	18,08,854	19,76,574	9.3%	3,39,132	3,89,805	14.9%

* Bmw, Mercedes, JLR, Tata Motors and Volvo Automobiles not available
Society of Indian Automobile Manufacturers (11/06/2024)



SIAM									
Summary Report: Cumulative Production, Domestic Sales & Exports data for the period of April-May 2024									
									Report I
(Number of Vehicles)									
Category Segment/Subsegment	Production			Domestic Sales			Exports		
	April-May			April-May			April-May		
	2023-24	2024-25	% Change	2023-24	2024-25	% Change	2023-24	2024-25	% Change
Passenger Vehicles*									
Passenger Cars	3,06,552	2,74,213	-10.5%	2,46,122	2,03,309	-17.4%	58,752	59,070	0.5%
Utility Vehicles	3,30,487	4,20,047	27.1%	3,03,479	3,62,212	19.4%	33,984	43,512	28.0%
Vans	24,691	26,678	8.0%	23,329	23,020	-1.3%	1,441	972	-32.5%
Total Passenger Vehicles	6,61,730	7,20,938	8.9%	5,72,930	5,88,541	2.7%	94,177	1,03,554	10.0%
Three Wheelers									
Passenger Carrier	1,16,489	1,25,819	8.0%	73,072	84,828	16.1%	48,439	44,807	-7.5%
Goods Carrier	14,210	19,676	38.5%	12,912	17,681	36.9%	293	414	41.3%
F-Rickshaw	3,290	2,456	-25.3%	4,905	2,611	-48.8%	-	-	-
E-Cart	501	507	1.2%	616	517	-16.1%	-	-	-
Total Three Wheelers	1,34,490	1,48,458	10.4%	91,505	1,05,537	15.3%	48,732	45,221	-7.2%
Two Wheelers									
Scooters	9,86,203	11,99,808	21.7%	9,10,982	11,22,143	23.2%	90,222	1,16,718	29.4%
Motorcycles	22,23,444	26,52,362	19.7%	18,28,394	21,67,016	18.5%	4,27,856	5,15,881	20.6%
Mopeds	75,409	81,282	7.8%	70,782	82,318	16.3%	54	696	1188.9%
Total Two Wheelers	32,85,056	39,43,432	20.0%	26,10,138	33,71,477	20.0%	6,18,132	6,33,295	22.2%
Quadricycle	679	1,420	109.1%	96	51	-46.9%	608	1,320	117.1%
Grand Total	40,81,955	48,14,248	17.9%	34,74,669	40,65,606	17.0%	5,81,649	7,83,390	18.4%

* BMW, Mercedes JLR, Tata Motors and Volvo Automotals are not available
 Society of Indian Automobile Manufacturers (11/06/2024)

SIAM												
Category & Company wise Summary Report for the month of May 2024 and Cumulative for April-May 2024												
												Report II
(Number of Vehicles)												
Category Segment/Subsegment Manufacturer	Production				Domestic Sales				Exports			
	May		April-May		May		April-May		May		April-May	
	2023	2024	2023-24	2024-25	2023	2024	2023-24	2024-25	2023	2024	2023-24	2024-25
Passenger Vehicles												
FCA India Automobiles Pvt Ltd	820	453	2,006	692	734	341	1,292	718	361	50	768	50
Force Motors Ltd	94	225	99	274	8	173	8	268	-	-	-	-
Honda Cars India Ltd	6,426	7,530	11,376	15,680	4,860	4,822	9,973	9,173	587	6,521	2,950	13,037
Hyundai Motor India Ltd	53,177	52,591	1,13,668	1,15,590	48,901	49,151	98,302	99,352	11,000	14,400	19,500	27,900
Isuzu Motors India Pvt Ltd	26	62	84	193	38	36	73	57	-	-	-	-
Kia Motors India Pvt Ltd	24,869	15,902	54,771	37,732	18,766	19,500	41,592	39,468	8,008	2,303	13,793	4,507
Mahindra & Mahindra Ltd	31,022	41,595	94,241	83,539	32,886	43,218	67,584	64,226	1,078	1,095	1,957	1,659
Maruti Suzuki India Ltd	1,76,218	1,89,964	3,20,315	3,58,289	1,43,708	1,44,002	2,81,028	2,81,954	26,287	17,241	43,121	39,205
MG Motor India Pvt Ltd	6,120	2,779	11,538	5,367	5,006	3,032	9,557	5,988	-	-	-	-
Nissan Motor India Pvt Ltd	4,814	6,653	8,215	13,436	2,818	2,211	5,235	4,815	2,013	3,993	2,648	4,632
PCA Motors Pvt. Ltd	1,929	494	2,883	1,194	806	515	1,809	919	12	638	898	881
Renault India Pvt Ltd	3,649	3,146	6,517	6,011	4,825	3,708	8,948	7,416	1,475	472	1,550	478
SkodaAuto India Pvt Ltd	4,464	2,628	8,353	5,330	3,547	2,884	7,556	5,463	183	125	327	175
Toyota Kirloskar Motor Pvt Ltd	27,577	34,960	47,823	58,228	19,869	23,928	33,285	42,604	1,031	1,314	2,378	3,108
Volkswagen India Pvt Ltd	4,362	10,666	9,842	19,133	3,288	3,273	6,318	5,222	3,222	5,839	4,488	7,842
Total Passenger Vehicles	3,45,567	3,69,648	6,61,730	7,20,938	2,86,659	3,00,795	5,72,930	5,88,541	53,237	53,991	94,177	1,03,554

SIAM												
Category & Company wise Summary Report for the month of May 2024 and Cumulative for April-May 2024												
												Report II
(Number of Vehicles)												
Category Segment/Subsegment Manufacturer	Production				Domestic Sales				Exports			
	May		April-May		May		April-May		May		April-May	
	2023	2024	2023-24	2024-25	2023	2024	2023-24	2024-25	2023	2024	2023-24	2024-25
Passenger Vehicles												
FCA India Automobiles Pvt Ltd	820	453	2,006	692	734	341	1,292	718	361	50	768	50
Force Motors Ltd	94	225	99	274	8	173	8	268	-	-	-	-
Honda Cars India Ltd	6,426	7,530	11,376	15,680	4,860	4,822	9,973	9,173	587	6,521	2,950	13,037
Hyundai Motor India Ltd	53,177	52,591	1,13,668	1,15,590	48,901	49,151	98,302	99,352	11,000	14,400	19,500	27,900
Isuzu Motors India Pvt Ltd	26	62	84	193	38	36	73	57	-	-	-	-
Kia Motors India Pvt Ltd	24,869	15,902	54,771	37,732	18,766	19,500	41,592	39,468	8,008	2,303	13,793	4,507
Mahindra & Mahindra Ltd	31,022	41,595	94,241	83,539	32,886	43,218	67,584	64,226	1,078	1,095	1,957	1,659
Maruti Suzuki India Ltd	1,76,218	1,89,964	3,20,315	3,58,289	1,43,708	1,44,002	2,81,028	2,81,954	26,287	17,241	43,121	39,205
MG Motor India Pvt Ltd	6,120	2,779	11,538	5,367	5,006	3,032	9,557	5,988	-	-	-	-
Nissan Motor India Pvt Ltd	4,814	6,653	8,215	13,436	2,818	2,211	5,235	4,815	2,013	3,993	2,648	4,632
PCA Motors Pvt. Ltd	1,929	494	2,883	1,194	806	515	1,809	919	12	638	898	881
Renault India Pvt Ltd	3,649	3,146	6,517	6,011	4,825	3,708	8,948	7,416	1,475	472	1,550	478
SkodaAuto India Pvt Ltd	4,464	2,628	8,353	5,330	3,547	2,884	7,556	5,463	183	125	327	175
Toyota Kirloskar Motor Pvt. Ltd	27,577	34,960	47,823	58,228	19,869	23,928	33,285	42,604	1,031	1,314	2,378	3,108
Volkswagen India Pvt Ltd	4,362	10,666	9,842	19,133	3,288	3,273	6,318	5,222	3,222	5,839	4,488	7,842
Total Passenger Vehicles	3,45,567	3,69,648	6,61,730	7,20,938	2,86,659	3,00,795	5,72,930	5,88,541	53,237	53,991	94,177	1,03,554



Statistics

SIAM												
Category & Company wise Summary Report for the month of May 2024 and Cumulative for April-May 2024												
												Report II
												(Number of Vehicles)
Category Segment/Subsegment Manufacturer	Production				Domestic Sales				Exports			
	May	2024	2023-24	2024-25	May	2024	2023-24	2024-25	May	2024	2023-24	2024-25
Three Wheelers												
Atul Auto Ltd	983	2,424	1,726	4,513	940	2,100	1,522	3,746	161	231	294	277
Bajaj Auto Ltd	48,360	46,467	87,619	81,374	33,555	33,715	64,838	68,829	13,550	12,438	25,203	28,108
Continental Engines Pvt Ltd	386	501	878	831	383	721	741	859	-	-	-	-
Force Motors Ltd	336	336	546	504	-	-	-	-	448	168	588	448
Mahindra & Mahindra Ltd	5,637	6,224	10,456	12,788	5,851	5,967	11,403	11,471	7	72	13	156
Piaggio Vehicles Pvt Ltd	7,122	9,661	12,778	18,432	6,530	8,152	10,035	15,828	1,470	1,315	2,739	2,351
TI Clean Mobility Pvt Ltd	51	622	80	1,192	39	600	49	1,258	-	-	-	-
TVS Motor Company Ltd	10,855	9,674	20,407	18,373	1,317	1,808	2,917	3,466	10,007	8,516	19,835	15,881
Total Three Wheelers	71,703	74,879	1,34,490	1,48,458	48,810	55,763	91,505	1,05,537	25,838	22,740	48,732	45,221
Two Wheelers												
Ather Energy Pvt. Ltd	9,742	7,882	10,927	18,006	9,670	7,023	16,116	15,873	-	-	-	40
Bajaj Auto Ltd	3,77,016	3,76,714	5,79,656	6,26,793	1,94,684	1,88,346	3,76,374	4,05,990	1,12,885	1,17,147	2,19,047	2,41,981
Chetak Technology Ltd	122	-	435	-	127	-	265	-	-	-	-	-
Hero MotoCorp Ltd	4,60,930	5,19,432	6,95,695	10,28,064	5,08,309	4,73,450	8,34,483	9,92,746	11,186	19,671	21,068	38,960
Honda Motorcycle & Scooter India Pvt Ltd	3,28,668	4,84,666	6,01,481	9,78,116	3,11,174	4,59,588	6,49,434	9,31,656	18,248	41,458	54,797	1,02,358
India Kawasaki Motors Pvt Ltd	289	238	369	310	304	362	790	743	-	-	-	-
India Yamaha Motor Pvt. Ld	75,518	68,247	1,48,057	1,70,545	53,571	64,222	1,36,510	1,27,320	18,842	17,308	35,288	37,812
Okinawa Autotech Pvt. Ltd	-	65	-	85	68	60	617	61	-	-	-	-
Piaggio Vehicles Pvt Ltd	3,930	5,748	9,236	11,260	2,601	3,250	5,581	6,367	1,457	2,430	2,903	5,450
Royal-Enfield (Unit of Eicher Motors)	82,012	87,408	1,58,026	1,83,819	70,195	63,531	1,39,616	1,38,569	6,666	7,479	10,921	14,311
Suzuki Motorcycle India Pvt Ltd	87,836	1,15,546	1,74,742	2,21,130	67,040	92,032	1,34,299	1,80,099	24,276	19,486	45,748	33,796
Triumph Motorcycles India Pvt Ltd	13	24	47	67	34	86	87	216	-	-	-	-
TVS Motor Company Ltd	3,27,736	3,74,931	6,14,142	7,25,448	2,52,690	2,71,140	4,85,646	5,72,589	66,696	88,450	1,28,435	1,61,593
Total Two Wheelers	17,06,854	20,10,448	32,85,058	39,43,432	14,71,550	16,20,084	28,10,138	33,71,477	2,59,945	3,12,418	5,18,132	6,33,295
Quadricycle												
Bajaj Auto Ltd	385	664	679	1,420	35	32	86	51	312	656	608	1,320
Total Quadricycle	365	664	679	1,420	35	32	96	51	312	656	608	1,320
Grand Total	21,24,289	24,55,637	40,81,955	48,14,248	18,08,854	18,76,674	34,74,869	40,85,606	3,38,132	3,88,805	6,81,849	7,83,390

Society of Indian Automobile Manufacturers (31/05/2024)

SIAM												
Segment & Company wise Production, Domestic Sales & Exports Report for the month of May 2024 and Cumulative for April-May 2024												
												Report III
												(Number of Vehicles)
Category Segment/Subsegment Manufacturer	Production				Domestic Sales				Exports			
	May	2024	2023-24	2024-25	May	2024	2023-24	2024-25	May	2024	2023-24	2024-25
Passenger Vehicles												
A: Passenger Cars												
Honda Cars India Ltd	6,426	3,575	11,376	7,025	4,660	3,299	9,973	5,689	587	2,470	2,684	6,466
Hyundai Motor India Ltd	25,785	22,053	65,033	48,632	20,873	16,311	43,270	32,724	8,955	11,555	15,161	22,651
Maruti Suzuki India Ltd	1,21,684	1,05,329	2,23,003	1,97,861	84,647	78,838	1,74,709	1,48,177	20,661	7,917	32,776	21,199
MG Motor India Pvt Ltd	1,552	NA	1,552	NA	730	NA	730	NA	-	-	-	-
Nissan Motor India Pvt Ltd	1,662	2,114	1,795	5,345	-	-	-	-	1,451	2,635	2,043	3,195
Renault India Pvt Ltd	1,468	503	2,477	1,086	797	743	1,879	1,770	1,054	30	1,089	30
SkodaAuto India Pvt Ltd	2,018	1,108	3,858	2,229	1,705	1,542	3,412	2,808	9	10	9	10
Toyota Kirloskar Motor Pvt Ltd	160	112	232	286	5,321	4,639	9,037	9,788	-	-	-	-
Vicor Swagun India Pvt Ltd	2,904	6,973	7,295	11,739	1,631	1,610	3,112	2,793	3,059	4,185	3,980	5,498
Total A: Passenger Cars	1,83,619	1,42,367	3,06,552	2,74,213	1,20,364	1,06,952	2,48,122	2,03,309	35,806	28,802	58,752	59,070
B: Utility Vehicles												
ICVA India Automobiles Pvt Ltd	820	453	2,306	632	734	341	1,292	718	361	50	768	50
Force Motors Ltd	94	225	98	274	8	73	8	256	-	-	-	-
Honda Cars India Ltd	-	3,955	-	9,655	-	1,553	-	3,284	-	4,351	286	5,551
Hyundai Motor India Ltd	27,392	30,538	58,835	66,948	27,728	32,840	55,032	56,628	2,045	2,845	4,339	5,249
Isuzu Motors India Pvt Ltd	28	62	84	193	39	36	73	57	-	-	-	-
Kia Motors India Pvt. Ld	24,869	16,902	64,771	37,732	18,768	16,530	41,062	39,488	6,068	2,303	13,793	4,607
Mahindra & Mahindra Ltd	30,992	41,580	84,191	83,509	32,583	43,216	67,577	84,226	1,048	1,065	1,907	1,690
Maruti Suzuki India Ltd	40,794	70,831	72,871	1,31,780	46,243	54,204	62,997	1,10,757	4,503	8,635	7,954	17,074
MG Motor India Pvt Ltd	4,588	2,779	9,888	6,387	4,278	3,032	8,827	5,968	-	-	-	-
Nissan Motor India Pvt. Ltd	3,152	3,639	6,460	8,151	2,618	2,211	5,235	4,615	582	1,338	603	1,438
PCA Motors Pvt. Ltd	1,929	494	2,363	1,194	908	515	1,009	919	12	835	638	881
Renault India Pvt Ltd	2,181	2,643	4,240	4,915	3,920	2,988	7,068	5,606	42	442	451	448
SkodaAuto India Pvt Ltd	2,368	1,820	4,494	3,181	1,942	1,342	4,144	2,655	154	115	318	165
Toyota Kirloskar Motor Pvt Ltd	27,417	34,848	47,651	58,942	14,340	16,289	24,220	33,406	1,031	1,314	2,379	3,100
Vicor Swagun India Pvt Ltd	1,565	3,693	2,547	7,384	1,655	1,883	3,208	3,529	123	1,654	538	2,344
Total B: Utility Vehicles	1,68,178	2,13,462	3,30,487	4,20,047	1,55,474	1,82,883	3,03,479	3,62,212	16,274	24,490	33,984	43,512
C: Vans												
Mahindra & Mahindra Ltd	30	16	50	30	3	-	7	-	30	30	60	40
Maruti Suzuki India Ltd	13,740	13,804	24,841	26,648	12,918	10,980	23,922	23,020	1,127	869	1,391	832
Total C: Vans	13,770	13,819	24,891	26,678	12,921	10,980	23,929	23,020	1,157	899	1,441	872
Total Passenger Vehicles	3,45,567	3,69,648	6,61,730	7,20,938	2,88,659	3,00,795	5,72,930	5,88,541	53,237	53,991	94,177	1,03,554

NA- Not Available



SI 111												
Segment & Company wise Production, Domestic Sales & Exports Report for the month of May 2024 and Cumulative for April-May 2024												
											Report III	
											(Number of Vehicles)	
Category	Production				Domestic Sales				Exports			
Segment/Subsegment	May	2024	April-May	2024-25	May	2024	April-May	2024-25	May	2024	April-May	2024-25
Manufacturer	2023	2024	2023-24	2024-25	2023	2024	2023-24	2024-25	2023	2024	2023-24	2024-25
Two Wheelers												
A: Scooters												
Ather Energy Pvt Ltd	9,742	7,892	16,927	18,006	9,670	7,023	16,416	15,673	-	-	-	40
Bajaj Auto Ltd	9,073	14,847	13,448	27,541	9,209	15,042	13,754	26,163	2	-	74	-
Chetak Technology Ltd	122	-	495	-	127	-	265	-	-	-	-	-
Hero MotoCorp Ltd	30,086	39,150	57,603	69,626	29,400	24,606	54,764	56,518	738	2,133	2,631	7,462
Honda Motorcycle & Scooter India Pvt Ltd	2,14,271	2,61,674	4,17,185	5,41,273	2,03,365	2,45,383	4,49,361	5,26,875	12,777	23,050	31,569	59,464
India Kawasaki Motors Pvt Ltd	23,337	31,590	40,200	61,320	18,215	24,795	34,461	49,576	3,580	3,688	5,286	11,454
Okinawa Autotech Pvt Ltd	-	65	-	65	581	60	817	91	-	-	-	-
Piaggio Vehicles Pvt Ltd	3,930	4,563	9,208	8,709	2,601	3,030	5,591	5,965	1,457	1,478	2,903	3,362
Suzuki Motorcycle India Pvt Ltd	72,823	98,741	1,44,771	1,91,886	63,009	80,305	1,29,708	1,76,411	11,369	5,532	25,115	8,228
TVS Motor Company Ltd	1,26,823	1,52,402	2,29,363	2,88,400	1,10,416	1,30,382	2,05,010	2,52,721	10,740	14,923	22,642	26,770
Total A: Scooters	4,90,007	6,05,114	8,86,203	11,99,808	4,46,593	5,40,886	9,10,982	11,22,143	40,687	60,844	90,222	1,16,718
B: Motorcycles												
Bajaj Auto Ltd	3,12,945	3,11,367	5,86,408	5,98,252	1,85,478	1,73,298	3,62,620	3,79,127	1,12,883	1,17,142	2,18,968	2,41,581
Hero MotoCorp Ltd	4,38,844	4,87,302	8,42,050	9,65,436	4,78,909	4,54,644	8,33,709	3,36,226	10,427	16,538	18,457	31,498
Honda Motorcycle & Scooter India Pvt Ltd	1,14,297	2,22,622	2,20,306	4,36,843	1,07,779	2,05,796	2,00,053	4,02,750	5,478	18,368	23,136	42,894
India Kawasaki Motors Pvt Ltd	289	238	369	310	304	282	720	713	-	-	-	-
India Yamaha Motor Pvt Ltd	52,181	58,657	1,04,837	1,09,225	35,355	39,427	72,040	77,744	15,082	13,820	30,000	28,358
Piaggio Vehicles Pvt Ltd	-	1,188	-	2,551	-	190	-	422	-	932	-	2,088
Royal-Enfield (Unit of Eicher Motors)	82,012	87,403	1,53,328	1,63,819	70,795	83,531	1,39,878	1,36,589	6,886	7,479	10,921	14,311
Suzuki Motorcycle India Pvt Ltd	14,383	18,804	26,971	29,273	4,031	1,727	4,598	3,688	12,677	13,048	20,633	22,564
Triumph Motorcycles India Pvt Ltd	13	24	47	67	34	55	97	215	-	-	-	-
TVS Motor Company Ltd	1,62,100	1,81,498	3,09,370	3,55,786	1,08,437	1,00,384	2,09,874	2,27,550	55,517	73,263	1,08,739	1,34,187
Total B: Motorcycles	11,77,673	13,64,289	22,23,444	26,62,362	9,89,120	10,38,824	18,28,394	21,67,016	2,19,204	2,61,310	4,27,856	5,15,881
C: Mopeds												
TVS Motor Company Ltd	38,974	41,033	75,409	81,262	35,937	40,394	70,762	82,318	54	264	54	698
Total C: Mopeds	38,974	41,033	75,409	81,262	35,937	40,394	70,762	82,318	54	264	54	698
Total Two Wheelers	17,06,654	20,10,446	32,85,056	39,43,432	14,71,550	16,20,084	28,10,138	33,71,477	2,59,945	3,12,418	5,18,132	6,33,295
Quadricycle												
Bajaj Auto Ltd	365	664	879	1,420	35	32	68	51	312	856	608	1,320
Total Quadricycle	365	664	879	1,420	35	32	68	51	312	856	608	1,320
Grand Total	21,24,289	24,55,637	40,81,955	48,14,248	18,08,884	19,76,674	34,74,669	40,65,606	3,39,132	3,89,805	6,61,649	7,83,390

Society of Indian Automobile Manufacturers 11/06/2024

SI 112												
Sub-segment & Company wise Production, Domestic Sales & Exports Report for the month of May 2024 and Cumulative for April-May 2024												
											Report IV	
											(Number of Vehicles)	
Category	Production				Domestic Sales				Exports			
Segment/Subsegment	May	2024	April-May	2024-25	May	2024	April-May	2024-25	May	2024	April-May	2024-25
Manufacturer	2023	2024	2023-24	2024-25	2023	2024	2023-24	2024-25	2023	2024	2023-24	2024-25
Passenger Vehicles												
A: Passenger Cars - Upto 5 Seats												
Micro: Seats upto-4, Length Normally <3200 mm, Body Style-Hatchback, Engine Displacement Normally upto 0.8 Litre												
MG Motor India Pvt Ltd (Comet Ev)	1,552	NA	1,552	-	730	NA	730	NA	-	-	-	-
Total Micro	1,552	-	1,552	-	730	-	730	-	-	-	-	-
Mini: Seats upto-5, Length Normally <3600 mm, Body Style-Hatchback, Engine Displacement Normally upto 1.0 Litre												
Maruti Suzuki India Ltd (Aho, Scorpio)	20,700	13,972	37,612	27,880	12,236	9,902	28,246	21,421	8,757	1,498	8,757	3,123
Renault India Pvt Ltd (Kwid)	7,488	503	2,477	1,096	797	743	1,379	1,720	1,054	30	1,099	30
Total Mini	22,168	14,481	40,085	28,776	13,033	10,645	28,225	23,141	7,211	1,528	9,886	3,153
Compact: Seats upto-5, Length Normally between 3600 - 4000 mm, Body Style-Sedan/Estate/Hatch/Notchback, Engine Displacement Normally upto 1.4 Litre												
Honda Cars India Ltd (Amaze)	3,241	1,960	5,760	2,560	3,125	2,275	5,527	4,071	-	-	4	150
Hyundai Motor India Ltd (Aura, Grand i10, i20 Xcent)	72,031	69,957	43,297	38,827	17,198	14,900	35,562	29,772	8,954	7,506	11,167	14,105
Maruti Suzuki India Ltd (Celerio, Wagon, Celerio, Dzire, Ignis)	96,031	59,910	1,52,207	1,86,753	71,415	66,205	1,43,154	1,25,759	14,741	6,893	24,455	19,990
Toyota Kirloskar Motor Pvt Ltd (Ciaz)	-	-	-	-	5,179	4,577	8,832	8,897	-	-	-	-
Total Compact	1,24,603	1,08,830	2,31,314	2,95,245	96,912	89,868	1,97,289	1,87,839	23,095	13,401	35,689	31,285
Mid-Size: Seats upto-5, Length Normally between 4250 - 4500 mm, Body Style-Sedan/Estate/Hatch/Notchback, Engine Displacement Normally upto 1.6 Litre												
Honda Cars India Ltd (City)	3,185	1,015	5,018	4,465	1,832	1,054	3,452	1,878	557	2,470	2,850	5,205
Hyundai Motor India Ltd (Verna)	3,454	5,086	11,666	11,706	3,687	1,327	7,655	2,962	1	4,047	3,674	8,046
Maruti Suzuki India Ltd (Ciaz)	1,953	1,439	3,059	3,423	992	730	2,009	1,597	353	595	497	1,096
Nissan Motor India Pvt Ltd (Sunny)	1,062	2,714	1,725	5,045	-	-	-	-	1,451	2,635	2,043	3,138
Volkswagen India Pvt Ltd (Vrus)	2,801	6,972	7,285	1,739	1,637	1,670	3,172	2,793	3,069	4,185	3,980	5,498
Total Mid-Size	13,058	17,836	29,500	38,877	7,842	4,775	16,261	9,220	5,491	13,893	13,168	24,642
Executive: Seats upto-5, Length Normally between 4500 - 4700 mm, Body Style-Sedan/Estate/Notchback, Engine Displacement Normally upto 2 Litre												
Skoda Auto India Pvt Ltd (Slavia)	2,078	1,108	5,859	2,229	1,895	1,535	3,257	2,791	9	10	9	10
Total Executive	2,078	1,108	5,859	2,229	1,895	1,538	3,281	2,791	9	10	9	10
Premium: Seats upto-5, Length Normally between 4700 - 5000 mm, Body Style-Sedan/Estate, Engine Displacement Normally upto 3 Litre												
Skoda Auto India Pvt Ltd (Supro)	-	-	-	-	10	4	137	7	-	-	-	-
Toyota Kirloskar Motor Pvt Ltd (Camry)	160	112	232	286	142	122	205	301	-	-	-	-
Total Premium	160	112	232	286	152	126	342	308	0	0	0	0
Total Passenger Cars	1,63,619	1,42,367	3,06,562	2,74,213	1,20,364	1,08,952	2,46,122	2,03,309	35,806	28,802	58,752	59,070

#Only production volume of OEM Models is reported by Maruti Suzuki India Limited.

NA- Not Available



Statistics

S7.1.1												
Segment & Company wise Production, Domestic Sales & Exports Report for the month of May 2024 and Cumulative for April-May 2024												
												Report III
												(Number of Vehicles)
Category	Production				Domestic Sales				Exports			
	Segment/Subsegment		May	April-May	May		April-May		May		April-May	
Manufacturer	2023	2024	2023-24	2024-25	2023	2024	2023-24	2024-25	2023	2024	2023-24	2024-25
Three Wheelers												
A: Passenger Carrier												
Atul Auto Ltd	330	861	670	1,550	289	568	490	1,026	161	221	290	273
Bajaj Auto Ltd	42,304	40,869	80,180	82,865	29,532	32,458	57,852	80,577	13,502	12,262	25,067	25,918
Continental Engines Pvt Ltd	121	87	184	157	147	42	181	123	-	-	-	-
Force Motors Ltd	336	336	546	504	-	-	-	-	448	168	586	448
Mahindra & Mahindra Ltd	2,901	3,989	5,193	7,013	2,615	4,253	4,734	7,595	124	24	11	108
Piaggio Vehicles Pvt Ltd	4,868	7,234	9,225	13,264	4,543	5,746	6,908	10,956	1,322	1,247	2,646	2,221
TI Clean Mobility Pvt Ltd	54	622	80	1,182	38	600	48	1,258	-	-	-	-
TVS Motor Company Ltd	10,940	8,538	20,391	18,584	1,286	1,776	2,857	3,357	10,002	8,516	19,835	15,841
Total A: Passenger Carrier	61,764	63,837	1,16,489	1,25,819	35,454	45,445	73,072	84,823	25,442	22,448	48,439	44,807
E-Rickshaw												
Atul Auto Ltd	533	417	805	789	527	471	792	795	-	-	-	-
Continental Engines Pvt Ltd	225	237	531	400	184	227	508	431	-	-	-	-
Mahindra & Mahindra Ltd	794	452	1,854	1,287	1,603	505	3,905	1,285	-	-	-	-
Total E-Rickshaw	1,552	1,106	3,290	2,456	2,314	1,203	4,805	2,511	-	-	-	-
B: Goods Carrier												
Atul Auto Ltd	-	1,025	-	1,909	5	922	5	1,686	-	-	4	4
Bajaj Auto Ltd	4,058	4,498	7,423	8,509	4,023	4,257	6,068	6,252	48	173	136	192
Continental Engines Pvt Ltd	40	165	53	218	52	134	52	237	-	-	-	-
Mahindra & Mahindra Ltd	1,782	1,694	3,159	3,633	1,435	1,112	2,863	2,449	-	48	2	48
Piaggio Vehicles Pvt Ltd	2,154	2,447	3,553	6,168	1,984	2,406	3,123	4,990	148	68	151	130
TVS Motor Company Ltd	15	86	16	239	28	32	60	115	-	-	-	40
Total B: Goods Carrier	8,027	9,918	14,210	19,676	7,545	8,863	12,912	17,681	196	292	293	414
E-Cart												
Atul Auto Ltd	120	121	251	283	119	138	235	257	-	-	-	-
Continental Engines Pvt Ltd	-	8	-	56	-	17	-	48	-	-	-	-
Mahindra & Mahindra Ltd	250	96	250	196	179	97	361	212	-	-	-	-
Total E-Cart	370	218	501	507	297	252	616	517	-	-	-	-
Total Three Wheelers	71,703	74,879	1,34,490	1,48,458	48,810	55,763	91,505	1,05,537	25,638	22,740	48,732	45,221

S7.1.2												
Sub-segment & Company wise Production, Domestic Sales & Exports Report for the month of May 2024 and Cumulative for April-May 2024												
												Report IV
												(Number of Vehicles)
Category	Production				Domestic Sales				Exports			
	Segment/Subsegment		May	April-May	May		April-May		May		April-May	
Manufacturer	2023	2024	2023-24	2024-25	2023	2024	2023-24	2024-25	2023	2024	2023-24	2024-25
UV4 : Price between Rs. 20 to 30 Lakh												
FCA India Automobiles Pvt Ltd (Jeep Compass)	201	311	1,090	322	316	236	562	546	109	-	450	-
Force Motors Ltd (Curkha)	-	-	-	-	-	-	-	53	-	-	-	-
Hyundai Motor India Ltd (Kona, Tucson)	525	120	1,125	283	483	188	1,013	389	-	-	-	-
Isuzu Motors India Pvt Ltd (i-EM under N-Cross)	-	47	-	178	-	36	-	58	-	-	-	-
Mahindra Suzuki India Ltd (Invoto)	-	-	-	-	-	193	-	380	-	-	-	-
MG Motor India Pvt Ltd (ZS EV)	404	-	1,321	-	557	-	1,130	-	-	-	-	-
PCA Motors Pvt Ltd (CS Airtrax)	3	-	31	-	6	-	16	1	-	-	-	-
Toyota Kirloskar Motor Pvt Ltd (Model Manufactured for the sale)	-	329	-	1,147	-	-	-	-	-	-	-	-
Total UV4	1,223	1,101	3,507	2,230	1,452	663	2,741	1,413	109	-	480	-
UV6 : Price >Rs. 30 Lakh												
FCA India Automobiles Pvt Ltd (Jeep Meridian)	529	147	978	270	418	75	710	170	255	50	268	50
Hyundai Motor India Ltd (Soniq)	30	16	130	45	130	42	340	67	-	-	-	-
Isuzu Motors India Pvt Ltd (MU-X)	25	15	29	15	5	-	9	1	-	-	-	-
Kia Motors India Pvt Ltd (EV5)	-	-	-	-	83	15	235	20	-	-	-	-
MG Motor India Pvt Ltd (Gloria)	355	72	575	259	217	135	496	259	-	-	-	-
Skoda Auto India Pvt Ltd (Kodiaq)	393	32	790	32	157	185	297	340	-	-	-	-
Toyota Kirloskar Motor Pvt Ltd (Fortuner Hilux, Land Cruiser, Venza)	3,415	3,153	6,070	5,559	3,182	2,736	5,909	5,306	-	-	-	-
Volkswagen India Pvt Ltd (Tiguan)	232	129	232	374	171	102	202	210	-	-	-	-
Total UV6	5,009	3,569	8,898	6,504	4,393	3,290	8,209	6,383	255	50	288	50
Total Utility Vehicles												
	1,68,178	2,13,462	3,30,487	4,20,047	1,55,474	1,82,663	3,03,479	3,62,212	16,274	24,490	33,984	43,512
C : Vans ; Generally 1 or 1.5 box; seats upto 5 to 10												
V1 : Hard tops mainly used for personal transport. Price upto Rs. 10 Lakh												
Mahindra & Mahindra Ltd (Maxi no)	-	15	50	30	-	-	-	-	30	30	50	43
Mahindra Suzuki India Ltd (Eeco)	13,740	13,804	24,541	26,548	12,818	10,960	23,522	23,020	1,127	669	1,391	332
Total V1	13,770	13,819	24,591	26,578	12,818	10,960	23,522	23,020	1,157	699	1,441	372
V2 : Soft tops mainly used as Maxi Cabs, Price upto Rs. 10 Lakh												
Mahindra & Mahindra Ltd (Supro)	-	-	-	-	3	-	7	-	-	-	-	-
Total V2	-	-	-	-	3	-	7	-	-	-	-	-
Total Vans	13,770	13,819	24,591	26,578	12,821	10,960	23,329	23,020	1,197	699	1,441	372
Total Passenger Vehicles	3,45,567	3,68,648	6,61,730	7,20,938	2,88,659	3,00,785	5,72,930	5,88,541	53,237	53,991	94,177	1,03,554

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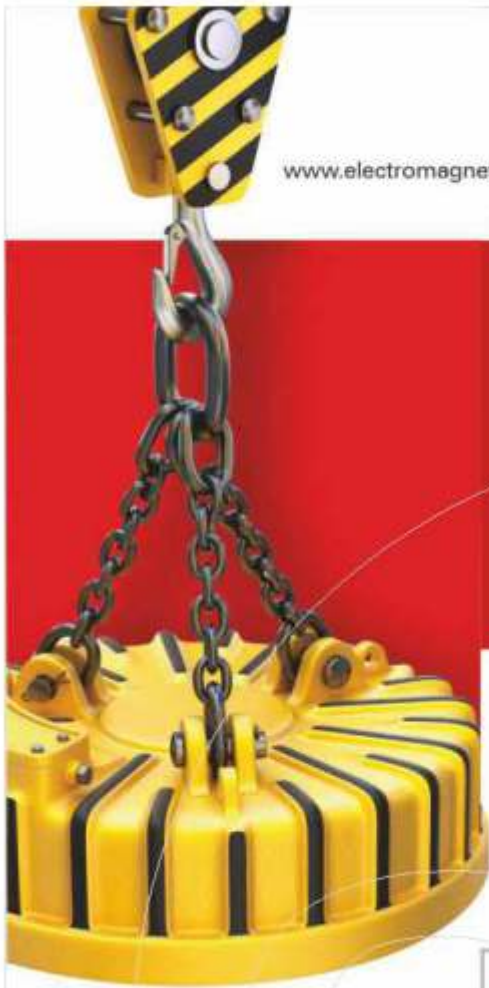
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