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**India's policy reforms
will be a key demand
driver for zinc**

Arun Misra

*CEO & Whole-time Director,
Hindustan Zinc Ltd.*

■ Importance of interdisciplinary
studies in metallurgy &
material science- A study

■ International Conference on
Automotive Materials and
Manufacturing (AM&M 2023)

■ HARDLOCK aims to provide safety
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D. A. Chandekar
Editor

Dear Readers,

After the covid pandemic was over, the metals industry was about to manifest a V shaped recovery, at least the experts were predicting that. The demand was growing and the disruptions in the supply chain were being fixed. With the government's emphasis on infrastructure development, 'metals' was supposed to have a clear ride in coming months. The process had already started but the Ukraine – Russia war extended beyond the expectations of most of the analysts and the global supply chain again got disrupted to some extent. As Ukraine and Russia both were big suppliers of raw materials and semies to the world, the demand supply balance got disturbed to some extent. Eventually the metals fraternity learnt to live and operate in spite of the constraints created by the war and today even if the war has not ended, the international metals trade is not much affected by it.

I would say the Indian story is quite positive but not very outstanding. Yes, the consumption is increasing steadily. The infra dev projects are progressing steadily. Auto industry is doing good but not great. The exports are reduced mostly due to economy stagnation in EU and the other developed countries. Still with the prediction of more than 6 % annual growth, India remains the fastest growing large economy on the planet

Editorial Desk



and continues to attract many overseas companies to participate in this growing market.

Since last few years, the efforts to reduce the carbon footprint in the metal production have intensified. Hydrogen is seen as the replacement to carbon but the full scale commercialization is not yet achieved. We do get the news of successful metal production with 100 % hydrogen but still a long way to go before the industry adopts it as a regular practice. Green manufacturing in real sense is still quite far but we, as an industry, are certainly going in that direction. Further, the industry now seems to have accepted that there is no avoiding Digitalization. Initially there was much resistance and many thought it was not more than being 'fashionable' and more of a marketing trick. Now after few years, the industry has realized the real benefits like improvement in quality, quantity, efficiency, productivity etc. And is now ready to embrace it.

Where does India go from here ? Will the growth continue ? Will India enter recession in coming months ? Well, the present situation is so volatile and uncertain, it is quite risky to predict the future. Nobody knows the fate of Ukraine – Russia war, one can not foresee the next move by Chinese govt, the situation in many countries in the Middle East remains fluid. All these geopolitical factors will have a big impact on the global economy and also on metallurgical industry. My guesstimation is that India will continue to grow in this year aided by a good monsoon and if the economy grows, the metallurgical industry has to grow, isn't it ? ■

Write your comments :

<https://metalworldddac.wordpress.com>

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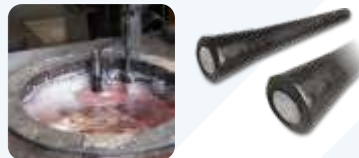
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“ India's policy reforms will be a key demand driver for zinc ”

Arun Misra

*CEO & Whole-time Director,
Hindustan Zinc Ltd.*

Hindustan Zinc, the world's second largest integrated producer of Zinc and 6th largest Silver producer since August 1, 2020.



Following this in June 2022, Misra has taken on additional responsibility of managing the operations & growth of Vedanta Zinc International which have their mines and concentrator in South Africa.

Misra was appointed Deputy CEO, HZL on November 20, 2019, and was elevated to CEO & WTD, Hindustan Zinc Limited from August 1st, 2020. In less than 10 months, he was moved to the Corner Office and placed at the helm of the world's second-largest integrated producer of zinc.

Misra is the 1st ever Indian Chairperson of the International Zinc Association. He is also the Vice President of the Indian Institute of Mineral Engineers. Mr. Misra has to his credit several published papers in nationally reputed journals.

Misra was awarded 'CEO of the Year' and Hindustan Zinc the 'Most Innovative Company of the Year' in the

Business Leader of the Year awards. Further, the Company under his able leadership has retained its 1st position in Asia-Pacific for the fourth consecutive year and globally 3rd in S&P Global Corporate Responsibility Assessment in 2022 amongst Mining & Metal companies.

After graduating with a bachelor's degree in Electrical Engineering from IIT, Kharagpur, Mr. Misra took a Diploma in Mining and Beneficiation from the University of New South Wales Sydney, and another Diploma in General Management from CEDEP, France.

D A Chandekar, Editor & CEO of Metalworld Magazine had an exclusive interaction with Mr. Arun Misra, *CEO & Whole-time Director, Hindustan Zinc Ltd., to understand more about the present and future of zinc market in India. He also suggested changes for the policymakers.*

Excerpts :

1. How is the present situation in the global and Indian Zinc markets?

The global economy continues to remain impacted by extraneous factors. Though the previous quarter did begin with optimism on the global economic outlook on account of easing supply chain disruptions and expectations of China's economic recovery supported by positive hope on broad-based recession avoidance, however, the same was short lived. With the potential banking meltdowns and mounting inflation in the US supplemented by China showing few signs of strong economic recovery yet, broader market sentiments continue to remain weak.

Zinc supply and demand forces remain underperforming. There has been a fall in global consumption by 3.3% in 2022 amidst the slowdown of China's economic recovery and possibility of US banking crisis impacting the construction and



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Face to Face

the automotive sector for the first half. Global consumption is forecast to grow by 0.8% in 2023. As for the Indian markets, industries maximized output in the last quarter of FY thus maintaining robust domestic demand.

2. How do you see the future of the zinc market in India?

India is at a momentous point in its journey towards becoming one of the top three economies in the world. Critical sectors such as infrastructure, manufacturing, construction and agriculture will spearhead this growth and commodities, especially zinc, will fuel this reform significantly. India is the world's fourth-largest producer of zinc in 2022. Over the five years to 2022, production from India increased steadily and is expected to rise by a CAGR of 8% between 2022 and 2026.

The application of zinc will increase over time. From the galvanization of steel for flat products; now it is used in long products as well. Now it is used as a key micro-nutrient to maintain the health of soil, and vital mineral for human health used in various multi-vitamin tablets. Zinc can play a critical role here as railway tracks galvanized with zinc last longer and thus will prove to be cost effective in the long run. The key drivers for zinc would be the automotive industry and transmission infrastructure – increase in galvanised cars

& power transmission lines for longevity. It will also become an alternative to battery manufacturing—zinc air batteries. With the growth in infrastructure, and construction activity, zinc is expected to grow at CAGR 7-8% in India between 2022 to 2025.

3. Tell us about Hindustan Zinc and what activities are being carried out there

We are a fully integrated player, focused on driving sustainable future growth as laid out by our parent company, Vedanta's core philosophy of #Transforming For Good. Led by a strong core of experience and expertise, we are focussed on creating value for all our stakeholders.

With self-sufficiency in power with captive thermal power plants, we have ventured into green energy by setting-up wind power plants and also signed the power delivery agreement for 450MW round the clock renewable power. From operating highly mechanized zinc-lead mines and also the world's largest underground zinc mining operation - Rampura Agucha mine, the other operations include Zawar Group of mines, Rajpura Dariba mine, Sindesar Khurd mine and Kayad Mine along with zinc-lead processing facilities which include smelters at Debari, Chanderiya and Dariba and a silver refinery at Pantnagar in Uttarakhand. The core philosophy is based on conducting operations in a Safe, Smart and Sustainable manner wherein



we have deployed of India's first ever Battery Electric Vehicle in underground mining with the aim of decarbonizing Indian mining. Along with this, we have also deployed 21 electric vehicles at the smelting locations, thus further reducing our dependency on fossil fuels. We are certified 2.41 times water positive and are on track to become 5 times water positive by 2025.

Currently, we are creating jobs for more than 22,000 employees, and we have also created numerous opportunities for downstream and ancillary industries. By doing this, we are assisting in the growth and development of the sector and the country as a whole. In addition, we are improving the quality of life in the neighbourhood surrounding our operational units through a variety of CSR initiatives, including training rural youth in sustainable farming methods, empowering rural women through microenterprises, and much more. We are transforming the lives of 1.73 million people through our focussed community development initiatives which has also garnered us the title of Top 15 CSR spenders in the country.

4. What are the initiatives of Hindustan Zinc in the area of digitalization?

Technology & innovation is assisting us in a big way for real-time data-based decision making, reduction of waste, increased productivity, and resource efficiency, while harnessing renewable energy sources for a greener future.

We are currently reimagining the entire value chain, backed



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Face to Face

by automation and analytics, to foster an environment that is conducive to the business growth while making mining operations safer.

The use of drones to measure bulk material volumes and scan stopes in underground mining operations is making exploration for resources safer. Computer-vision based technology helps in detecting quality defects and unsafe working conditions. We are developing the silver rich Sindesar Khurd mine as not just ours but India's most mechanized & digitized mine and make it a model for modern mining. With automated and tele-remote controlled drilling operations, we are achieving maximum efficiency during shift-change (smoke hours) for additional production drilling. This provides flexibility, higher safety standards, visibility, and control from outside the drill cabin. The tele-remote control provides more range and features than other remotes. An operator can work from a comfortable space, such as a control room.

As leaders in sustainable mining, we have become the first mining company in India to introduce battery operated utility vehicles for underground mining thus reducing dependency on fossil fuels and setting an example in the industry.

5. What does the Zinc producing industry expect from the policy makers?

The path to a five trillion-dollar economy is also poised to be a path of transition to a more sustainable future, in which zinc can be a torchbearer. From its usage in steel structures to railway lines and batteries, Zinc is also an



enabler of a circular economy as it can be recycled and can also very easily be returned to nature if used in the agricultural sector. The government investments in zinc and favourable policy reforms will be a key enabler in India's economic success. It becomes imperative to integrate its usage across sectors which will not only help us to build a stronger economy but also be important in India's transition to a modern, sustainable superpower.

Regulating and channelizing the scraps that are imported to India is an urgent action to be undertaken so that it does not deter economic growth. Along with this, there is an

urgency to strengthen the physical examination to prevent the entry of mixed zinc scrap into the country, which can go a long way in boosting the indigenous industry and also propel the vision of Atmanirbhar Bharat.

6. What are the future growth plans of Hindustan Zinc?

Our future growth plans are based on going downstream with the fertilizer plant and alloy plant. As part of the next phase of growth, we are investing Rs. 2,200 crores to set up a fertilizer plant and roaster to expand our zinc footprint and the product portfolio. Along with this, we have also set up Hindustan Zinc Alloys to produce value-added product in the market. This move will make way to produce value-added zinc alloy products and enable us to deliver international quality products in the domestic market.

At the same time, from the sustainability perspective, we are aiming to become carbon neutral by 2050 or sooner and are continually working towards reducing the carbon footprint. With this regard, we have signed power delivery agreement for 450 MW round the clock renewable power. We are also committed to invest USD 1 billion for decarbonization journey including converting all diesel-run mining vehicles to battery operated ones and have set a target to achieve 75% electrification of the mining fleet by 2035 and complete electrification by 2040. ■



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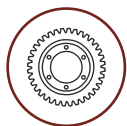


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International Conference on Automotive Materials and Manufacturing (AM&M 2023)

"4th International Conference on Automotive Materials and Manufacturing (AM&M 2023) was organized by The Automotive Research Association of India (ARAI), in association with SAE India and ASM International (Pune Chapter) at Chakan, Pune during 31st May to 2nd June 2023. Dr. Reji Mathai, Director – ARAI was Chairman and Ms. Medha Jambhale, Sr. Deputy Director at ARAI was Convenor of the conference. The central theme of conference was "Shaping Progressive Mobility through Emerging Materials and Manufacturing Technology". The conference was

inaugurated at the hands of Dr. Hanif Qureshi, Joint Secretary of Ministry of Heavy Industries, Government of India. During inaugural address, Dr. Hanif Qureshi emphasized the need to bring in a greener approach in the automobile manufacturing industry to face the stringent emission norms around the world. "The automobile sector is an important part of the growth story of the emerging modern India. The sector is now more than \$120 billion and is about 7% of the size of the Indian economy. It contributes more than 35% of the jobs in the manufacturing sector. We

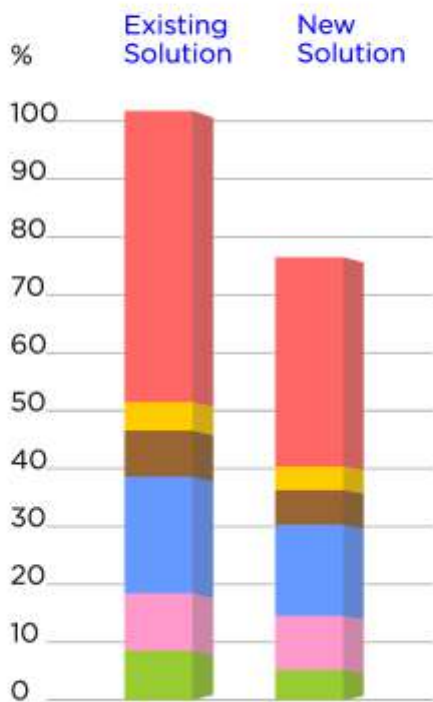
look forward to new challenges as governments around the world are talking about stringent emission norms and fuel efficiency." He added that the industry is looking for advanced materials that would help them in reducing environmental impact. "This is the time when the Indian automobile sector is oiled for growth, but along with this growth, there are certain challenges as we have to look for advanced materials and processes which will hasten our journey towards not only better automobiles and better fuel efficiency, but also reduced environmental impact through improvement in manufacturing processes," Dr.

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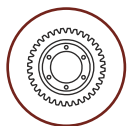
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Industry Update



Qureshi said. Mr. Deepak Garg, Managing Director, Sany Heavy Industries Pvt. Ltd. was Guest of Honour. Mr. Garg highlighted the significance of the Indian automobile industry and the need for its further expansion. He said, "Indian automobile industry is a significant contributor to India's GDP. It is currently accounting for almost 49% of the manufacturing GDP and 7% plus of total GDP. The rapidly growing automobile industry is now worth more than \$2,222 billion, contributing almost 8% of the country's total exports and generating employment of more than 37 million people. As India targets to surpass GDP of \$5 trillion by 2025, the goal set by our honorable Prime Minister, with a long-term potential to reach \$30 billion by 2050, coupled with the target to achieve net zero emissions by 2070, the significance and potential for the automobile sector will increase further."

During the 3-day conference, more than 60 presentations took place, including keynote speeches by renowned industry leaders in

automotive, space and defence sector as well as academicians. There were two panel discussions held on futuristic topic of "Big data analytics for Materials and Manufacturing" and "Materials for sustainable mobility". Concurrent exposition was organized wherein 28 industries and start ups showcased their innovative technologies and services. The Materials Pavillion gave opportunity to budding engineers to put forth their innovative ideas to industry professionals. More than 300 delegates, from various industries, research organizations and academia attended this conference. During the conference, high energy was seen that brought these professionals closer to exchange the ideas and innovations.

The conference concluded on 2nd June. Mr. Lalitkumar Pahwa, MD – Pahwa MetalTech was Chief Guest of the valedictory function. Mr. Vijay Mittal, Joint Secretary, Ministry of Heavy Industries, Government of India gave an address through video in which he said that India can emerge as one of the leaders in the automotive industry in the

coming years. Mr. Mittal praised the organizers for conducting a conference where ideas were exchanged for the development of the sector. "I'm sure this conference has been highly productive and added value to the past. Over the years, the India automotive industry has emerged as one of the world's leading and fastest growing auto markets. Demographically and economically, India's automotive industry is well-paced for growth, meeting both the domestic and export opportunities," Mr Mittal said.

He said that the country can become a big base for manufacturing if the focus is put on developing local resources.

"India can emerge as a world-class automotive manufacturing base. However, this calls for developing indigenous solutions in emerging automotive areas. The Government of India is working for facilitating a safe and clean mobility ecosystem through regulations and fostering innovation with an underlying belief that technology is the important determinant of growth and development. We at the Ministry of Heavy Industries are focused on promoting technology development, encouraging domestic manufacturing of high-end products, and boosting electric mobility through our various schemes," he added.

Participants appreciated the conference for its topics, sessions, various innovative ideas, challenges and way forward discussed in panel discussions and key notes. ■



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Importance of interdisciplinary studies in metallurgy & material science- A study

Part 4

Basic science in metallurgy
Basic science plays a critical role in the field of metallurgy, providing the fundamental understanding of the physical and chemical principles that govern the behavior of metals and alloys. Here are some of the key areas of basic science that are important in metallurgy:

1. Thermodynamics:

Thermodynamics provides the theoretical framework for understanding the behavior of materials at different temperatures and under different conditions. Thermodynamics is used to predict the formation of phases and the stability of materials, and to design processes for the production and processing of metals and alloys.

2. Kinetics: Kinetics is the study of how materials change over time, and it is essential for understanding the behavior of metals and alloys during processing and manufacturing. Kinetics is used to predict the rates of phase transformations, nucleation and growth, and diffusion processes.

3. Crystallography:

Crystallography is the study of the structure of crystals, and it is essential for

understanding the properties of metals and alloys. The crystal structure of a material determines many of its physical and mechanical properties, including its strength, hardness, and ductility.

4. Solid-state physics: Solid-state physics is the study of the properties of solids, including metals and alloys. Solid-state physics is used to understand the electronic and magnetic properties of materials, as well as their thermal and mechanical properties.

5. Materials characterization: Materials characterization techniques, such as microscopy and spectroscopy, are essential for understanding the structure and properties of metals and alloys. These techniques allow scientists and engineers to examine the microstructure of materials, identify phases and defects, and measure properties like hardness and strength.

Overall, basic science provides the foundation for understanding the behavior of metals and alloys, and for designing and optimizing processes for their production and processing. By combining basic science with applied research and engineering, metallurgists are able to develop new



Sadguru Kulkarni

Retired President- Technology, Hindalco Industries Ltd Corporate, covering Research & Technology, Technical. Now a Freelance Consultant in FMCG, Minerals & Metals, Chemicals and Sustainability

materials with tailored properties and improved performance for a wide range of applications.

Landmark patents in Metallurgy: Patents are closely linked to industrial applications of discoveries / inventions. What are the important patents in metallurgy/ material science? The question led to the expected answers as follows:

Metallurgy is a broad field that encompasses many different types of materials and applications, so there are many landmark patents that have been granted over the years. Here are a few examples of patents that have had a significant impact on the field of metallurgy:

1. Bessemer Converter: In 1855, British inventor Henry Bessemer was granted a patent for his converter, which allowed for the mass production of high-quality steel. The Bessemer converter used a process of blowing air through molten iron to remove impurities and create a more uniform product. This invention revolutionized the steel industry, making it possible to produce steel on a large scale at a lower cost.
2. Hall-Heroult Process: In 1886, American inventor Charles Martin Hall and French engineer Paul

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Analysis

Heroult were granted a patent for their process for producing

transportation.

4. NiTi Alloy Patent: In 1962, William Buehler



aluminum. The Hall-Heroult process involves the electrolysis of alumina, using a carbon anode and an electrolyte made of cryolite. This process made it possible to produce aluminum on a large scale, and aluminum quickly became an important material for a wide range of applications.

3. Bainite Patent: In 1931, Edgar Bain was granted a patent for his discovery of a new microstructure in steel, now known as bainite. Bainite has unique mechanical properties that make it suitable for a wide range of applications, including high-strength steel for machinery and

and Frederick Wang were granted a patent for their discovery of a new alloy made of nickel and titanium, now known as Nitinol. Nitinol has unique shape memory properties, meaning it can be trained to "remember" a particular shape and return to that shape when heated. This property has led to a wide range of applications for Nitinol, including medical devices like stents and orthodontic wires.

5. Van Arkel-de Boer process: The Van Arkel-de Boer process, patented in 1919, is a method for producing high-purity metals, such as titanium and zirconium. The process

involves the reaction of a metal halide with a reducing metal, producing a purified metal and a halogen gas.

6. Kroll process: The Kroll process, patented in 1940, is another method for producing high-purity titanium. The process involves the reduction of titanium tetrachloride with magnesium, producing titanium and magnesium chloride
7. Friction stir welding: Friction stir welding was first patented in 1991 by Thomas W. Thomas and colleagues at The Welding Institute in the UK. The process involves using a rotating tool to create friction between two metal surfaces, causing the metal to soften and bond together without melting
8. 3D Printing of Metals

These landmark patents have had a significant impact on the field of metallurgy, enabling the mass production of high-quality steel, aluminum, and other metals, and facilitating the production of high-purity metals for a wide range of applications.

Here are some important patents in the field of materials science:

1. US Patent 2,248,357: This patent, filed in 1939 by Wallace Carothers and others at DuPont, describes the production of nylon, a synthetic polymer that has many applications in textiles, plastics, and other industries.
2. US Patent 3,020,220: This

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Analysis

patent, filed in 1955 by Karl Ziegler and Giulio Natta, describes the development of Ziegler-Natta catalysts for the production of high-density polyethylene, a widely used plastic.

3. US Patent 3,293,114: This patent, filed in 1966 by Robert Gore, describes the production of expanded polytetrafluoroethylene (ePTFE), a material with many applications in medical devices, clothing, and other industries.

4. US Patent 4,256,840: This patent, filed in 1979 by Akira Yoshino, describes the development of the lithium-ion battery, a rechargeable battery that has revolutionized portable electronics.

5. US Patent 7,025,916: This patent, filed in 2003 by Chad Mirkin and others at Northwestern University, describes the development of DNA-based nanotechnology, a field that has many potential applications in materials science, medicine, and other areas.

These patents have had a significant impact on the field of materials science, enabling the development of new materials and technologies that have transformed many industries and improved people's lives.

Can Chat-GPT help us identify and forecast future technologies in material science

Here are some potential future technologies in the field of materials science:

1. Smart materials: Smart materials are materials that can respond to changes in their environment, such as temperature, light, or pressure. In the future, smart materials may be used in a wide range of applications, from medical devices that can adapt to the body's



needs, to buildings that can adjust their shape and size in response to changing weather conditions.

2. Nanotechnology: Nanotechnology involves the manipulation of matter on a very small scale, typically at the nanometer level. In the future, nanotechnology may enable the development of new materials with unique properties, such as super-strong materials, materials that can self-repair, and materials that can convert waste heat into usable energy.

3. Advanced composites: Advanced composites are materials made from two or more different materials with complementary properties. In the future, advanced composites may be used in a wide range of applications, from aircraft and spacecraft to sports equipment and medical devices.
4. Bioplastics: Bioplastics are plastics made from renewable resources, such as plant-based materials.

In the future, bioplastics may become more common as a sustainable alternative to traditional plastics, reducing the environmental impact of many products.

5. 3D printing: 3D printing, also known as additive

manufacturing, is a process in which a three-dimensional object is created by layering material on top of itself. In the future, 3D printing may become more widespread, enabling the production of custom-designed products and reducing waste in manufacturing.

These are just a few potential future technologies in materials science. As new discoveries are made and new applications are developed, the field of materials science will continue to evolve and shape the world around us.

Young Scientists' preference or

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Analysis

lack of preference for the field of metallurgy/ material science:

With this kind of contemporary science and engineering as well as a wide range of applications, we thought, metallurgy & material science should be a well-sought after area of education. Since we don't observe such excitement, we asked ChatGPT- 'where does metallurgy rank as a career choice for graduates, engineers in India and world'.

It is difficult to provide a definitive ranking for metallurgy as a career choice for graduates and engineers in India and the world, as it may vary based on factors such as location, industry demand, and individual preferences. However, based on general

in India, and is often overshadowed by more traditional engineering fields such as computer science, mechanical engineering, and electrical engineering.

- However, there is still demand for metallurgical engineers in industries such as manufacturing, mining, and steel production, and graduates with a degree in metallurgy can find job opportunities in these sectors.
- According to the All India Council for Technical Education (AICTE), metallurgy and materials engineering accounts for only around 2-3% of all engineering seats in India.

In the World:

- Metallurgy and materials science are recognized

energy, and transportation.

- The global market for metallurgical engineering is projected to grow steadily in the coming years, driven by increasing demand for metals and alloys in various sectors.
- In some countries such as Russia and Germany, metallurgy and materials science are among the most popular engineering disciplines.
- According to a report by Forbes, materials science and metallurgical engineering are among the top 10 most valuable college majors in terms of salary potential, with a median starting salary of around \$64,000 (Rs 50 Lakhs) per year in the United States.

Overall, while metallurgy may not be the most popular career choice for graduates and engineers in India, it is still a valuable and relevant field with job opportunities and growth potential both in India and around the world.

We at Metalworld are a bit surprised to observe that metallurgy, metals & material science is not a career choice for most science & engineering graduates. We wondered why and asked the question to ChatGPT- 'Why do today's graduates not prefer metallurgy as a work area? Here is the report:

There could be several reasons why today's graduates may not prefer metallurgy as a work area:

1. Lack of Awareness: One reason could be a lack of



trends and data available, the following information can be provided:

In India:

- Metallurgy is *not* among the most popular engineering disciplines

as important and valuable fields worldwide, with applications in various industries such as aerospace, construction,



Analysis

awareness about metallurgy as a career option. Many students may not be aware of the potential career opportunities in the field of metallurgy.

2. **Perception of the Field:**
Another reason could be the perception that metallurgy is a field that is outdated or not relevant in today's world. Many students may think that metallurgy is only about working with metals and may not be aware of the advancements in materials science that make metallurgy a dynamic and exciting field.
3. **Job Opportunities:**
Graduates may also not be choosing metallurgy as a work area due to limited job opportunities. This could be due to a lack of investment in the field by companies or a shift towards other fields such as computer science, engineering, and biotechnology.
4. **Lack of Interest:** Finally, graduates may not be choosing metallurgy as a work area simply because they are not interested in it. Metallurgy can be a very technical and specialized field, and some students may find it difficult or uninteresting.

Overall, there could be multiple factors that contribute to the lack of interest in metallurgy as a work area among today's

graduates. However, it is important to note that metallurgy is a crucial field that plays a significant role in many industries, including manufacturing, construction, and aerospace, and there are



many exciting career opportunities for those who pursue it.

Corrective Actions:

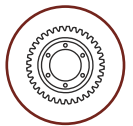
Next, we thought of asking ChatGPT itself for any corrective actions which need to be taken to make the field attractive again- 'what corrective actions are required to popularize metallurgy and material science among science & technology students?'

To popularize metallurgy and material science among science and technology students, the following corrective actions can be taken:

1. **Increase Awareness:** The first step is to increase awareness about metallurgy and material science among students. This can be done through outreach programs, seminars, workshops, and career fairs that highlight the various applications and potential of these

fields.

2. **Curriculum Development:**
The curriculum of science and technology courses can be updated to include more courses related to metallurgy and materials science, highlighting their importance and relevance in various industries.
3. **Practical Learning:**
Providing practical learning opportunities to students in metallurgy and materials science can make the field more interesting and accessible. This can be achieved through laboratory work, internships, and research projects.
4. **Industry-Academia Collaboration:**
Collaboration between industry and academia can help bridge the gap between theory and practice, and provide students with insights into the practical applications of metallurgy and materials science. This can be achieved through joint research projects, guest lectures, and industry visits.
5. **Role Models:** Highlighting the achievements of successful professionals in metallurgy and materials science can inspire students to consider these fields as a viable career option. This can be done through mentorship programs, industry talks, and alumni networks.
6. **Networking:** Networking opportunities with industry experts, alumni, and other professionals in the field can help students develop a better understanding of the job market and career prospects in metallurgy and



- It has generally not been and is unlikely to grow to become the top field in technology
- The field of metals and materials is adapting to the newly available technologies like measurement sciences, computation, computational material science, nano-technology and biotechnology & biomaterials etc, evolving into a significant contributor.
- This requires extensive collaboration across other disciplines, which is happening now.
- Efforts need to be put in by stalwarts from the field, to attract young talent to the field, so that new directions for work come up and new materials develop.
- Important work areas for application will be transportation & e-transportation, energy, climate change, computational technology-hardware, and good old manufacturing.

In terms of the methods used in this paper, we observe that the general output of answers provided by ChatGPT fairly match the insights which a domain expert would provide; and it is thus an important tool. What is important is the ability to ask cohesive probing and connected questions and to link the responses across. This probably remains an important role for human experts.

- Note that this paragraph of the article is not written with ChatGPT. ■

materials science.
7. Go interdisciplinary:
Historically when a field appears to stagnate, Overall, a combination of these corrective actions can help popularize metallurgy and material science among science and technology students and encourage more students to pursue careers in these fields.

In Conclusion (without ChatGPT use)

This interesting experiment

for understanding the area of metals, metallurgy and material science, its position in the history of technology, people who have shaped the field, important upcoming areas, patents which have shaped the technology, prospects, problems and possible solutions, projections for the future etc. The main findings are:

- The field of metals & metallurgy has always been and will continue to remain important to manufacturing.



of using the ChatGPT tool



Feature



HARDLOCK aims to provide safety through various products

We at HARDLOCK Japan are focused on Safety and treat it as topmost priority. The Philosophy of HARDLOCK is to provide ultimate safety through various products which are widely put to applications across many sectors in Japan including Bullet Train. Our Japanese Quality is uncompromised. HARDLOCK Nut provides unparalleled self-locking performance even in the toughest environments and applications. When you need fail safe fastening performance in the most demanding vibration environment, trust HARDLOCK Nuts (HLN) to meet or exceed your expectations. The primary reason for

loosening in bolted joints is a drop in the initial clamp load occurring due to external forces such as impact and vibration, which will lead to not only shortened life span but also bolt breakage resulting in catastrophic accidents. We hit on the idea of utilizing the wedge principle, widely used in ancient Japanese architecture, to eliminate the play (gap) between the threads of the bolt and nut aiming at prevention from rotational loosening. HLN consists of two nuts, the first nut (1) "Convex Nut" (clamping nut) has an eccentric protrusion on the upper surface. The second nut (2) "Concave Nut" (locking nut) is designed with a concentric recess for



Katsuhiko Wakabayashi
Founder and Chairman,
HARDLOCK Industry
Company Limited, Japan

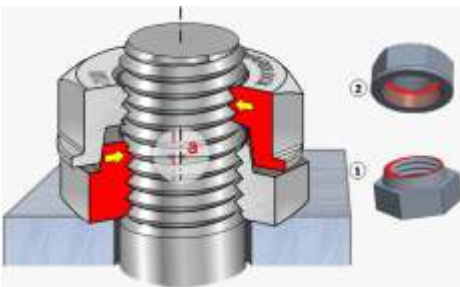
locking the Convex Nuts and the bolt together. By tightening the Concave Nut onto the Convex Nut, a strong perpendicular load will be applied to the bolt from both sides locking the HLN and making it resistant to vibrations and impacts from any direction. After installing HLN you will realize a significant decrease in maintenance related work due to its exceptional self-locking effect. Although HLN is a high-end product, HLN solution will offer improvement of running cost in combination with the advantage that it can be reused multiple times without almost any decrease in performance. HLN is entirely made from metal only unlike other common self-locking



nuts and is available in various materials and surface treatment suitable for any environment. HLN can be utilized in scenarios ranging from M3 size titanium nuts for securely attaching solar panels to

impeccable record of HLN represented by the following results. Since 1992, over 1.5 million sets have been annually used for Shinkansen, replacing welding for underfloor equipment and expanding to

other parts like couplers and cover plate holder. This innovative solution has resulted in significant reduction in maintenance work after every 750,000 miles (1.2 million km) of running. In the UK, over half a million



satellites, to high-temperature resistant M56 size SNB16 nuts used in steam turbines for thermal power plants.

HLN is predominantly used in applications which require safety at higher level in extreme conditions, including but not limited to;

- a) Railway: for rail joints bolts, fixing underfloor equipment, locking the rods of point machine
- b) Mining: for fixing pendulum & structural joints of vibration screen
- c) Steel mills: for fixing structural joints of coal charging car, pinch roll shaft, conveyer shaft
- d) Machinery: for joints of robot arm, ball screw of injection molding machine

We take great pride in the

sets have been installed on stretcher bars since 2003, with a 0% failure rate, which



led to the full acceptance of HLN for non-welded railway



joints. This achievement underscores the reliability and effectiveness of HLN in ensuring the safety and durability of railway infrastructure.

HLN are designed and manufactured in Japan and still have been protected by related patents in more than 20 countries and areas. Every company has important missions, HARDLOCK Industry's mission is to provide unrivaled Safety and Increased Performance.

In India HARDLOCK products are made available through a Pune based British Subsidiary by name "EURO TBA PROTECTIVE TECHNOLOGY SOLUTIONS INDIA PRIVATE LIMITED" and they can be contacted for any further details at the following: Mr. Digvijay Patankar, Director Euro TBA Protective Technology Solutions India Private Limited.





London copper prices set for best monthly gain since January



Copper prices in London were on track on Monday for their best monthly performances since January as traders cheered the prospects of further stimulus in top consumer China and that the U.S. Federal Reserve will pause rate hikes for the year.

Three-month copper on the London Metal Exchange CMCU3 was up 0.2% at \$8,679 per metric ton by 0301 GMT. On a monthly basis, the contract was up 4.4%.

LME copper is on course for its best monthly performance since January when expectations of a pickup in manufacturing activity and strong demand were boosted by the end of China's zero-COVID policy.

However, China's manufacturing sector has contracted for the fourth month running, suggesting weak metal consumption.

China's top leaders recently pledged to step up support for the economy amid a tortuous post-COVID recovery, focusing on boosting domestic demand, signalling more stimulus steps.

"The market is trying to look past the data. The perception is there will be more Chinese stimulus, if only to prop up the property market," a copper trader said, adding that the stronger dollar was a headwind for now.

A higher U.S. currency makes dollar-denominated commodities more expensive for holders of other currencies, which could subdue demand and prices.

But the dollar is heading for a monthly loss due to prospects that the U.S. Federal Reserve's aggressive rate-hike cycle - a key driver of the dollar's strength - may have concluded with last week's 25-basis-point increase.

"The dollar is not as much of a negative as it was and could help base (metals), but for a healthy outlook we need an improvement in underlying fundamentals," the copper trader said.

Also weighing on LME copper prices are rising stocks in LME-approved warehouses, which at 68,350 tonnes are up 26% since July 12.

Cancelled warrants metal earmarked for delivery at less than 1% compared with 68% in late June have also eased concerns about copper availability on the LME market.

In other metals, aluminium rose 0.9% to \$2,242 a metric ton, zinc added 1.8% to \$2,542, lead slipped 0.1% to \$2,157, tin was little changed at \$28,750 and nickel fell 1.4% to \$22,000.

Hindalco appoints Poorav Sheth as President, CDIO



Indian aluminium and copper manufacturer Hindalco has appointed Poorav Sheth as its new President and Chief Digital & Information Officer (CDIO).

In this role, Sheth will be responsible for overseeing the company's digital and IT operations, ensuring that technology plays a significant role in Hindalco's

development. He will be taking over from the current CDIO, Jagdish Ramaswamy, who is set to retire in the coming months as part of a well-planned succession.

Hindalco Industries Limited is the flagship metals company of the Aditya Birla Group.

Prior to joining Hindalco, Sheth served as the Chief Digital Officer (CDO) at Godrej & Boyce starting in September 2020. During his tenure, he successfully established the Corporate Digital division and implemented Digital & Analytics initiatives across G&B's 14 companies. His focus was on driving business-oriented initiatives to modernise manufacturing, logistics, sales & distribution, and related products. Key elements of these initiatives included leveraging cloud platforms, enhancing cybersecurity measures, and providing digital upskilling for the workforce.

Sheth comes with over 18 years of diverse expertise and extensive domain knowledge.

Before joining Godrej & Boyce, Sheth served as the Chief Digital & Information Officer at Piramal Glass. During his tenure, he successfully led analytics- and data-driven transformation efforts in key areas such as connected supply chains, smart manufacturing, digital workplace, and customer experience.

Prior to this role, Sheth was responsible for heading the Digital consulting practice at L&T Infotech for Europe & Asia-Pac. He provided valuable digital transformation advisory services to global customers in the financial, retail, and manufacturing industries.



With more than 25 years of combined experience in technology and business strategy, Sheth has a proven track record in managing large transformation programs, account management, global delivery management, and consulting.

Sheth holds a bachelor's degree in computer engineering from Ramrao Adik Institute of Technology, University of Mumbai.

HZL exploring overseas acquisitions, keen to bid for lithium mines in India, overseas: CEO

While Hindustan Zinc Ltd. acquisition plans for Vedanta's overseas zinc mines are now in limbo, the company continues to explore other overseas acquisition options, particularly in Latin America and African nations. The company is also looking to diversify into rare earth, critical mineral and lithium mining, both overseas and in India.

"We continue to explore overseas acquisition opportunities in zinc and some other minerals. Hindustan Zinc will place bids for such mine auctions as and when they open up. In India, we can look at the lithium auctions (in India) too," Arun Misra, CEO, told *businessline*.

Lithium mining

The Centre is already on course to remove lithium from the list of atomic minerals and by proposing amendments to The Mines and Minerals (Development and Regulation) Act, it is looking to open up lithium mining to private players. India has declared lithium reserves of 5.9 million tonnes in Jammu and Kashmir, and auction for these blocks are likely in December.

Misra pointed out, the company's "core competence" lies in mining activities of around 1-2 km depth and base metal mining continues to be an "area of interest". "So if there is opportunity for mining copper or other critical minerals, including uranium, we can look into placing bids around them too," he said.

Acquisition Plans

According to Misra, "there is no immediate update" on the proposed acquisition of parent company Vedanta's overseas zinc assets (mines). The near \$3 billion deal to acquire these assets "fell through" for want of consensus among various stakeholders, primarily following objections from the Centre.

The Centre — the largest minority shareholder — has a 29.5 stake in HZL. Being a related party transaction, HZL would have required approval from majority of the minority shareholders for the purchase of these overseas zinc mines to go through.

"The proposal to acquire the assets of Vedanta was floated last year and it lapsed following non-consensus

among stakeholders. And we are now in a new fiscal. So the previous proposal lapses automatically. As of now there is no new proposal on this," Misra said.

However, the company continues to explore overseas acquisition opportunities, especially in Latin American and African nations. "So we are in regular talks with our team there," he said.

Jindal Aluminium to invest ₹100-150 cr in Bhiwadi plant to boost capacity

Jindal Aluminium Limited (JAL) plans to invest ₹100-150 crore in its Bhiwadi plant to bolster capacity to 60,000 tonnes per annum, its vice-chairman and managing director, Pragun Khaitan, told *Mint* in an interview.

The latest planned investment follows the company's ₹250 crore infusion into the facility in 2022, after an initial ₹100 crore investment for acquisition in 2021. This will bring the total investment to roughly ₹500 crore, aiming to meet increasing demand.

"The way the demand is growing, I think we need to be firing on all cylinders in terms of growth and these investments will help us achieve it," he said.

Jindal Aluminium is India's largest aluminum extrusion company and has a current capacity of 1.25 lakh tonnes per annum. They have a dominant share of India's extrusion market and are the country's largest manufacturer. They are focused on new opportunities in domestic manufacturing and are continuously increasing their share in the export market.

India currently has sufficient domestic capacity to meet the country's aluminium demand of around 4 million tonnes per year. The consumption of aluminium in India is expected to grow at 10-11% CAGR over the next decade and Khaitan says that the company will be ahead of the curve in being able to meet the demand.

The company will invest heavily in innovation and R&D to reduce expenses and to even streamline its processes and minimize waste, resulting in cost savings. "We are primarily concerned with advancing technology, enhancing productivity, and controlling manufacturing costs," Khaitan added.

"Our entire focus is on making this state of the art; The lowest cost, best quality extrusion facility, maintaining the quality of extrusion that's going to come out of this facility, in terms of the technology intervention, in terms of the plant design, in terms of the facility creation, all up to the global standards," Pragun said. "Our emphasis is that we are not benchmarking ourselves with Indian competition. We're benchmarking ourselves with global competition."

The company wants to focus on capex building and also on tech building, as in the long-term they focus on expanding into other markets and one such market is railways.



Aluminium companies complain about EU carbon border tax loophole

European aluminium producers are warning that a loophole in the EU's carbon border tax will lead heavily polluting exporters such as China to circumvent the rules and flood the bloc with low cost, emissions heavy metal. Under the EU's proposed carbon border tax, a levy on the amount of CO₂ emissions produced during the manufacture of goods imported into the bloc, offcuts of aluminium which are remelted can be sold as a zero carbon product even if the virgin material was produced with coal or other fossil fuel power. Aluminium companies including Norsk Hydro and Speira told the Financial Times that the so called carbon border adjustment mechanism (CBAM) incentivised producers outside the EU to generate as much scrap as possible which would be then be remelted and exported to Europe.

"This loophole enables the widespread greenwashing of imported aluminium products and undermines the effectiveness of CBAM in preventing carbon leakage," said Hilde Merete Aasheim, chief executive of Norway's Norsk Hydro. Lightweight and durable, aluminium is vital for building aircraft and cars and is used in solar power components. However, it is the most energy-intensive metal known in the industry and is sometimes referred to as "solid electricity". Aluminium production accounts for around 3 per cent of the world's industrial emissions, according to the International Energy Agency. This is slightly more than the emissions from aviation. The CBAM will initially be introduced without charges during a trial phase that starts in October this year; producers will have to pay the levy from 2026. In the initial phase, it will cover seven different sectors including aluminium, iron, steel, fertiliser and hydrogen. The aim is to prevent products made with lower cost but dirtier production processes from undercutting companies within the EU that have to comply with the bloc's stricter climate laws and pay for pollution under the EU's emissions trading system. EU officials hope that it will promote more rapid decarbonisation in industrial sectors around the world. In the EU, smelters emit around 6.8kg of CO₂ for every kilogramme of aluminium, compared to a global average of 16.1kg of Co2 per kg, according to the trade body European Aluminium.

But the loophole risks undercutting its purpose, say its critics. Ana Šerdoner, senior manager in industry and energy systems at the environmental NGO Bellona, said that some manufacturers "might use [this loophole] to reshuffle their exports a bit and make sure those scraps are remelted and sold to Europe as carbon neutral". Europe's aluminium producers' claims come on top of concerns about a lack of rebates for exports containing imported aluminium that had been taxed, finished products such as cars or cans containing highly polluting aluminium being allowed in without paying for emissions generated in metal production and the loss of the sector's free emission allowances. "The details and current design raise more concerns than opportunities," said Volker

Backs, head of public affairs at Speira, a large German aluminium rolling and recycling company, who warned of CBAM's impact on Europe's broader manufacturing competitiveness. Paul Voss, head of European Aluminium, said that if the measures were poorly designed the sector "will be undercut so badly there will be nothing left to decarbonise and it won't help the planet". Europe's aluminium industry has been ravaged by higher energy costs after Russia invaded Ukraine, leading to approximately half of the EU's smelting capacity to shut.

For some, opposition to CBAM is more fundamental. Nick Keramidas, executive director of EU Affairs at Greek aluminium producer Mytilineos Energy & Metals, said that the domestic producers facing soaring costs needed a level playing field. "CBAM threatens to cripple European production out of serving the European and global market. It would actually cause the problem it seeks to address by causing more carbon leakage," he said. The CBAM has been heavily contested by countries outside the EU, which argues that it punishes producers in less developed nations that are economically reliant on exports to the bloc. The European Commission, which is consulting on the final details of CBAM until July 11, declined to comment.

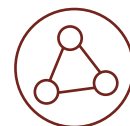
LME Clear appoints new Chief Executive Officer

LME Clear has announced the appointment of Michael Carty as Chief Executive Officer and LME Clear Board Director, effective 2 October 2023.

The LME has said that Michael brings with him a wealth of knowledge and experience in financial infrastructure and technology. He joins LME Clear from Euroclear Group, where he has held various senior roles over the last 15 years, including Chief Information Officer and Chief Operations Officer for Euroclear Sweden and Euroclear Finland, CEO of Euroclear Sweden and, most recently, CEO of Euroclear UK and International.

Commenting on his appointment, Michael said: "It's an honour to be appointed CEO of LME Clear and I look forward to building on the foundations of innovation and impact that the organisation has become known for since its establishment a decade ago. LME Clear is one of the world's premier centres for metals clearing and settlement and it has an exciting future ahead of it. I am committed to playing my part in ensuring its long-term sustainability and resilience, while exploring new ways to progress the business and the market."

David Warren, Chairman of the LME Clear Board said: "I'm delighted to welcome Michael to LME Clear and look forward to working alongside him. A highly regarded industry leader, his expertise and international experience in clearing and financial infrastructure will be of great benefit to LME Clear as we evolve and drive forward our business and markets in a dynamic macro landscape. I would like to thank James Cressy for his leadership at LME Clear over the last 12 months, and I look forward to continuing to work with him as we play a pivotal role in the



global metals industry.”

James Cressy will step down as Interim CEO of LME Clear, remaining with LME Group when Michael Carty joins LME Clear in October.

Europe adds aluminium to its critical raw materials list

European Union (EU) countries have added aluminium to the list of minerals and metals covered by the Critical Raw Materials Act (CRMA).

The Act is the centerpiece of the EU's strategy for ensuring it has the necessary inputs to compete with the United States and China in the global race to decarbonise.

The initial omission of aluminium from the CRMA was greeted with outrage from parts of the industry, the Federation of Aluminium Consumers in Europe lambasting EU policy-makers for "doing the opposite of what should be done".

Alba Joins Forces with Nasser Artificial Intelligence Research and Development Centre to Advance in AI

Aluminium Bahrain B.S.C. (Alba) underlined its commitment to advance in Artificial Intelligence (AI) within its operations with the successful completion of "Green Anode Density Prediction" -- one of the many joint projects with Nasser Artificial Intelligence Research and Development Centre.

To celebrate this remarkable achievement, an honouring



ceremony was held at Alba's premises where Alba's Chief Executive Officer, Ali Al Baqali, and Nasser Artificial Intelligence R&D Centre CEO, Dr. Abdulla Naser Al Noaimi, honoured the Centre's team involved in the project, in the presence of the Centre's AI Executive Advisor, Dr. Jassim Haji, as well as other Alba and Nasser Vocational Training Centre (NVTC) officials.

Commenting on the achievement, Alba's Chief Executive Officer, Ali Al Baqali, said:

"We would like to express our thanks and appreciation to HH Shaikh Nasser bin Hamad Al Khalifa for driving the transformation towards AI in the Kingdom of Bahrain and the Nasser Artificial Intelligence Research & Development Centre for selecting Alba to be amongst the first industrial companies in Bahrain for such collaboration.



Artificial Intelligence is a tool we want to adopt as without it, we won't be able to advance and disrupt the norms in our business. We believe that the choices which we make today will simply give us more data

about what to do next."

Adding Further, Nasser Artificial Intelligence Research & Development Centre CEO, Dr Abdulla Naser Al Noaimi, indicated that the Centre aims at becoming one of the main pillars of Artificial Intelligence system in the Kingdom through its unique projects and smart solutions that contribute to the digital transformation initiatives in both government and private sector organizations and companies. He added that the R&D Arm of NVTC, will work on accelerating the pace of digitisation, while heading towards a promising horizon in the knowledge-based economy, achieving the Bahrain Vision 2030 goals by young, ambitious Bahraini youth equipped with the necessary skills of this vital stage of national development. The team is focusing on providing creativity and innovation in a new technical suit that contributes to improving operations and enhancing productivity at the local and regional levels, by undertaking these qualitative projects with the various sectors inside and outside the Kingdom of Bahrain.

Green Anode Density Prediction is one of many joint projects to be implemented between Alba and Nasser Artificial Intelligence R&D Centre. The completed project consists of an artificial intelligence model that predicts green anode density based on process variables, in addition to a dashboard that allows users to enter the values of process parameters and get the predicted density, which helps users to optimise the process and achieve the desired density of green anodes.

Rusal considers restart of aluminium smelter in Nigeria

Russian aluminium producer Rusal and the Nigerian government are discussing possible restart of the smelter Alcon in Nigeria which was suspended as loss-making 10 years ago, Rusal said on Friday.

Alcon produced 22,000 tonnes of aluminium in 2012, 11% of its annual production capacity, before Rusal suspended it in early 2013 due to the lack of reliable gas supply and low aluminium prices .

Nigeria's Vice President Kashim Shettima met Rusal's management on the sidelines of the Russia-Africa summit in St Petersburg this week as the Nigerian government is taking efforts to reactivate production at Alcon, his office said in a statement.



Hydro reaches ASI certification milestone in the United States and Canada

Hydro's Extrusion North America business unit has achieved Aluminium Stewardship Initiative Performance Standard V2 certification at 23 of the company's sites in the United States and Canada.

Hydro have stated that there will be further consideration of ASI Chain of Custody (CoC) certification for these sites, and it will be evaluated in the coming year.

"We are pleased to reach this ASI certification milestone in North America. The speed and breadth of this effort is an excellent reflection of Hydro's dedication to sustainability and responsible business practices," says Charlie Straface, President of Hydro Extrusion North America.

"We have seen increased demand from our customers in North America for greener products and greater transparency. With this certification we are sending a clear message to the market: When it comes to sustainability, we are the leader in North America," says Jerrod Hoeft, who is responsible for the Commercial Transportation & Sustainability segment for Extrusion North America.

Hydro completes acquisition of Alumetal, strengthening recycling position in Europe



Hydro acquired the Polish aluminium recycling company, Alumetal S.A, completing the tender offer for more than 97 percent of the shares. The acquisition of the Polish aluminium recycling company strengthens Hydro's recycling position in Europe and widens its product offering in the low-carbon and scrap based foundry alloy market.

This step forward makes up a part of Hydro's recycling ambitions and the company's goal to double the use of post-consumer aluminium scrap by 2025. The use of post-consumer scrap significantly reduces the CO2 footprint compared to pre-consumer/process scrap as well as primary aluminium.

"With this acquisition, Hydro and Alumetal will together become the leading integrated aluminium recycler in Europe. This will enable us to offer more low-carbon and recycled aluminium products based on post-consumer scrap, further strengthening our commitment to enable

our customer's to reach their sustainability goals. Bringing Alumetal into the Hydro family will also contribute to increased circularity in the aluminium value chain, fostering an increasingly circular economy in Europe," said Eivind Kallevik, Executive Vice President in Hydro Aluminium Metal.

As a result of the transaction, Hydro claims it will increase its competence in the recycling of aluminium scrap materials, and Alumetal will strengthen its competitive position by entering the structures of one of the largest and leading global aluminium companies in the world.

"The acquisition shows how extraordinary the Alumetal team's efforts have been over the last 20 years, demonstrates our significant growth journey and intensive development within our organization. I am very proud of our employees and we look forward to an even more exciting future together with Hydro," said Agnieszka Drzyżdżyk, President and CEO of Alumetal.

Hydro states they will be an active owner and support Alumetal in further positioning and strengthening the company going forward within operational excellence, safety, and further growth. Alumetal will be a stand alone company in the Hydro family and continue to work with its current business, organisational and operational model, ensuring that Alumetal's successful track record will continue with new ownership.

Hydro and Alumetal will now initiate the process of integrating the Polish recycler into Hydro. The two companies marked successfully completing the transaction with a small celebration at Alumetal's headquarters in Kety, Poland on July 10.

Novelis and thyssenkrupp Materials Services Partner to Drive Circularity Novelis Inc. and thyssenkrupp Materials Services have formed a partnership to increase end-of-vehicle-life recycling and availability of valuable secondary materials that can be recovered from automobiles at the end of the consumer-use cycle.

Through the joint development of a digital platform called the Automotive Circularity Platform (ACP), the companies seek to digitalise the market for secondary materials recovered from end-of-life vehicles and increase its transparency by creating an ecosystem with the common long-term goal to increase the recycling rate of cars and reduce carbon emissions. ACP will be a digital marketplace that connects stakeholders throughout the automotive end-of-life value chain and empowers automotive suppliers to capture and reuse aluminium and other materials, such as steel, plastics, glass, rubber, and more.

The first step is to create a prototype of the platform for comprehensive testing and evaluation purposes. The results of the proof-of-concept analysis will serve as feedback for Novelis and thyssenkrupp Materials Services to make enhancements and explore the possibility of wider adoption and use by their respective industry partners.

"ACP is a major step forward in creating an open, accessible trading platform for materials at the end of the consumer-use cycle for companies seeking to fulfill



broader and deeper commitments to sustainability and circularity," said Michael Hahne, Vice President and General Manager Automotive, Novelis Europe. "Not only will ACP increase circularity through optimised material flows and thus enable access to larger quantities of high-quality recycling materials, while minimizing waste to landfill, it will also create a transparent and trusted connection for all stakeholders to create and deploy their own value-generating recycling processes."

With the rise in electric vehicles, the reduction of pollutants from tailpipes will become secondary to increasing supply chain and manufacturing efficiencies, as top targets for decarbonisation. A circular ecosystem with unprecedented collaboration between all stakeholders will play an essential role in the automotive industry reaching its climate targets.

"Novelis and thyssenkrupp Materials Services have formed a relationship that leverages the best of our companies'

Automotive Circularity Platform (ACP) Digitalizes the Market for End-of-Vehicle-Life Recycling and Increases its Transparency



respective expertise, the strengths of which are complementary in every respect," said Sebastian Smerat, Head of Customer Innovation at thyssenkrupp Materials Services. "thyssenkrupp Materials Services delivers unmatched materials knowledge and experience in digital supply chains and market access to a broad, complex sector. Novelis brings in unique expertise in fields such as aluminium recycling, reuse processes and development of aluminium alloys with high-recycled content. With the idea of developing an automotive circularity platform for aluminium, we are consistently pursuing the path of our sustainability strategy BEYOND at thyssenkrupp Materials Services."

For aluminium in particular, recycling is the epitome of sustainable practices representing an approximate 95% reduction in CO2 emissions compared to the more energy intensive requirements of primary production. Furthermore, aluminium has the ability to be infinitely recyclable with no loss of properties including strength, lightness, durability, and formability. The many advantages aluminium offers contribute to its increasing use across industries seeking to achieve greater sustainability. While closed-loop aluminium recycling of production scrap has become a sustainability best practice in the automotive industry in recent years, the loop at the end of

a vehicle's life has yet to be closed. In a market that is thriving with diverse opportunities and on the brink of exciting growth, the partnership between Novelis and thyssenkrupp Materials Services is a major step toward achieving a circular economy for aluminium.

Southern Copper getting more optimistic on stalled Peru mine



Southern Copper Corp. is growing more optimistic about being able to build a fiercely contested copper mine in the coastal mountains of Peru as sociopolitical tensions ease.

The company has been trying for years to convince local communities of the merits of the Tia Maria project. A 2019 decision to approve its license unleashed weeks of protests and former President Pedro Castillo singled it out as a non-starter. But the company says it's been making progress with communities of late.

"Basically we are relatively much more optimistic than we were a year ago," chief financial officer Raul Jacob told analysts on an earnings call Friday.

Developing the \$1.4 billion project would be a major breakthrough in a country where the mining industry's relations with isolated rural communities often sour. It's part of Southern's \$15 billion pipeline of projects this decade.

Codelco sees lower copper output, more stoppages in 2023

Chile's state miner, Codelco, on Friday cut its copper output forecast for 2023 and said it expects more halts in production during the second half of the year, following months of declines.

The miner expects to have a yearly production of between 1.31 million-1.35 million metric tons from 1.35 million-1.45 million tons previously forecast, it said on Friday, as it reported that pretax profit fell 86% in the first six months of this year.

The new forecast follows a recent rock explosion accident in its biggest mine, El Teniente, which has affected parts of the area's project developments and a productive area in the north of the mine, it said. This will hamper production in the remainder of the year, it added.

The miner's pretax profit landed at \$329 million for the



News Update

first half of 2023, while its copper output slipped 14% year-on-year to 633,000 metric tons, extending a slowdown reported in the first three months of the year.

Codelco's average copper sales prices fell 3% and sales volumes shrank 11.3%, while direct production costs rose 41.3% to hit about \$2.12 per pound, from \$1.506 the year before.

Codelco, whose production fell to its lowest level in a quarter-century last year, has faced a series of adverse weather and operational problems, including the death of a contract worker at El Teniente in June.

The company has also been tasked with leading talks with private companies in Chile's push to increase state control over the country's vast lithium industry.

Chile is the world's top copper-producing country and No. 2 for lithium, key to powering the booming electric vehicle industry, though Codelco does not mine any lithium.

Chief executive Andre Sougarret recently decided to step down by the end of August. Codelco has yet to name a successor.

ASK Chemicals Korea is Awarded with National Industry Award for Exceptional Safety Management and Commitment to ESG Principles



ASK Chemicals Korea has been honored with the National Industry Award 2023 in the category Safety Management & ESG Excellence by the Ministry of Trade, Industry and Energy, Ministry of SME, and Institute for Industrial Policy Studies (IPS). The award celebrates the company's exceptional safety management practices and its commitment to promoting ESG principles in its operations.

The annual award recognizes companies for their dedication to safety by following safety policies and guidelines, making safety improvements, and achieving a high score on Process Safety Management (PSM) evaluation by the Korean Occupational Safety and Health

Agency (KOSHA). The committee reviewed all submissions and recognized ASK Chemicals Korea's outstanding efforts in these areas.

On behalf of ASK Chemicals Korea, Jeong-Hyun Park, General Manager Korea, attended the award ceremony in Seoul. He states: "We are proud to have met all the necessary requirements for the award. This recognition affirms ASK Chemicals Korea's commitment to ESG principles and its continued efforts to prioritize safety and well-being of our employees and customers."

Base metals brace for challenging times as supply outpaces demand.



Analysts have stated that there will be challenging times ahead for base metals such as aluminium, copper, and zinc due to an ongoing disparity between supply and demand. This imbalance is expected to result in a bearish price outlook for these metals in the near future.

Jayant Roy, senior vice-president and group head of corporate sector ratings at ICRA, said "The supply growth is outstripping demand growth for most key base metals such as aluminium, zinc and copper globally."

After rising sharply during the first quarter of 2022 post the start of the Russia-Ukraine war, base metal prices corrected regularly and significantly in the quarters after that. Some rise was seen at the year-end and in early 2023, encouraged by opening of the Chinese economy as covid-19 restrictions eased.

Nevertheless, the rally fizzled as Chinese demand did not meet expectations. China remains the largest consumer of commodities. Analysts now do not expect much recovery in demand and prices any time soon amidst global slowdown.



Commercial vehicle sales back on track, will continue growth: SIAM President

According to the latest data shared by SIAM, total CV sales in the domestic market declined by 3.31 per cent year-on-year (y-o-y) to 2,17,046 units in the first quarter of this year as compared with 2,24,488 units in the corresponding period last year.

Production of the CVs also declined by 1.51 per cent y-o-y to 2,53,447 units during the April-June quarter as compared with 2,57,338 units in the same period last year.

The demand for commercial vehicles (CVs) is on track and growth will continue as demand is back mostly on the replacement side, though the sector is still lower than its peak time.

The overall demand for CVs is doing much better, even though we are still lower than the earlier peak levels. But, some of the segments within that are above the earlier peak levels. The demand is led by a lot of replacements, the pent-up replacement demands."

This is because the new trucks have been designed after BS6 or have been designed to carry the right payloads as per the new norms which were announced a few years back. They are much more productive and have better fuel efficiency. Therefore, it makes sense to replace the older trucks with the new trucks, Aggarwal explained.

He said with the better infrastructure, customers also need better/more powerful engines, which also requires

replacement of older trucks. New-age customers, especially e-commerce companies, also have a lot of demand on productivity and require a specific type of trucks which can deliver goods quickly.

He added that the infrastructure investments in the country are also leading to increased demand for construction trucks and with better infrastructure, a lot of migration is needed.

"For example, in the tractors segment, there is a lot of migration happening in the tractor segment. Overall, I would say the CV segment is on the right track and the prospects of CV are also very good," Aggarwal added.

While commenting on the Q1 2023-24 performance, Mr Rajesh Menon, Director General, SIAM said, "Sales of Passenger Vehicles in Q1 of Apr-June 2023 has been the highest ever with a growth of 9.4%, compared to the previous year. The Passenger Vehicle segment crossed 2 million units in the first half of Calendar year for the first time. Two-Wheelers also posted a growth of 11.2% in this Quarter, compared to last year, but are still lower than 2016-17 levels. Domestic sales of Three-Wheelers in Q1 of 2023-24 grew by 89.4% compared to last year albeit on a low base, but are still lower than the 2018-19 levels. Commercial Vehicles have de-grown by (-)3.3% in this Quarter, compared to Q1 of last financial year."

Domestic Sales: Monthly

Category	Domestic Sales (In Nos.)	
Segment/Subsegment	June	
	2022	2023
Total Passenger Vehicles⁵	3,20,985	3,27,487
Three Wheelers		
Passenger Carrier	17,934	41,090
Goods Carrier	7,050	8,797
E-Rickshaw	1,464	2,655
E-Cart	253	477
Total Three Wheelers	26,701	53,019
Two Wheelers		
Scooter / Scooterette	4,21,362	3,87,373
Motorcycle/Step-Throughs	8,49,928	9,08,954
Mopeds	37,474	34,499
Total Two Wheelers	13,08,764	13,30,826



SIAM						
Segment wise Comparative Production, Domestic Sales & Exports data for the month of June 2023						
(Number of Vehicles)						
Category	Production		Domestic Sales		Exports	
Segment/Subsegment	June		June		June	
	2022	2023	2022	2023	2022	2023
Passenger Vehicles (PVs)*						
Passenger Cars	1,59,121	1,43,556	1,32,342	1,16,375	37,071	35,964
Utility Vehicles (UVs)	1,54,492	1,78,514	1,33,076	1,54,520	19,437	21,162
Vans	10,398	9,792	10,370	9,357	-	472
Total Passenger Vehicles (PVs)	3,24,011	3,31,862	2,75,788	2,80,252	56,508	57,618
Three Wheelers						
Passenger Carrier	53,078	66,343	17,934	41,090	33,674	24,492
Goods Carrier	7,551	9,557	7,050	8,797	287	136
E-Rickshaw	1,282	2,826	1,464	2,655	-	-
E-Cart	240	300	253	477	-	-
Total Three Wheelers	62,151	79,026	26,701	53,019	33,961	24,628
Two Wheelers						
Scooter/ Scooterette	4,49,905	4,21,105	4,21,362	3,67,373	33,535	35,668
Motorcycle/Step-Throughs	12,10,557	11,57,621	8,49,928	9,08,954	3,61,585	2,37,186
Mopeds	34,326	34,860	37,474	34,499	268	330
Total Two Wheelers	16,94,788	16,13,386	13,08,764	13,30,826	3,95,408	2,73,184
Quadracycle	198	429	47	47	234	384
Grand Total	20,81,148	20,24,703	16,11,300	16,64,144	4,86,111	3,55,814
* BMW, Mercedes, JLR, Tata Motors and Volvo Auto data is not available						
Society of Indian Automobile Manufacturers (SIAM) (15/07/2023)						

SIAM						
Summary Report: Cumulative Production, Domestic Sales & Exports data for the period of April-June 2023						
Report I						
(Number of Vehicles)						
Category	Production		Domestic Sales		Exports	
Segment/Subsegment	April-June		April-June		April-June	
	2022-23	2023-24	2022-23	2023-24	2022-23	2023-24
Passenger Vehicles (PVs)*						
Passenger Cars	5,10,826	5,00,521	4,11,507	4,13,723	1,04,400	94,793
Utility Vehicles (UVs)	5,17,389	6,02,145	4,64,558	5,46,803	55,547	55,419
Vans	34,484	34,527	34,432	35,648	169	1,944
Total Passenger Vehicles (PVs)	10,62,699	11,37,193	9,10,495	9,95,974	1,60,116	1,52,156
Commercial Vehicles (CVs)**						
M&HCVs						
Passenger Carrier	8,900	11,559	7,876	10,939	2,223	2,388
Goods Carrier	80,224	77,931	67,978	66,835	3,733	1,400
Total M&HCVs	89,124	89,490	75,854	77,774	5,956	3,788
LCVs						
Passenger Carrier	11,454	18,188	11,590	14,438	274	390
Goods Carrier	1,56,720	1,45,769	1,37,044	1,24,834	13,394	10,447
Total LCVs	1,68,174	1,63,957	1,48,634	1,39,272	13,668	10,837
Total Commercial Vehicles (CVs)	2,57,298	2,53,447	2,24,488	2,17,046	19,624	14,625
Three Wheelers						
Passenger Carrier	1,44,546	1,82,752	50,663	1,14,127	56,038	72,931
Goods Carrier	23,260	23,767	21,350	21,866	1,199	429
E-Rickshaw	3,150	6,116	3,567	7,560	-	-
E-Cart	733	801	713	1,093	-	-
Total Three Wheelers	1,71,689	2,13,436	76,293	1,44,475	97,237	73,360
Two Wheelers						
Scooter/ Scooterette	12,76,513	14,07,308	12,07,903	12,98,355	96,775	1,25,890
Motorcycle/Step-Throughs	34,50,846	33,81,065	24,05,228	27,37,348	10,51,477	6,65,042
Mopeds	1,07,106	1,10,069	1,11,402	1,05,261	342	384
Total Two Wheelers	48,34,465	48,98,442	37,24,533	41,40,964	11,48,594	7,91,316
Quadracycle	501	1,108	101	143	396	992
Grand Total	63,26,692	65,03,626	49,35,910	54,98,602	14,25,967	10,32,449
* BMW, Mercedes, JLR and Volvo Auto data is not available						
** Dealer JDM & Scania data is not available						
Society of India - Automobile Manufacturers (SIAM) (12/07/2023)						



SIAM						
Summary Report: Cumulative Production, Domestic Sales & Exports data for the period of April-June 2023						
						Report I (Number of Vehicles)
Category	Production		Domestic Sales		Exports	
Segment/Subsegment	April-June		April-June		April-June	
	2022-23	2023-24	2022-23	2023-24	2022-23	2023-24
Passenger Vehicles (PVs)*						
Passenger Cars	5,10,826	5,00,821	4,11,507	4,13,723	1,04,400	94,793
Utility Vehicles (UVs)	5,17,389	6,02,145	4,64,556	5,46,603	55,547	55,419
Vans	34,484	34,527	34,432	35,648	189	1,944
Total Passenger Vehicles (PVs)	10,62,699	11,37,493	9,10,495	9,95,974	1,60,116	1,52,158
Commercial Vehicles (CVs)**						
M&HCVs						
Passenger Carrier	8,900	11,559	7,876	10,939	2,223	2,388
Goods Carrier	80,224	77,931	67,978	66,836	3,733	1,400
Total M&HCVs	89,124	89,490	75,854	77,774	5,956	3,788
LCVs						
Passenger Carrier	11,494	18,188	11,590	14,438	274	390
Goods Carrier	1,56,720	1,45,769	1,37,044	1,24,834	13,394	10,447
Total LCVs	1,68,214	1,63,957	1,48,634	1,39,272	13,668	10,837
Total Commercial Vehicles (CVs)	2,57,338	2,53,447	2,24,488	2,17,046	19,624	14,625
Three Wheelers						
Passenger Carrier	1,44,546	1,82,752	50,663	1,14,127	96,038	72,931
Goods Carrier	23,260	23,767	21,350	21,696	1,199	429
E-Rickshaw	3,150	6,116	3,567	7,560	-	-
E-Cart	733	801	713	1,093	-	-
Total Three Wheelers	1,71,689	2,13,436	76,293	1,44,475	97,237	73,360
Two Wheelers						
Scooter/ Scooterette	12,76,513	14,07,308	12,07,903	12,98,366	96,775	1,25,890
Motorcycle/Step-Throughs	34,50,846	33,81,065	24,05,228	27,37,348	10,51,477	6,65,042
Mopeds	1,07,106	1,10,089	1,11,402	1,05,261	342	384
Total Two Wheelers	48,34,465	48,98,442	37,24,533	41,40,964	11,48,594	7,91,316
Quadricycle	501	1,108	101	143	396	992
Grand Total	83,26,692	85,03,826	49,35,910	54,98,602	14,25,967	10,32,449
* BMW, Mercedes, JLR and Volvo Auto data is not available						
** Daimler, JCBM & Scania data is not available						
Society of Indian Automobile Manufacturers (SIAM)						

SIAM												
Category & Company wise Summary Report for the month of June 2023 and Cumulative for April-June 2023												
												Report II (Number of Vehicles)
Category	Production				Domestic Sales				Exports			
Segment/Subsegment	June		April-June		June		April-June		June		April-June	
Manufacturer	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24
Passenger Vehicles (PVs)												
FCA India Automobiles Pvt Ltd	2,154	726	4,762	2,732	1,983	493	3,777	1,785	513	613	1,127	1,361
Force Motors Ltd	67	160	215	258	73	233	217	241	-	-	-	-
Honda Cars India Ltd	10,289	6,524	29,963	18,000	7,634	5,080	23,896	15,053	2,602	2,708	6,533	5,068
Hyundai Motor India Ltd	62,600	66,964	1,63,900	1,80,662	49,001	50,001	1,35,293	1,45,309	13,950	15,800	34,520	35,100
Isuzu Motors India Pvt Ltd	372	6	1,212	90	89	30	166	103	-	-	194	-
Kia Motors India Pvt Ltd	32,288	25,501	84,161	80,272	24,024	19,391	61,661	61,373	8,006	8,118	21,459	22,511
Mahindra & Mahindra Ltd	27,052	53,991	75,352	98,235	29,680	32,588	76,310	1,00,172	582	1,421	1,819	3,378
Maruti Suzuki India Ltd	1,40,740	1,30,793	4,54,161	4,54,113	1,22,865	1,33,027	3,89,154	4,14,055	20,753	19,736	58,987	62,867
MG Motor India Pvt Ltd	4,801	5,483	11,727	17,006	4,503	5,125	10,519	14,680	-	-	-	-
Nissan Motor India Pvt Ltd	8,909	7,038	20,154	15,253	3,510	2,552	7,766	7,767	4,487	3,282	11,419	5,928
PCA Motors Pvt Ltd	77	272	134	3,155	77	1,009	162	2,812	-	5	-	703
Renault India Pvt Ltd	12,055	5,119	28,874	12,636	3,317	5,450	21,921	14,398	1,976	1,619	6,658	3,165
Skoda Auto India Pvt Ltd	8,872	5,948	16,681	14,301	5,023	3,865	15,779	11,522	-	198	-	525
Tata Motors Ltd	NA	NA	1,31,375	1,43,001	NA	NA	1,31,970	1,43,062	NA	NA	222	361
Toyota Kirloskar Motor Pvt Ltd	9,841	20,449	22,535	77,272	16,405	17,970	41,423	60,894	-	1,371	32	3,760
Volkswagen India Pvt Ltd	3,967	8,785	11,433	19,607	3,315	3,394	10,429	9,712	1,329	2,945	7,146	7,433
Total Passenger Vehicles (PVs)	3,24,011	3,31,862	10,62,699	11,37,193	2,75,788	2,80,252	9,10,495	9,95,974	55,508	57,618	1,60,116	1,52,156
Exhibit English												



Statistics

S.I.4.11												
Category & Company wise Summary Report for the month of June 2023 and Cumulative for April-June 2023												
												Report II
												(Number of Vehicles)
Category	Production				Domestic Sales				Exports			
Segment/Subsegment	June	April-June	June	April-June	June	April-June	June	April-June	June	April-June	June	April-June
Manufacturer	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24
Three Wheelers												
Atul Auto Ltd	1,073	1,540	5,253	3,375	1,632	1,225	4,395	2,747	186	42	807	330
Bajaj Auto Ltd	31,493	47,507	85,907	1,35,126	13,221	33,644	30,017	96,482	17,554	12,257	47,874	38,480
Continental Engines Pvt Ltd	583	484	1,638	1,377	605	474	1,683	1,215	-	-	-	-
Force Motors Ltd	280	301	554	847	-	-	-	-	70	420	462	1,008
Mahindra & Mahindra Ltd	3,761	5,315	10,046	16,771	4,008	6,377	10,052	17,780	-	4	18	17
Paggo Vehicles Pvt Ltd	8,225	10,480	24,097	23,265	6,273	9,855	17,668	19,300	2,327	323	5,845	3,128
TVS Motor Company Ltd	15,745	12,272	44,132	32,679	982	1,434	3,565	4,351	13,824	10,576	42,431	30,411
Total Three Wheelers	62,151	79,026	1,71,689	2,13,436	26,701	53,019	76,293	1,44,475	33,961	24,628	97,237	73,350
Two Wheelers												
Atul Auto Ltd	3,190	9,039	10,505	29,965	3,190	10,202	10,551	26,618	-	-	-	-
Bajaj Auto Ltd	3,01,053	2,51,741	8,73,730	8,70,987	1,25,083	1,66,241	3,14,418	5,42,515	1,80,865	1,27,357	5,32,740	3,46,399
Chetak Technology Ltd	-	-	-	485	-	51	-	316	-	-	-	-
Hero MotoCorp Ltd	4,91,642	4,20,792	13,48,570	13,19,885	4,63,210	4,22,757	13,28,166	13,17,250	2,657	14,236	62,026	35,324
Honda Motorcycle & Scooter India Pvt Ltd	3,77,380	3,28,875	10,73,583	10,70,366	3,55,585	3,02,758	9,85,156	9,57,180	28,322	21,337	1,02,833	76,044
India Kawasaki Motors Pvt Ltd	174	296	572	665	250	398	752	1,118	-	-	-	-
India Yamaha Motor Pvt Ltd	77,127	70,774	2,13,730	2,15,231	52,098	58,597	1,40,874	1,65,377	26,128	12,819	79,905	45,706
Mahindra Two Wheelers Ltd	19	-	72	-	-	-	48	-	-	-	-	-
Okawa Auto Tech Pvt Ltd	9,767	549	29,698	549	9,248	36	29,982	653	-	-	-	-
Paggo Vehicles Pvt Ltd	5,242	4,227	19,440	13,435	3,702	3,333	13,706	8,924	1,580	1,676	5,200	4,479
Royal-Enfield (Unit of Eicher Motors)	58,829	82,732	2,06,445	2,35,758	50,235	67,495	1,67,042	2,07,171	1,142	9,614	20,583	20,535
Suzuki Motorcycle India Pvt Ltd	55,679	84,970	2,02,496	2,59,720	52,928	63,059	1,57,773	1,97,358	15,089	17,678	43,757	63,426
Triumph Motorcycles India Pvt Ltd	57	51	146	86	84	98	260	195	-	-	-	-
TVS Motor Company Ltd	2,93,929	3,21,732	8,55,272	9,35,274	1,83,090	2,35,233	5,95,105	7,21,479	1,00,625	98,668	2,95,690	1,87,003
Total Two Wheelers	16,94,788	16,13,386	48,34,465	48,98,442	13,08,764	13,30,826	37,24,533	41,40,964	3,95,408	2,73,184	11,48,594	7,91,316
Quadracycle												
Bajaj Auto Ltd	198	429	501	1,108	47	47	101	143	234	384	396	992
Total Quadracycle	198	429	501	1,108	47	47	101	143	234	384	396	992
Grand Total	20,81,148	20,24,703	60,69,354	62,50,179	16,11,300	16,64,144	47,11,422	52,81,556	4,86,111	3,55,814	14,06,343	16,17,824

Society of Indian Automobile Manufacturers (SIAM)

S.I.4.12												
Segment & Company wise Production, Domestic Sales & Exports Report for the month of June 2023 and Cumulative for April-June 2023												
												Report III
												(Number of Vehicles)
Category	Production				Domestic Sales				Exports			
Segment/Subsegment	June	April-June	June	April-June	June	April-June	June	April-June	June	April-June	June	April-June
Manufacturer	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24
Passenger Vehicles (PVs)												
A: Passenger Cars												
Ford Cars India Ltd	9,568	6,624	28,043	18,000	7,235	5,080	22,110	15,053	2,523	2,109	6,350	4,792
Hyundai Motor India Ltd	35,000	34,428	88,800	89,456	22,725	21,367	84,172	84,881	10,374	12,703	24,550	27,864
Mahindra & Mahindra Ltd	-	-	-	-	-	-	-	-	-	-	-	-
Mazda Suzuki India Ltd	1,02,085	68,916	3,15,000	3,11,921	93,005	80,269	2,58,536	2,54,878	10,350	15,048	59,722	49,725
M/C Motor India Pvt Ltd	-	1,500	-	3,052	-	1,184	-	1,814	-	-	-	-
Nissan Motor India Pvt Ltd	4,124	3,000	10,382	4,725	-	-	-	-	4,170	2,838	10,452	4,881
Renault India Pvt Ltd	3,504	975	3,054	3,452	2,580	1,349	6,146	3,223	837	705	2,097	1,304
Skoda Auto India Pvt Ltd	3,408	2,365	8,572	9,224	2,901	1,639	3,305	5,051	-	-	-	0
Tata Motors Ltd	NA	NA	41,997	50,473	NA	NA	12,182	57,226	NA	NA	54	97
Toyota Kirloskar Motor Pvt Ltd	82	195	710	427	1,218	3,657	7,051	12,688	-	-	-	-
Volkswagen India Pvt Ltd	2,600	5,559	7,788	12,551	1,920	1,812	4,980	4,924	1,317	2,101	6,575	6,161
Total A: Passenger Cars	1,59,121	1,43,556	5,10,826	5,00,521	1,32,342	1,16,375	4,11,507	4,13,723	37,071	35,984	1,04,400	94,793
B: Utility Vehicles (UVs)												
Chetak Technology Pvt Ltd	2,184	775	4,762	2,732	1,863	493	3,777	1,735	513	613	1,727	1,381
Force Motors Ltd	67	160	215	258	73	233	217	241	-	2	-	2
Ford Cars India Ltd	681	-	1,920	-	599	-	1,780	-	170	-	183	266
Hyundai Motor India Ltd	29,800	32,571	81,100	91,205	26,276	28,610	71,123	83,642	2,975	2,897	9,670	7,236
Isuzu Motors India Pvt Ltd	312	8	1,212	90	60	30	186	103	-	-	194	-
Kia Motors India Pvt Ltd	32,286	25,531	84,101	80,272	24,024	19,397	61,791	57,373	8,005	5,712	21,459	22,511
Mahindra & Mahindra Ltd	26,715	33,954	74,298	98,745	26,620	32,525	76,420	1,00,162	582	1,401	1,579	3,308
Mazda Suzuki India Ltd	28,002	35,728	1,05,342	1,07,799	18,860	43,404	80,852	1,25,401	5,703	3,335	15,776	11,289
M/C Motor India Pvt Ltd	4,901	3,966	11,727	13,954	4,603	3,947	10,510	12,768	-	-	-	-
Nissan Motor India Pvt Ltd	4,785	4,356	9,772	10,525	3,615	2,552	7,756	7,787	327	444	957	1,077
Okawa Auto Tech Pvt Ltd	77	275	134	3,155	77	1,003	152	2,812	-	5	-	703
Renault India Pvt Ltd	5,582	5,744	20,820	9,784	6,767	4,107	15,775	11,170	1,138	1,214	4,581	1,885
Skoda Auto India Pvt Ltd	5,344	3,583	8,109	8,077	3,062	2,327	7,474	6,471	-	102	-	510
Tata Motors Ltd	NA	NA	27,887	93,741	NA	NA	87,943	88,881	NA	NA	115	273
Toyota Kirloskar Motor Pvt Ltd	9,758	29,254	22,225	78,845	15,277	14,268	34,872	38,206	1,371	-	32	3,750
Volkswagen India Pvt Ltd	1,007	4,209	3,725	8,756	1,067	1,582	5,489	4,788	12	764	271	1,272
Total B: Utility Vehicles (UVs)	1,54,492	1,78,514	5,17,389	6,02,145	1,33,076	1,54,520	4,64,555	5,46,603	19,437	21,162	55,547	55,419
C: Vans												
Mahindra & Mahindra Ltd	337	40	1,054	90	240	3	851	10	-	20	-	70
Mazda Suzuki India Ltd	10,061	9,752	31,018	34,393	10,130	9,354	31,786	32,876	-	452	149	1,843
Tata Motors Ltd	NA	NA	1,511	44	NA	NA	1,815	2,862	NA	NA	20	31
Total C: Vans	10,398	9,792	34,484	34,527	10,370	9,387	34,432	35,648	-	472	189	1,944
Total Passenger Vehicles (PVs)	3,24,011	3,31,862	10,62,699	11,37,193	2,75,788	2,80,282	9,10,495	9,95,974	56,508	57,619	1,60,116	1,52,156

Report III



SIAM												
Segment & Company wise Production, Domestic Sales & Exports Report for the month of June 2023 and Cumulative for April-June 2023												
												Report III
												(Number of Vehicles)
Category	Production				Domestic Sales				Exports			
Segment/Subsegment	June		April-June		June		April-June		June		April-June	
Manufacturer	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24
Three Wheelers												
A: Passenger Carrier												
Atul Auto Ltd.	1,026	754	2,781	7,424	784	506	1,699	606	186	72	704	332
Bajaj Auto Ltd.	28,749	43,221	77,747	1,23,411	10,645	29,713	30,515	57,565	17,426	13,161	47,450	38,228
Continental Engineering Pvt. Ltd.	170	117	455	311	180	100	532	250	-	-	-	-
Force Motors Ltd.	280	301	554	847	-	-	-	-	70	420	462	1,058
Mahindra & Mahindra Ltd.	1,450	2,788	3,572	7,961	1,469	2,605	3,514	7,539	-	2	4	13
Piaggio Vehicles Pvt. Ltd.	3,800	6,351	15,856	15,155	3,937	6,524	10,405	15,435	2,214	201	5,327	2,550
TVS Motor Company Ltd.	15,598	12,241	43,603	32,622	905	1,433	3,427	4,304	13,778	10,576	42,041	30,411
Total A: Passenger Carrier	53,078	66,343	1,44,546	1,82,752	17,934	41,090	50,663	1,14,127	33,674	24,482	96,038	72,931
E-Rickshaw												
Atul Auto Ltd.	178	579	358	7,484	205	490	432	1,282	-	-	-	-
Continental Engineering Pvt. Ltd.	20	252	63	913	10	392	119	845	-	-	-	-
Mahindra & Mahindra Ltd.	1,076	1,555	2,709	3,719	1,272	1,833	3,322	5,435	-	-	-	-
Total E-Rickshaw	1,282	2,828	3,150	6,116	1,484	2,855	3,597	7,560	-	-	-	-
B: Goods Carrier												
Atul Auto Ltd.	580	19	1,292	19	570	18	1,668	23	-	-	53	4
Bajaj Auto Ltd.	2,749	4,285	8,160	17,715	2,572	3,831	7,501	10,977	123	96	224	232
Continental Engineering Pvt. Ltd.	470	94	1,072	127	400	33	1,362	55	-	-	-	-
Mahindra & Mahindra Ltd.	1,086	1,550	5,395	4,729	1,143	1,473	3,416	4,156	-	2	14	4
Piaggio Vehicles Pvt. Ltd.	2,420	3,557	6,271	7,110	2,308	3,341	7,263	8,487	113	38	518	758
TVS Motor Company Ltd.	147	31	529	47	53	1	758	47	46	-	300	-
Total B: Goods Carrier	7,551	9,557	23,280	23,787	7,050	8,797	21,360	21,695	287	136	1,199	429
E-Cart												
Atul Auto Ltd.	90	157	302	438	96	211	290	446	-	-	-	-
Continental Engineering Pvt. Ltd.	-	11	-	11	-	-	-	-	-	-	-	-
Mahindra & Mahindra Ltd.	150	102	431	352	154	206	430	647	-	-	-	-
Total E-Cart	240	300	733	801	250	417	713	1,093	-	-	-	-
Total Three Wheelers	62,151	79,028	1,71,689	2,13,436	26,701	53,019	78,293	1,44,475	33,961	24,628	97,237	73,360

SIAM												
Segment & Company wise Production, Domestic Sales & Exports Report for the month of June 2023 and Cumulative for April-June 2023												
												Report III
												(Number of Vehicles)
Category	Production				Domestic Sales				Exports			
Segment/Subsegment	June		April-June		June		April-June		June		April-June	
Manufacturer	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24
Two Wheelers												
A: Scooter/ Scooterette												
Ather Energy Pvt. Ltd.	3,100	3,039	10,505	25,000	3,190	10,202	10,551	20,676	-	-	-	-
Bajaj Auto Ltd.	2,449	5,010	8,357	21,458	2,469	7,080	6,268	20,534	-	-	-	74
Chetak Technology Ltd.	-	-	-	495	-	51	-	376	-	-	-	-
Hero MotoCorp Ltd.	24,011	25,581	83,992	85,187	21,989	29,708	87,309	64,492	1,457	2,811	2,550	5,442
Honda Motorcycle & Scooter India Pvt. Ltd.	2,20,816	1,52,718	5,96,728	5,23,903	2,10,895	1,70,019	5,62,050	5,89,430	15,147	13,702	52,342	45,271
India Yamaha Motor Pvt. Ltd.	18,151	24,670	46,394	64,870	18,036	23,013	40,108	57,474	3,490	2,468	9,528	7,756
Okins Auto Tech Pvt. Ltd.	5,267	549	29,696	549	5,248	56	29,982	653	-	-	-	-
Piaggio Vehicles Pvt. Ltd.	5,242	4,227	10,440	13,435	3,752	3,393	13,700	8,524	1,580	1,570	5,200	4,479
Suzuki Motorcycle India Pvt. Ltd.	56,297	65,026	1,70,559	2,15,897	52,206	69,872	1,62,927	1,89,575	3,600	7,806	13,086	32,921
TVS Motor Company Ltd.	1,05,882	1,25,225	3,12,844	3,54,568	1,01,674	1,12,059	3,00,480	3,20,059	8,254	7,305	14,409	29,947
Total A: Scooter/ Scooterette	4,48,905	4,21,103	12,76,513	14,07,308	4,21,362	3,87,373	12,07,803	12,98,355	33,535	35,668	96,775	1,25,890
B: Motorcycle/Step-Throughs												
Bajaj Auto Ltd.	2,98,604	2,53,121	8,67,373	8,49,539	1,22,674	7,69,151	3,05,168	6,21,781	1,90,886	1,27,357	5,32,740	3,46,329
Hero MotoCorp Ltd.	4,67,231	3,91,611	12,54,518	12,33,701	4,41,227	3,93,048	12,46,827	12,32,758	26,200	11,425	59,455	29,882
Honda Motorcycle & Scooter India Pvt. Ltd.	1,58,504	1,76,157	4,77,235	3,95,403	1,44,679	1,62,797	4,33,106	3,82,750	13,170	7,835	60,611	30,770
India Kawasaki Motors Pvt. Ltd.	174	266	512	665	250	308	752	1,176	-	-	-	-
India Yamaha Motor Pvt. Ltd.	58,976	45,504	1,67,342	1,50,381	38,093	35,554	1,00,865	1,07,603	22,638	10,150	67,437	40,350
Mahindra Two Wheelers Ltd.	19	-	72	-	-	-	-	-	-	-	-	-
Royal-Enfield (Unit of Eicher Motors)	68,020	52,722	2,06,445	2,35,758	50,255	67,495	1,57,642	2,07,771	11,142	9,014	20,593	20,593
Suzuki Motorcycle India Pvt. Ltd.	10,582	16,852	31,941	43,883	720	3,187	4,846	7,783	11,489	9,872	30,721	30,605
Triumph Motorcycles India Pvt. Ltd.	57	51	148	98	84	88	260	795	-	-	-	-
TVS Motor Company Ltd.	1,46,721	1,51,247	4,35,252	4,70,617	54,002	87,275	1,52,723	2,06,748	62,073	60,833	2,80,930	1,65,672
Total B: Motorcycle/Step-Throughs	12,10,557	11,57,621	34,50,845	33,81,065	8,49,928	9,08,954	24,95,228	27,37,348	3,61,585	2,37,186	10,51,477	5,65,042
C: Mopeds												
TVS Motor Company Ltd.	34,326	34,660	1,07,108	1,10,069	37,474	34,498	1,17,402	1,06,261	260	330	342	364
Total C: Mopeds	34,326	34,660	1,07,108	1,10,069	37,474	34,498	1,17,402	1,06,261	260	330	342	364
Total Two Wheelers	18,94,788	16,13,388	48,34,485	48,98,442	13,08,764	13,30,826	37,24,533	41,40,984	3,95,408	2,79,184	11,48,594	7,91,316
Quadricycle												
Bajaj Auto Ltd.	198	429	501	1,108	47	47	101	143	204	384	395	992
Total Quadricycle	198	429	501	1,108	47	47	101	143	204	384	395	992
Grand Total	20,81,148	20,24,703	60,65,354	62,50,179	16,11,307	16,64,144	47,11,422	52,81,556	4,86,111	3,55,814	14,06,343	10,17,824

Society of Indian Automobile Manufacturers (12/07/2023)



Statistics

SIAM

Sub-segment & Company wise Production, Domestic Sales & Exports Report for the month of June 2023 and Cumulative for April-June 2023

Report IV

(Number of Vehicles)

Category	Production				Domestic Sales				Exports			
	June 2022	June 2023	April-June 2022-23	2023-24	June 2022	June 2023	April-June 2022-23	2023-24	June 2022	June 2023	April-June 2022-23	2023-24
Passenger Vehicles (PVs)												
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)	-	1,500	-	3,052	-	1,184	-	1,914	-	-	-	-
Total Micro	-	1,500	-	3,052	-	1,184	-	1,914	-	-	-	-
Mini : Seats upto-5, Length Normally <3600 mm, Body Style-Hatchback, Engine Displacement Normally upto 1.0 Litre												
Maruti Suzuki India Ltd (Ato, Ignis, Spacio)	20,145	14,545	55,999	52,264	14,442	14,054	45,907	40,400	7,349	2,647	15,304	11,634
Renault India Pvt. Ltd (Kwid)	3,534	975	5,054	5,452	2,550	1,549	5,146	5,228	537	205	2,097	1,354
Total Mini	23,649	15,621	77,053	55,716	17,002	15,403	55,133	43,628	8,186	3,052	17,481	12,938
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, Jazz)	3,593	3,841	12,771	9,601	3,343	3,802	12,896	10,122	155	180	278	124
Hyundai Motor India Ltd (Aura, Grand i10 i20, Santro, X)	28,502	24,856	77,797	58,123	21,522	17,390	63,200	52,812	1,525	1,059	11,701	18,216
Maruti Suzuki India Ltd (CEM Model# Baleno, Celerio)	81,321	7,578	2,42,800	2,55,865	77,745	24,171	2,34,877	2,10,825	10,221	2,101	55,902	58,523
Tata Motors Ltd (Altroz, Tigor, Tigor)	NA	NA	41,907	50,412	NA	NA	42,182	51,220	NA	NA	54	57
Toyota Kirloskar Motor Pvt Ltd (Glanza)	-	-	-	-	1,123	3,497	5,727	12,259	-	-	-	-
Volkswagen India Pvt Ltd (Polo)	-	-	874	-	25	-	750	-	-	-	1,095	-
Total Compact	1,13,216	1,00,275	3,75,948	3,82,002	1,03,865	88,930	3,27,635	3,37,445	17,735	19,350	54,778	55,096
Super Compact : Seats upto-5, Length Normally between 4000 - 4250 mm, Body Style-Sedan/Estate/Hatch/Notchback, Engine Displacement Normally upto 1.6 Litre												
Mahindra & Mahindra Ltd (Verito)	-	-	-	-	20	-	39	-	-	-	-	-
Total Super Compact	-	-	-	-	20	-	39	-	-	-	-	-
Mid-Size : Seats upto-5, Length Normally between 4250 - 4500 mm, Body Style-Sedan/Estate/Hatch/Notchback, Engine Displacement Normally upto 1.8 Litre												
Honda Cars India Ltd (City)	3,705	4,783	15,272	8,399	3,292	1,478	9,220	4,920	2,135	1,928	5,074	4,602
Hyundai Motor India Ltd (Verna)	7,595	9,557	11,303	21,323	1,705	1,001	5,972	11,623	3,315	5,537	1,396	9,602
Maruti Suzuki India Ltd (Ciaz)	1,519	2,994	5,092	5,722	1,557	1,771	2,672	5,453	477	1,001	2,736	1,132
Nissan Motor India Pvt Ltd (Sunni)	7,124	3,000	3,382	1,725	-	-	-	-	1,170	2,838	12,452	1,881
Volkswagen India Pvt Ltd (Vento, Virtus)	2,550	5,550	5,804	12,851	1,553	1,812	4,207	4,924	1,317	2,181	5,780	5,011
Total Mid-Size	18,706	23,600	48,943	53,100	8,405	9,035	20,071	25,296	11,150	13,582	32,141	26,750
Executive : Seats upto-5, Length Normally between 4500 - 4700 mm, Body Style-Sedan/Estate/Hatch/Notchback, Engine Displacement Normally upto 2 Litre												
Skoda Auto India Pvt Ltd (Octavia Skoda)	3,313	2,355	5,207	5,254	2,527	1,838	7,940	4,520	-	-	-	9
Total Executive	3,313	2,355	5,207	5,254	2,527	1,838	7,940	4,520	-	-	-	9
Premium : Seats upto-5, Length Normally between 4700 - 5000 mm, Body Style-Sedan/Estate/Hatch/Notchback, Engine Displacement Normally upto 3 Litre												
Skoda Auto India Pvt Ltd (Superb)	155	-	365	-	159	-	365	-	-	-	-	-
Toyota Kirloskar Motor Pvt Ltd (Camry)	52	195	310	427	59	184	324	325	-	-	-	-
Total Premium	207	195	675	427	218	184	689	520	-	-	-	-
Total Passenger Cars	1,59,121	1,43,555	5,10,826	5,00,521	1,32,342	1,16,375	4,11,507	4,13,723	37,071	35,984	1,04,400	94,793

NA : Not available

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Sub-segment & Company wise Production, Domestic Sales & Exports Report for the month of June 2023 and Cumulative for April-June 2023

Report IV

(Number of Vehicles)

Category	Production				Domestic Sales				Exports			
	June 2022	June 2023	April-June 2022-23	2023-24	June 2022	June 2023	April-June 2022-23	2023-24	June 2022	June 2023	April-June 2022-23	2023-24
B : Utility Vehicles (UVs)												
B : Utility Vehicles/ Sports Utility Vehicles; 4x2 or 4x4 offroad capability ; Generally ladder on frame ; 2 box ; 5 Seats or more but upto 10 Seats.												
UVG : Length < 4000 mm & Price < 20 Lakhs												
Honda Cars India Ltd (WR-V)	891	-	1,920	-	599	-	1,700	-	179	-	103	266
Hyundai Motor India Ltd (Xeta, Venue)	10,537	14,115	25,531	55,130	10,521	11,505	27,013	52,161	2	1,511	1,297	3,549
Kia Motors India Pvt Ltd (Sonet)	10,555	12,402	29,625	37,317	7,455	7,722	20,758	25,717	2,997	5,185	8,228	12,253
Mahindra & Mahindra Ltd (Bolero, Kuv100, Kuv100, Kuv100)	16,954	15,198	45,967	58,022	18,275	12,487	45,023	57,074	490	825	1,495	2,012
Maruti Suzuki India Ltd (CEM Model# Brezza, Fronx)	13,319	22,524	52,799	57,836	7,404	21,540	25,780	56,127	2,205	552	15,074	17,251
Nissan Motor India Pvt Ltd (Magna)	7,455	4,038	5,070	10,428	3,551	2,552	7,217	7,781	527	477	967	1,041
PCA Motors Pvt. Ltd (C3, EC3)	50	272	60	3,124	50	991	60	2,784	-	5	-	702
Renault India Pvt. Ltd (Kiger, Tribor)	8,562	5,144	20,820	9,124	6,757	4,101	15,775	11,170	1,133	1,414	4,501	1,855
Tata Motors Ltd (Nexon, Punch)	NA	NA	73,107	79,513	NA	NA	73,187	78,000	NA	NA	145	272
Toyota Kirloskar Motor Pvt Ltd (Urban Cruiser)	-	-	-	-	5,331	-	1,953	-	-	-	-	-
Total UVG	65,896	77,694	2,62,589	2,99,773	54,506	67,079	2,32,226	2,78,514	10,342	9,927	30,820	22,691
UV1 : Length 4000 to 4400 mm & Price < 20 Lakhs												
Kia Motors India Ltd (Garnit)	57	4	219	10	73	-	217	-	2	-	-	2
Hyundai Motor India Ltd (Creta)	16,556	14,819	44,461	48,212	13,790	14,447	37,414	45,022	2,439	198	5,719	1,035
Kia Motors India Pvt Ltd (Seltos)	12,565	12,711	35,391	20,668	8,555	3,578	21,877	14,256	7,506	2,877	11,103	8,077
Maruti Suzuki India Ltd (Ertiga, Grand Vitara, S-Cross)	10,725	6,741	45,991	50,544	11,120	12,908	42,585	51,587	454	2,772	1,561	10,482
MG Motor India Pvt. Ltd (Astor)	2,257	111	4,781	2,004	1,543	891	3,911	2,187	-	-	-	-
Nissan Motor India Pvt Ltd (Kicks)	297	-	732	-	154	-	539	-	-	-	-	-
Skoda Auto India Pvt Ltd (Kushaq)	5,255	3,047	7,061	8,785	2,953	2,130	7,202	5,580	-	190	-	515
Toyota Kirloskar Motor Pvt Ltd (Model Manufactured by)	-	16,420	-	45,052	-	2,021	-	6,527	-	1,371	-	3,755
Volkswagen India Pvt Ltd (Taigun)	1,259	1,849	3,556	5,164	1,327	1,449	5,226	4,453	12	754	271	1,279
Total UV1	49,292	52,395	1,35,992	1,55,048	39,505	44,227	1,18,941	1,30,672	7,241	8,114	19,704	25,128
UV2 : Length between 4400 - 4700 mm & Price < 20 Lakhs												
Hyundai Motor India Ltd (Nexson)	2,532	2,138	7,804	9,310	1,956	2,119	5,300	5,593	535	1,193	1,404	2,659
Kia Motors India Pvt Ltd (Carens)	8,255	2,828	20,210	22,266	7,595	2,047	15,261	20,427	735	708	1,878	2,101
Mahindra & Mahindra Ltd (Marazzo, Scorpio, Xuv500, X)	9,551	14,755	27,102	42,107	10,277	14,118	27,195	45,288	92	575	324	1,230
Maruti Suzuki India Ltd (XUV500)	3,325	2,800	11,852	9,020	3,335	2,059	11,787	9,090	11	31	11	82
MG Motor India Pvt. Ltd (Hector)	1,351	2,819	5,751	9,046	2,432	2,170	5,400	6,073	-	-	-	-
Tata Motors Ltd (Land Rover Defender)	NA	NA	14,700	13,631	NA	NA	14,776	12,554	NA	NA	2	1
Total UV2	25,787	32,231	87,509	1,05,700	25,896	29,107	83,857	99,955	1,341	2,508	3,670	6,219
UV3 : Length > 4700 mm & Price < 20 Lakhs												
Kia Motors India Pvt Ltd (H-lander, Niro)	-	155	2	248	-	233	-	247	-	-	-	-
Suzuki Motors India Pvt Ltd (H-Lander, V-Cross)	312	1	1,197	55	50	28	159	52	-	-	194	-
Toyota Kirloskar Motor Pvt Ltd (Innova Crysta, Innova)	6,721	2,848	15,902	21,126	6,735	2,351	15,883	20,874	-	-	-	-
Total UV3	7,033	9,005	17,095	22,030	6,875	8,522	16,042	21,307	-	-	194	-

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SIAM												
Sub-segment & Company wise Production, Domestic Sales & Exports Report for the month of June 2023 and Cumulative for April-June 2023												
												Report IV
												(Number of Vehicles)
Category	Production				Domestic Sales				Exports			
Segment/Subsegment	June		April-June		June		April-June		June		April-June	
Manufacturer	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24
UV4 : Price between Rs. 20 to 30 Lakh												
FCA India Automobiles Pvt. Ltd (Jeep Compass)	1,266	501	5,877	1,334	592	211	2,706	735	513	328	1,127	805
Hyundai Motor India Ltd. (Kona, Tucson)	205	695	304	1,830	179	338	341	1,357	-	-	-	-
Kia Motors India Pvt. Ltd. (Sorento)	280	-	690	-	265	-	878	-	-	-	-	-
Mahindra & Mahindra Ltd. (Atlas 64)	50	-	209	-	35	-	202	-	-	-	-	-
Maruti Suzuki India Ltd. (Suzuki)	-	-	-	-	-	203	-	203	-	-	-	-
MG Motor India Pvt. Ltd. (ZS EV)	347	650	669	1,371	315	617	340	1,747	-	-	-	-
PCA Motors Pvt. Ltd. (GS Aircross)	17	-	74	31	17	12	92	35	-	-	-	-
Toyota Kirloskar Motor Pvt. Ltd. (Mode Manufactured for)	-	500	-	500	-	-	-	-	-	-	-	-
Total UV4	2,191	1,922	5,190	5,429	1,748	1,381	5,060	4,122	513	328	1,127	805
UV5 : Price >Rs. 30 Lakh												
FCA India Automobiles Pvt. Ltd. (Jeep Meridian)	578	422	918	1,358	1,077	282	1,071	992	-	285	-	573
Hyundai Motor India Ltd. (Soniq)	-	159	-	260	-	100	-	449	-	-	-	-
Isuzu Motors India Pvt. Ltd. (MU-X)	-	5	15	24	3	2	7	-	-	-	-	-
Kia Motors India Pvt. Ltd. (Sorento)	-	-	15	-	-	24	16	279	-	-	-	-
MG Motor India Pvt. Ltd. (Gloria)	200	358	326	1,033	157	263	285	757	-	-	-	-
Skoda Auto India Pvt. Ltd. (Kodiaq)	83	535	278	1,232	79	197	272	497	-	-	-	-
Toyota Kirloskar Motor Pvt. Ltd. (Fortuner, Hilux, and Q	1,079	2,468	8,020	9,556	2,157	3,098	6,506	8,735	-	-	30	-
Volvo Cars India Pvt. Ltd. (S90)	48	850	169	562	50	138	243	355	-	-	-	-
Total UV5	4,293	5,267	8,014	14,185	4,548	4,104	8,430	12,023	-	285	30	573
Total Utility Vehicles (UVs)	1,54,492	1,78,514	5,17,389	5,02,145	1,33,076	1,54,520	4,54,556	5,46,603	19,437	21,162	55,547	55,419
Vans												
C-Vans : Generally 1 or 1.5 box; seats upto 6 to 10												
V1 : Hard tops mainly used for personal transport, Price upto Rs. 10 Lakh												
Mahindra & Mahindra Ltd. (Maxximo, Supro)	300	43	902	50	215	-	769	-	-	20	-	70
Maruti Suzuki India Ltd. (Eeco)	10,367	9,752	51,919	34,353	10,150	9,354	31,766	32,575	NA	452	745	7,845
Tata Motors Ltd. (Magic Express)	NA	NA	1,761	-	NA	NA	1,216	2,534	NA	NA	-	-
Total V1	10,367	9,792	34,282	34,483	10,348	9,354	34,350	35,210	-	472	148	1,813
V2 : Soft tops mainly used as Maxi Cabs, Price upto Rs. 10 Lakh												
Mahindra & Mahindra Ltd. (Santro)	37	-	152	-	22	3	82	10	-	-	-	-
Tata Motors Ltd. (Magic Iris)	NA	NA	60	44	NA	NA	-	125	NA	NA	20	31
Total V2	37	-	202	44	22	3	82	438	-	-	20	31
Total Vans	10,398	9,792	34,484	34,527	10,370	9,357	34,432	35,848	-	472	169	1,944
Total Passenger Vehicles (PVs)	3,24,611	3,31,652	10,52,699	11,37,193	2,75,788	2,80,262	9,10,495	9,95,974	56,606	67,618	1,60,116	1,52,158

SIAM												
Sub-segment & Company wise Production, Domestic Sales & Exports Report for the month of June 2023 and Cumulative for April-June 2023												
												Report IV
												(Number of Vehicles)
Category	Production				Domestic Sales				Exports			
Segment/Subsegment	June		April-June		June		April-June		June		April-June	
Manufacturer	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24
Three Wheelers												
A: Passenger Carriers												
A1: No. of seats including driver not exceeding 4 & Max. Mass not exceeding 1 tonnes												
Atul Auto Ltd. (Atul Gemini, Atul Rik At. Rik + 3P, Atul Bajaj Auto Ltd. (Maxima RE)	403	454	1,300	695	285	251	996	631	180	42	724	270
Continental Engineering Pvt. Ltd. (Baxy Express, Passenger)	28,748	43,221	77,747	1,23,411	10,948	29,713	30,576	57,695	17,428	12,161	47,450	38,220
Mahindra & Mahindra Ltd. (Alfa 110)	170	117	433	311	185	139	507	290	-	-	-	-
Piaggio Vehicles Pvt. Ltd. (Ape Auto, Ape Cargo)	1,450	2,785	3,572	7,961	1,489	2,535	3,874	7,539	-	2	4	13
TVS Motor Company Ltd. (TVS King Cargo)	5,805	6,651	16,326	15,166	3,937	6,524	10,400	13,433	2,214	291	9,327	2,839
Total A1	5,266	12,241	13,600	32,032	909	1,433	3,427	4,307	3,776	10,575	12,047	53,411
A2: No. of seats including driver exceeding 4 but not exceeding 7 & Max. Mass not exceeding 1.5 tonnes												
Atul Auto Ltd. (Atul Gemini)	532	250	1,427	439	499	225	1,202	365	-	-	30	56
Force Motors Ltd. (Machino)	280	301	524	877	-	-	-	-	70	120	462	1,008
Total A2	812	551	2,015	1,286	499	225	1,203	365	70	420	492	1,064
Total Passenger Carriers	53,078	66,343	1,44,546	1,82,752	17,934	41,060	50,663	1,14,127	33,674	24,492	96,038	72,931
E-Rickshaw												
Atul Auto Ltd. (Atul E-Rick)	178	579	358	1,484	209	490	432	1,282	-	-	-	-
Continental Engineering Pvt. Ltd. (Baxy E-Rick)	28	252	23	913	13	352	113	840	-	-	-	-
Mahindra & Mahindra Ltd. (Alfa Mini, Tred Year)	1,075	1,555	2,700	5,719	1,242	1,555	3,022	5,438	-	-	-	-
Total E-Rickshaw	1,282	2,386	3,150	8,116	1,464	2,555	3,567	7,560	-	-	-	-
B: Goods Carrier												
B1: Max mass not exceeding 1 tonnes												
Atul Auto Ltd. (Atul Gemini, Atul Samad, Atul Bajaj Auto Ltd. (Maxima)	880	19	1,852	19	540	15	1,662	23	-	-	52	4
Continental Engineering Pvt. Ltd. (Baxy Cargo, Baxy Cargo)	2,719	4,256	8,160	11,716	2,572	3,654	7,807	10,917	128	56	224	232
Mahindra & Mahindra Ltd. (Alfa Tred Year, Grand)	470	54	1,072	137	400	33	1,062	85	-	-	-	-
Piaggio Vehicles Pvt. Ltd. (Ape X Cargo)	1,005	1,550	3,356	4,709	1,143	1,473	3,478	4,150	-	7	74	4
TVS Motor Company Ltd. (TVS King Cargo)	2,420	3,557	6,577	7,110	2,355	3,541	7,363	8,467	113	35	578	189
Total B1	7,551	9,557	23,280	23,767	7,050	8,797	21,350	21,695	287	138	1,199	429
B2: Max mass exceeding 1 tonnes												
Atul Auto Ltd. (Atul E-Rick Cargo)	90	157	302	430	99	211	255	440	-	-	-	-
Continental Engineering Pvt. Ltd. (Baxy E-Rick Cargo)	11	11	11	11	-	-	-	-	-	-	-	-
Mahindra & Mahindra Ltd. (Alfa Cargo)	150	102	437	352	154	255	408	647	-	-	-	-
Total B2	240	300	733	801	253	477	713	1,093	-	-	-	-
Total Three Wheelers	62,151	79,026	1,71,689	2,13,436	26,701	53,019	75,293	1,44,475	33,951	24,528	97,237	73,360



Statistics

STAT												
Sub-segment & Company wise Production, Domestic Sales & Exports Report for the month of June 2023 and Cumulative for April-June 2023												
												Report IV
												(Number of Vehicles)
Category	Production				Domestic Sales				Exports			
Segment/Subsegment	June	April-June	2022-23	2023-24	June	April-June	2022-23	2023-24	June	April-June	2022-23	2023-24
Manufacturer	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24
Two Wheelers												
A : Scooter/ Scooterette : Wheel size is less than or equal to 12"												
A1: Engine capacity less than or equal to 75 CC												
(Maggie Vehicle 1 1/2 Ltd (SXR 50))	573	480	2,063	1,638	-	-	-	-	672	480	2,064	1,638
Total A1	573	480	2,063	1,638	-	-	-	-	672	480	2,064	1,638
A2: Engine capacity >75 CC but less than or equal to 90 CC												
(TVS Motor Company Ltd (Jupie))	7,880	-	21,182	-	6,557	1,379	19,466	5,132	-	-	-	-
Total A2	7,880	-	21,182	-	6,557	1,379	19,466	5,132	-	-	-	-
A3: Engine capacity >90 CC but less than or equal to 125 CC												
Hero MotoCorp Ltd (Hero Duetto 125, Maestro 125)	24,511	25,449	83,552	81,578	21,989	25,545	81,335	81,012	1,457	2,811	2,560	5,442
Honda Motorcycle & Scooter India Pvt Ltd (Activa, Avn)	2,29,816	1,52,718	5,95,725	5,23,903	2,10,885	1,40,019	5,62,050	5,85,400	15,144	13,702	52,042	45,271
India Yamaha Motor Pvt Ltd (Alpha, Fascio, Ray)	18,151	24,870	43,354	64,870	16,005	23,015	40,105	57,474	3,490	2,468	5,528	7,755
(Maggie Vehicle 1 1/2 Ltd (Aprilia, Vespa))	3,219	2,410	12,155	7,938	3,114	2,495	11,527	7,132	1,565	227	694	579
Suzuki Motorcycle India Pvt Ltd (Access, Avenis, Burglar)	56,297	68,085	1,70,555	2,15,807	52,208	59,572	1,62,927	1,85,575	3,500	7,806	12,036	10,921
(TVS Motor Company Ltd (Jupite, Ntorq, Wego, Zest))	57,629	1,10,973	2,52,344	3,17,014	90,390	98,215	2,72,790	2,76,335	8,254	7,305	14,409	29,947
Total A3	4,20,783	3,84,309	11,92,708	13,11,198	3,84,595	3,50,565	11,30,742	12,00,928	32,141	34,319	32,269	1,22,216
A4: Engine capacity >125 CC but less than or equal to 150 CC												
(Maggie Vehicle 1 1/2 Ltd (Aprilia, Vespa))	934	876	2,948	2,240	230	429	741	730	721	659	2,243	1,482
Total A4	934	876	2,948	2,240	230	429	741	730	721	659	2,243	1,482
A5: Engine capacity >150 CC but less than or equal to 200 CC												
(Maggie Vehicle 1 1/2 Ltd (Aprilia))	366	481	1,694	1,621	408	409	1,438	1,062	1	210	199	500
Total A5	366	481	1,694	1,621	408	409	1,438	1,062	1	210	199	500
AE1: Upto 250 W Electric												
Chetak Technology Ltd (Yulu Ver 3.0)	-	-	-	496	-	51	-	316	-	-	-	-
Omniwheels Ltd (Dual 100, Lite, E-Go)	664	549	1,784	848	551	13	1,850	26	-	-	-	-
Total AE1	664	549	1,784	1,044	551	64	1,850	342	-	-	-	-
AE2: More than 250 W Electric												
Ather Energy Pvt. Ltd (450X)	3,190	9,059	10,505	25,968	3,190	10,232	10,551	26,518	-	-	-	-
Bajaj Auto Ltd (Chetak)	2,449	8,010	5,357	27,408	2,469	7,050	5,255	20,834	-	-	-	74
Hero MotoCorp Ltd (Vide)	-	3,152	40	4,608	-	2,760	-	2,480	-	-	-	-
Omniwheels Ltd (Dual 100, Lite, E-Go, Praise 100)	3,703	-	27,574	-	8,397	23	25,132	627	-	-	-	-
(TVS Motor Company Ltd (TVS Cuzee, Electro))	4,373	14,349	9,275	37,534	4,387	14,462	5,724	38,602	-	-	-	-
Total AE2	18,716	34,430	64,134	89,666	19,023	34,527	63,666	90,161	-	-	-	74
Total Scooter/ Scooterette	4,49,906	4,21,106	12,76,513	14,07,308	4,21,382	3,87,373	12,07,903	12,98,356	33,535	35,688	36,776	1,26,890

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												Report IV
												(Number of Vehicles)
Category	Production				Domestic Sales				Exports			
Segment/Subsegment	June	April-June	2022-23	2023-24	June	April-June	2022-23	2023-24	June	April-June	2022-23	2023-24
Manufacturer	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24
B : Motorcycles/Step-Through: Big wheel size – more than 12"												
B2: Engine Capacity >75 CC but less than equal to 110 CC												
(Bajaj Auto Ltd (Boxer, CT 100, Discover, Platina))	1,05,400	57,647	3,53,786	2,62,777	30,145	41,158	93,552	1,35,565	87,390	63,512	2,56,580	1,55,006
Hero MotoCorp Ltd (HLE Deluxe, Passion, Splendor)	3,82,308	3,28,115	10,35,027	10,51,244	3,74,073	3,39,851	10,49,867	10,64,046	8,826	5,744	30,631	15,278
Honda Motorcycle & Scooter India Pvt Ltd (Dream, Livewire)	17,099	33,612	85,058	59,202	13,439	32,666	48,431	53,135	4,545	1,144	15,372	6,732
India Yamaha Motor Pvt Ltd (Dax, Saluto BX)	5,024	1,312	10,158	10,402	-	-	-	-	3,065	2,152	8,575	5,668
(TVS Motor Company Ltd (Raider, Spidee, Star City))	55,051	43,121	1,81,181	1,33,812	75,283	24,488	85,084	65,748	81,274	19,817	96,570	45,807
Total B2	5,89,693	4,92,011	16,43,222	15,17,442	4,42,940	4,38,214	12,76,764	13,43,298	1,34,628	91,969	4,08,951	2,34,051
B3: Engine Capacity >110 CC but less than equal to 125 CC												
(Bajaj Auto Ltd (Boxer, CT 100, Discover, Husqvarna, KTM))	54,259	1,03,654	2,64,771	3,23,823	51,555	69,162	1,80,752	2,59,640	42,910	22,926	1,09,195	64,524
Hero MotoCorp Ltd (Glamor, Splendor)	67,185	51,465	1,84,352	1,54,692	68,370	45,469	1,73,711	1,52,280	3,575	1,236	9,356	4,880
Honda Motorcycle & Scooter India Pvt Ltd (CB Shine, CBR)	1,27,518	1,04,082	3,63,048	2,50,063	1,26,947	99,264	3,51,125	2,47,745	1,150	7,047	9,745	4,908
India Yamaha Motor Pvt Ltd (Saluto, YD125)	4,968	2,522	12,510	11,037	-	-	-	-	5,542	2,400	12,154	9,216
Suzuki Motorcycle India Pvt Ltd (Hayate)	180	180	510	640	-	-	-	-	560	180	556	620
(TVS Motor Company Ltd (Raider, Star City 125, Victor))	60,505	68,808	1,98,559	1,97,478	11,718	51,308	19,451	1,00,240	19,056	34,818	1,11,650	96,370
Total B3	3,54,493	3,31,332	9,83,884	9,67,634	2,47,890	2,49,194	6,91,022	7,63,905	93,226	62,406	2,82,504	1,80,518
B4: Engine Capacity >125 CC but less than equal to 150 CC												
(Bajaj Auto Ltd (Boxer, CT 150, Pulsar))	48,547	26,309	1,23,950	57,029	16,975	16,822	25,755	52,543	30,672	9,018	79,551	35,888
Hero MotoCorp Ltd (HLE)	5,200	4,122	11,010	6,540	-	-	-	-	4,924	4,125	12,170	7,305
Honda Motorcycle & Scooter India Pvt Ltd (CB Unicorn)	-	-	230	64	-	-	-	-	-	-	240	50
India Yamaha Motor Pvt Ltd (FZ, SZ)	27,358	21,612	80,386	70,513	10,305	16,316	50,551	54,166	10,562	4,784	37,564	17,088
Total B4	81,471	54,049	2,19,134	1,64,149	36,281	32,944	76,666	1,06,709	46,558	17,927	1,29,028	60,397
B5: Engine Capacity >150 CC but less than equal to 200 CC												
(Bajaj Auto Ltd (Avenger, Husqvarna, KTM Pulsar))	33,981	39,245	87,832	1,17,013	20,397	20,486	30,935	64,214	10,399	19,606	51,579	55,443
Hero MotoCorp Ltd (Xpulse 200, Xpulse)	11,471	9,355	28,223	21,222	8,448	6,872	23,345	15,589	2,772	820	7,249	2,409
Honda Motorcycle & Scooter India Pvt Ltd (CRF 200C)	8,121	32,225	41,302	39,165	3,084	28,852	24,706	28,852	6,350	3,130	20,633	11,234
India Kawasaki Motors Pvt Ltd (KX175)	-	100	-	100	-	65	-	251	-	-	-	-
India Yamaha Motor Pvt Ltd (MT 15, R15)	17,554	19,346	53,828	55,042	16,115	19,238	47,995	53,437	1,130	806	4,557	3,828
Suzuki Motorcycle India Pvt Ltd (Gixxer, Intruder)	8,388	11,727	24,087	30,818	144	1,778	2,159	5,248	8,952	7,256	24,375	27,612
(TVS Motor Company Ltd (Apache))	31,784	45,157	87,948	1,50,988	16,737	25,127	51,123	1,08,230	13,545	5,034	37,254	16,403
Total B5	1,11,384	1,57,930	3,23,930	3,94,783	64,905	1,02,990	1,80,245	2,74,655	51,116	36,352	1,45,730	1,10,929



SIAM												
Sub-segment & Company wise Production, Domestic Sales & Exports Report for the month of June 2023 and Cumulative for April-June 2023												
Report IV (Number of Vehicles)												
Category	Production				Domestic Sales				Exports			
Segment/Subsegment	June		April-June		June		April-June		June		April-June	
Manufacturer	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24
B6: Engine Capacity >200 CC but less than equal to 250 CC												
Bajaj Auto Ltd (Avenger Dominar Husqvarna, KTM, Pulsar)	9,557	15,227	15,208	37,162	2,883	8,715	7,659	21,422	5,450	9,415	13,100	16,712
India Kawasaki Motors Pvt Ltd (KX 250)	-	-	-	-	-	1	4	1	-	-	-	-
India Yamaha Motor Pvt Ltd (FZ25)	3,942	622	778	2,562	612	-	1,959	-	1,506	508	5,044	1,550
Suzuki Motorcycle India Pvt Ltd (Ciozer 250, V-Stron)	1,995	1,887	1,138	12,971	667	791	2,615	1,180	2,197	2,435	5,707	8,273
Total B6	11,297	21,924	30,124	52,498	4,177	11,177	9,295	22,909	9,203	9,419	23,851	26,555
B7: Engine Capacity >250 CC but less than equal to 350 CC												
Honda Motorcycle & Scooter India Pvt Ltd (CB300R, Honda)	3,727	9,122	13,939	18,320	2,222	4,125	8,744	11,212	1,500	2,374	5,221	8,343
India Kawasaki Motors Pvt Ltd (Ninja300C)	123	138	375	427	130	192	357	419	-	-	-	-
Mahindra Two Wheelers Ltd (Mojo)	19	-	72	-	-	-	45	-	-	-	-	-
Reys - Enfield (Unit of Eicher Motors) (Bullet 350, Bullet)	58,947	74,495	1,75,280	2,11,522	44,326	62,398	1,18,844	1,99,647	6,079	9,295	13,961	12,753
TVS Motor Company Ltd (BFMW, RR 310)	2,571	2,215	7,668	8,357	264	370	1,052	931	1,868	1,454	5,715	5,352
Total B7	65,387	83,971	1,96,898	2,38,435	46,948	66,895	1,52,055	2,02,215	9,447	10,074	24,597	26,188
B8: Engine Capacity >350 CC but less than equal to 500 CC												
Bajaj Auto Ltd (Dominar, Husqvarna KTM)	6,830	7,858	22,027	21,735	582	2,032	2,455	5,387	6,377	6,827	22,114	18,942
Honda Motorcycle & Scooter India Pvt Ltd (CB 500F)	-	-	-	-	-	-	1	-	-	-	-	-
India Kawasaki Motors Pvt Ltd (KLX450R, KX450, Ninja)	-	-	-	-	3	48	3	69	-	-	-	-
Reys - Enfield (Unit of Eicher Motors) (Himalayan)	6,351	9,209	27,995	12,531	4,514	3,255	10,557	13,840	3,090	887	5,700	2,159
Total B8	12,831	11,667	44,009	34,266	5,105	5,335	13,357	16,296	9,443	6,702	27,820	20,825
B9: Engine Capacity >500 CC but less than equal to 800 CC												
Honda Motorcycle & Scooter India Pvt Ltd (CBR 650F)	1	-	40	-	-	-	51	-	-	-	-	-
India Kawasaki Motors Pvt Ltd (Ninja650, Versys 650)	31	58	127	138	57	10	50	106	-	-	-	-
Reys - Enfield (Unit of Eicher Motors) 950 Twin Super	3,651	4,428	9,100	11,935	1,425	782	4,941	6,684	1,984	2,437	9,958	5,559
Suzuki Motorcycle India Pvt Ltd (DL650XA)	5	-	5	-	-	-	14	-	-	-	-	-
Triumph Motorcycles India Pvt Ltd (Street Triple, Tiger)	54	43	124	48	54	40	124	48	-	-	-	-
Total B9	3,742	4,534	9,476	11,791	1,530	1,838	5,310	6,838	1,964	2,437	9,986	5,568
B10: Engine Capacity >800 CC but less than equal to 1000 CC												
Hero MotoCorp Ltd (823 Iron)	-	-	-	-	13	-	19	-	-	-	-	-
India Kawasaki Motors Pvt Ltd (Ninja ZX-10R, Z900, Z1)	20	-	40	-	52	95	157	225	-	-	-	-
Triumph Motorcycles India Pvt Ltd (Boulevard 1100, Speed	3	3	22	50	4	14	43	76	-	-	-	-
Total B10	23	3	62	50	75	109	219	301	-	-	-	-

SIAM												
Sub-segment & Company wise Production, Domestic Sales & Exports Report for the month of June 2023 and Cumulative for April-June 2023												
Report IV (Number of Vehicles)												
Category	Production				Domestic Sales				Exports			
Segment/Subsegment	June		April-June		June		April-June		June		April-June	
Manufacturer	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24
B11: Engine Capacity >1000 CC but less than equal to 1600 CC												
Hero MotoCorp Ltd (Nightster, Pure, Arrow, Sparta)	-	-	40	-	1	-	40	-	-	-	-	-
Honda Motorcycle & Scooter India Pvt Ltd (Africa Twin)	-	-	-	-	2	5	41	47	-	-	-	-
India Kawasaki Motors Pvt Ltd (Ninja1000, Versys 1000)	-	-	-	-	-	-	-	-	-	-	-	-
Suzuki Motorcycle India Pvt Ltd (Hypobase)	20	-	61	31	25	-	50	50	-	-	-	-
Triumph Motorcycles India Pvt Ltd (Boreville Rocket)	-	-	-	-	25	28	85	52	-	-	-	-
Total B11	36	-	101	31	59	38	221	182	-	-	-	-
B12: Engine Capacity >1600 CC												
Hero MotoCorp Ltd (Fat Bob, Fat Boy 114, Heritage Classic)	-	-	-	-	17	13	60	21	-	-	-	-
Honda Motorcycle & Scooter India Pvt Ltd (GL 1800)	-	-	-	-	1	13	8	19	-	-	-	-
Triumph Motorcycles India Pvt Ltd (Rocket III, Rocket 4	-	-	6	-	18	20	74	40	-	-	-	-
Total B12	12,10,557	11,57,821	34,50,846	33,81,065	8,49,928	9,08,954	24,05,228	27,37,348	3,61,585	2,37,186	10,51,477	6,65,042
C: Moped: More than 75 CC to 100 CC and with fixed transmission Ratio, Big wheel size - more than 12"												
C1: Engine capacity less than or equal 100 CC	37,226	34,660	1,07,708	1,10,069	37,474	34,499	1,11,402	1,05,261	288	553	372	584
TVS Motor Company Ltd (TVS XL)	34,326	34,660	1,07,106	1,10,069	37,474	34,499	1,11,402	1,05,261	288	553	342	584
Total Mopeds	37,226	34,660	1,07,708	1,10,069	37,474	34,499	1,11,402	1,05,261	288	553	372	584
Total Two Wheelers	16,94,789	16,13,386	48,34,465	48,98,442	13,08,764	13,30,826	37,24,533	41,40,964	3,95,408	2,73,184	11,48,594	7,81,316
Quadracycle	-	-	-	-	-	-	-	-	-	-	-	-
Base Auto Ltd (Gute)	198	429	501	1,108	47	47	101	143	234	384	396	992
Total Quadracycle	198	429	501	1,108	47	47	101	143	234	384	396	992
Grand Total	20,81,148	20,24,703	60,69,354	62,50,179	16,11,300	16,64,144	47,11,422	52,81,556	4,86,111	3,55,814	14,06,343	10,17,824

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Category & Company wise Summary Report of Commercial Vehicles for April-June 2023							
Report III (Number of Vehicles)							
Category	Production		Domestic Sales		Exports		
Segment/Subsegment	April-June		April-June		April-June		
Manufacturer	2022-23	2023-24	2022-23	2023-24	2022-23	2023-24	2023-24
Commercial Vehicles (CVs)							
Ashok Leyland Ltd	42,782	42,657	37,124	39,107	2,527	-	2,222
Force Motors Ltd	3,696	5,635	3,614	5,491	13	-	87
Isuzu Motors India Pvt Ltd	6,069	7,049	292	426	3,975	-	4,082
Mahindra & Mahindra Ltd	63,611	67,085	58,982	61,252	5,671	-	3,539
Maruti Suzuki India Ltd	12,499	8,337	10,817	8,079	450	-	361
Olectra Greentech Limited	169	10	169	10	-	-	-
SML Isuzu Ltd	3,537	3,563	3,443	3,968	68	-	38
Tata Motors Ltd	1,06,610	95,735	93,888	79,263	5,198	-	3,539
Toyota Kirloskar Motor Pvt Ltd	460	697	433	684	-	-	-
VECV-Eicher	18,905	22,779	15,383	18,245	1,722	-	757
VECV-Volvo	-	-	343	321	-	-	-
Total Commercial Vehicles (CVs)	2,57,338	2,53,447	2,24,488	2,17,046	19,624	-	14,625

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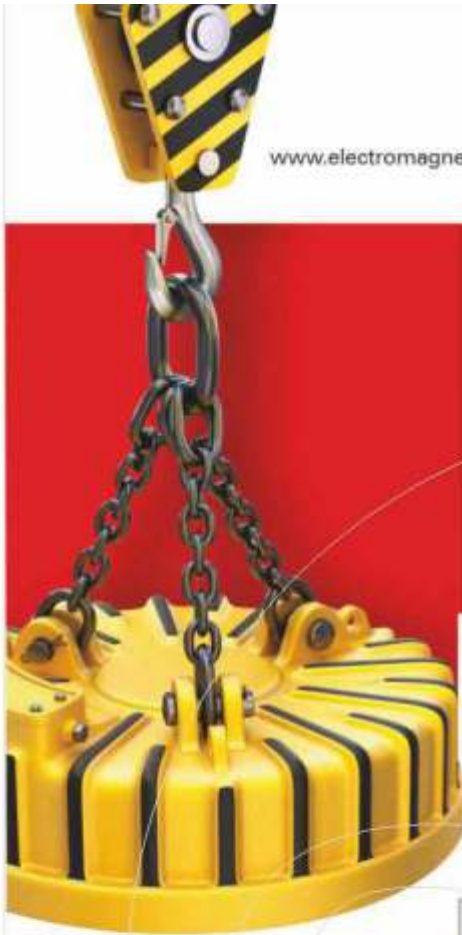


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