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Editor

Dear Readers,

The special steels sector is really special in the big umbrella of iron & steel industry. As we know, the iron and steel industry comprises of many sub-sectors like mining, sponge iron making, melting, rolling, etc. based on the process and also likes of special steels, stainless steels, high speed steels which are based on composition and applications.

More than 75 % steel produced in the country belongs to mild steel category and is mostly used in infrastructure and construction sector. With only carbon as the alloying element and absence of other alloying elements like chromium, manganese, silicon, boron etc. the metallurgy of these steels is comparitively simple. Also as they are mostly used in infra and construction where strength is the most important parameter, requirement of specific mechanical properties is also not very stringent. This is not the case with special steels. There are thousands and thousands of grades and specifications which produce different metallurgical and

Editorial Desk



mechanical properties. This in turn makes special steels useful in variety of applications, right from automobile gear parts, flanges to the springs used in railways. Alloy addition is done during the melting and is the most delicate as well as important part in special steel making. Any error in this process will alter the chemistry and whole heat may become off grade. This will naturally result in huge commercial losses as in many cases such off grade heat has to be recycled and re melted. Thus a chief metallurgist of a special steel plant plays a very crucial and decisive role in running of the plant in a viable way, something similar to a specialty food restaurant.

Conventionally around 50 % of special steels were used in automobile industry and the remaining in various industries like power, infra, engineering, etc. Now in last few years, due to a great forward leap by Indian automobile sector, their share in the total special steels production has increased to around 65 %. Also the new sector which has emerged as a big consumer of special steels in Defense. As you know, now a days, a lot of emphasis is being given to indiginization of defense equipment. Further India has also started exporting defense equipment. All this has given a big boost to special steels sector and today defense consumes around 25 % of special steels in the country.

Thus with consumer industries like automobile and defense progressing well, the future of special steels in the country looks secured and bright !

Write your comments : https://steelworldblog.wordpress.com/

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India to formulate its own policies to align with global efforts and reduce its carbon footprint

"India to reduce the carbon footprint to remain compliant with environment and cost efficiency. This will not only enhance our capabilities but also contribute to the overall growth and development of the secondary steel sector" Dr Rajib Paul, Director, National Institute of Secondary Steel Technology (NISST)

Dr. Rajib Paul, the Director of the National Institute of Secondary Steel Technology. With an impressive career spanning 32 years, including notable positions in international organizations such as Arcelor Mittal, Bar and Steel, and SR Steel Limited India, We are delighted to have Dr. Rajib Paul here today to delve into the technological challenges facing the iron and steel industry in our country.

D.A. Chandekar, Editor & CEO of Steelworld magazine had an exclusive interaction with Dr. Rajib Paul, Director-NISST to understand the latest technological trends in the steel production and best innovative processing technology in the country which will be helpful to reduce the carbon footprint. He further elaborated more on the NISST activities and to create more awareness about the next techonological changes are needed for sustainable future.

Excerpts : What are the latest technology trends in the steel production and processing technology available in the country?

The current trend in steel processing technology remains largely unchanged, encompassing blast furnaces, direct reduction processes (both coal-based and gas-based), basic oxygen furnaces (BOF), electric arc furnaces, and induction furnaces. However, there is a growing emphasis on integrating energy-saving technologies such as Top Recovery Turbines (TRT), coal dry quenching (CDQ), and other supplementary measures to reduce energy and fuel consumption,



thereby lowering costs. Additionally, there is a focus on increasing the capacity of blast furnaces while minimizing energy consumption, incorporating practices like pulverized coal injection (PCI), hydrogen injection, and natural gas injection. The adoption of hydrogen-based direct reduced iron (DRI) technology is gaining traction worldwide, with efforts directed towards making it more cost-effective. Many companies are also exploring ways to produce hydrogen at a reduced cost. These technological advancements are currently driving industry trends. Notably, when comparing blast furnaces to gas-based or coal-based DRI plants, the reduction process in DRI plants occurs at lower temperatures around 900-950 degrees Celsius. In contrast, blast furnaces operate at significantly higher temperatures, leading to







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Face to Face

greater energy losses. To address this, companies and governments are actively seeking reduction technologies that closely resemble direct reduction processes such as Midrex and HYL, as well as exploring coal gasification for iron ore reduction instead of conventional coalbased methods. These are the prevailing trends observed in the industry today.

Globally I think there is a conscious effort to reduce the carbon footprint. And it can be called as green steel making. A lot of experiments are being conducted and lot of research is being done in the country.

Could you please update us more on what kind of technological upgradation & research work going in India ?

The global focus on reducing carbon emissions and achieving green steelmaking is reflected in the ongoing research and experimentation taking place in India. The government has taken a proactive approach by forming task forces and committees comprised of eminent individuals. These entities are working to develop methodologies, including taxonomy and monitoring systems, to measure and account for CO2 emissions across different steelmaking processes. The aim is to make emissions measurable and comparable, enabling effective research and

development (R&D) and financing strategies. Additionally, India is considering the implications of the European market's Carbon Border Adjustment Mechanism (CBAM), which will assess and account for the CO2 emissions associated with imported steel. India is formulating its own policies to align with



alobal efforts and reduce its carbon footprint. The government aims to be an active participant in reducing emissions and avoiding becoming a victim of such mechanisms. In terms of R&D, there is a focus on improving the current coalbased direct reduced iron (DRI) process. Efforts are being made to transition from horizontal kilns to vertical kilns, enhancing energy efficiency and the effectiveness of the reduction process. Methods like mid-rex and H-Vile are being explored for their higher reduction effectiveness and smaller land footprint. Overall, India is actively engaged in research and development, seeking innovative solutions to reduce carbon emissions and contribute positively to global sustainability efforts in steelmaking.

What isthe current activity profile of NISST and its aims to spearhead into secondary steel technology. So, we would like to know from you what activities are being conducted at NISST?

We are heavily involved in consulting services, not just limited to expansion projects in steel plants. Our focus extends to helping companies improve energy efficiency and conducting energy audits. We are accredited energy auditors with the Bureau of Energy Efficiency (BE) and actively collaborate with them in various committees. We provide assistance in the Perform, Achieve, and Trade (PAT) scheme, which aims to reduce energy consumption. Additionally, in conjunction with the Ministry of Steel, we are developing a scheme that prioritizes both energy efficiency and carbon footprint reduction. This scheme will evaluate the CO2 emissions per ton of steel produced, moving away from an oilequivalent basis used in the PAT scheme. We are also investigating the carbon footprint associated with iron ore extraction and coal mining, aiming to establish a comprehensive accounting philosophy. Collaborating with the BE, we will create baseline data for the country, enabling the formulation of appropriate policies. Currently, the industry lacks clarity on the specific CO2 emissions per ton of steel produced. Therefore, the government's guidance is crucial, allowing major and secondary steel producers to align their efforts accordingly. Ultimately, our goal is to



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Face to Face

reduce the carbon footprint in the country, benefiting both the environment and cost efficiency. We will assist companies in identifying necessary production technology matures and becomes more accessible, steelmaking may begin to incorporate hydrogen. However, it's important to note that the



investments and provide guidance on financing options. To strengthen our organization, we are actively recruiting younger talent, as directed by our esteemed minister. This will not only enhance our capabilities but also contribute to the overall growth and development of the secondary steel sector. Additionally, we are dedicated to addressing safety concerns, which have often been neglected in the secondary steel sector.

What are the major technological changes you foresee in the future?

The adoption of hydrogenbased technology in the steel industry is anticipated in the future, but currently, hydrogen production is costly, and suppliers prioritize other sectors over steel. The availability of hydrogen for the steel sector would improve if it were granted infrastructure status in the country. Over the next 5-6 years, as hydrogen steel industry is not actively pursuing hydrogen production technologies themselves, as hydrogen technology is a separate business. Currently, the focus for steel producers is on reducing costs and minimizing carbon footprints using the best available technologies worldwide. One such approach is scrap preheating, where scrap is directly used in the steelmaking process, resulting in significantly lower carbon emissions. Although scrap availability is limited in the country, the circular economy is gradually taking shape and will mature over time. However, the transition to a fully developed circular economy will require further progress and time. As of now, the steel industry is primarily focused on reducing costs and carbon footprints through existing technologies, while the incorporation of hydrogen in the steelmaking process is

expected to occur in the future.

I think in fact the newscrappage policy will also help us to go in that direction. Because more vehicles will be available for scrapping and that will generate more scrap, isn't it?

That is true. Here also Tata Steel has established a scrap unit and is in the process of setting up a scrap melting unit in Ludhiana, which will effectively reduce their overall carbon footprint. Other major steel players like SAIL are also focused on increasing their consumption of scrap. As scrap becomes a scarce commodity, it is essential to develop a robust scrap policy that includes both domestic and imported scrap. It is worth noting that the global price of scrap cannot exceed the price of rebars (TMT), creating a price gap of around \$80-100. Consequently, scrap prices will remain under control, as individuals and businesses who purchase scrap will convert it into rebars. In India, there will likely be a policy to import a higher quantity of scrap if it is available at a more affordable price, as this can help reduce the high supply chain costs in the country. Currently, the cost of bringing steel to Mumbai port is often cheaper than transporting it to the hinterland, such as Bhopal, due to freight costs. Therefore, efforts should be made to consciously reduce freight costs, particularly through initiatives like the Dedicated Freight Corridors (DMT). By reducing overall freight costs, the prices of imported scrap can also be lowered.



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TQM ... ways to achieve 3 Ps -Profit, Praise & Peace

Total Quality Management (TQM) is a management approach that aims to optimize business processes and improve customer satisfaction by ensuring that every aspect of the organization is focused on quality. It is a comprehensive system that involves all employees in the organization from top-level management to front-line workers, in a continuous effort to improve processes, products, and services. The ultimate goal of TQM is to achieve profit, praiseand peace by delivering highquality products and on time services to customers.

The philosophy of TQM is \sim 'Doing Right Things Right ... First Time & Every Time and it has to start from choosing of right person for the right position ... clearly communicating them what are the various objectives of the organisation to be achieved, empowering to have them the feeling of ownership, taking care of their requirements in terms of right resources, continually upgrading their skills based on ... not only the technical needs but also the various management systems and knowhow of improvement methodologies/techniques like problem solving i.e. corrections, corrective actions and the better would be preventive measures and Failure Modes & Effect Analysis (FMEAs), using brainstorming techniques effectively and what's more important is'keeping motivational process well in place'.Targets once achieved ... celebration is must ! *Profit*:

TQM can lead to increased profitability in several ways ... by improving quality, organizations can reduce waste, rework and defects which in turn can lead to cost savings. This can be achieved through a variety of methods, including process improvement, error prevention and continuous improvement.

The skill level of all employees must be strictly checked while allowing them to work in processes, keeping in mind of 'achieving right first time i.e.defect free products or services through them (and if neededupgradation is done) and knowledge of FMEAs. Autonomous Maintenance (JishuHozen), DWM (daily work management), Kaizen etc will support in increasing level of profit ... for sure. One key component of TQM is the use of data & metrics to measure performance for example tracking metrics such as defect rates. customer satisfaction and cycle times and this way



Sapan Kumar Bardhan

Director (Organisation Development) – MABEC Total Quality & Lean Mgmt. ~ Trainer & Consultant Motivational Speaker, Author of Book 'Unfolding Success' (next book 'Unfolding Success 2.0 - Balanced Leadership with Human Face'is expected by Sept'23) organizations can identify areas for improvement and make data-driven decisions to optimize their processes. This can help organizations reduce costs and increase efficiency, which can ultimately lead to increased profitability. *Praise*:

TQM can also lead to increased praise from external customers, stakeholders and society as well. Focusing on quality, organizations can deliver products and services that meet or exceed customer expectations. This can lead to increased customer loyalty and positive word-of-mouth, which can help organizations build a strong reputation and brand.

One key parameter of TQM is 'Customer Satisfaction'. Listening to customer feedback and incorporating it into product and service development, organizations can ensure that they are meeting

the needs of their customers. This can lead to increased trust and loyalty, leading to increased praise and recognition from customers and other stakeholders.

Peace:

TQM can also lead to increased peace within the organization. Involving all employees in the continuous improvement processes, TQM can help build a culture of collaboration, teamwork and shared responsibility. This can lead to increased employee

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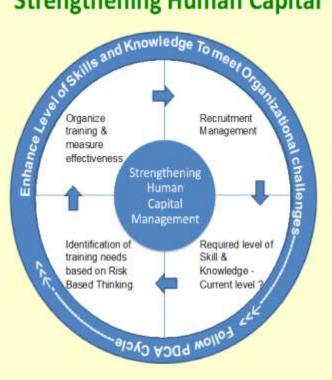
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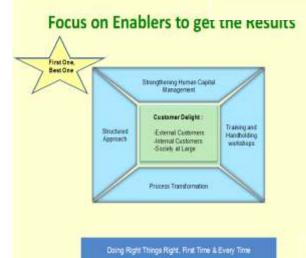
engagement, motivation and job satisfaction.

One key aspect of TQM is the emphasis on employee training and development. By providing employees with the tools and knowledge they need to excel in their roles, organizations can foster a culture of continuous learning and improvement. This can help employees feel valued and supported, which can lead to increased peace and harmony within the organization.

Below are few slides which are self-explanatory and describes the 'Way Forward' to achieve all the three Ps:

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TQM is a comprehensive management approach that can help organizations achieve profit, praiseand peace by delivering highquality products and services to customers. By focusing on quality, organizations can reduce costs, increase efficiency and build a strong reputation and brand. By involving all employees in the continuous improvement process, TQM can help build a culture of collaboration, teamwork, and shared responsibility, which can lead to increased employee engagement, motivation, and job satisfaction. Overall, TQM is a powerful tool for organizations looking to achieve sustainable success in today's competitive business environmentbut

needs patience during implementation and to enjoy the fruits and thus Leading to Prosperity for One & All ! One of the biggest aspects of TQM is empowering the co-workers to take decisions within their scope/boundaryof work to ensure that all of their internal customers get what exactly they need or visualised and all together cumulatively ... make external customers happy & smile. To conclude TQM can be established through three processes:

- Quality Process ... to understand who are my customers and trying to completely satisfying them.
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Growth Prospects of the Steel Industry in India

The steel industry in India plays a crucial role in the country's economic development, providing support to various sectors such as construction, infrastructure, automotive, and manufacturing. This report analyzes the future growth prospects of the Indian steel industry, focusing on both upstream and downstream segments. Furthermore, it highlights opportunities for overseas technology and equipment companies to contribute to the advancement of India's steel sector.

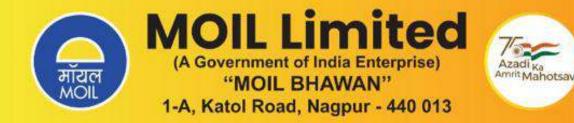
The steel industry in India has witnessed remarkable growth and holds promising growth prospects. According to Union Minister of Steel and Civil Aviation, Shri Jyotiraditya M. Scindia, India has become the second-largest producer of crude steel in the world, surpassing Japan in 2018. This growth has been fueled by various factors, including the government's focus on infrastructure development, affordable housing, and initiatives like "Make in India," which have increased the demand for steel in sectors. such as construction, infrastructure, automotive, and manufacturing.

India's steel sector has also made significant strides in terms of exports. In the year 2022-23, the country witnessed the export of 6.72

Steelworld Research Team

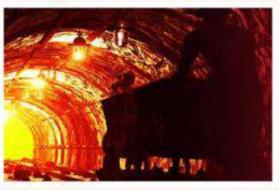
million metric tons (MT) of finished steel, surpassing the import of 6.02 MT. This marks a significant shift from the previous years when India was a net importer of steel. The growth in steel exports can be attributed to the increased production capacity and the emphasis on promoting domestic manufacturing.

To further strengthen the steel industry, India has undertaken various initiatives and policies. The Steel Scrap Recycling Policy aims to promote the scientific processing and recycling of ferrous scrap. As part of this policy, six vehicle scrapping centers have been opened in different cities, with three more planned to commence



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Industry Update

operations soon. End-of-life vehicles (ELVs) are being utilized as raw material for steel production, facilitating



resource efficiency and sustainability.

The National Steel Policy 2017 (NSP 2017) sets ambitious targets for the steel industry. By 2030-31, India aims to achieve a total crude steel capacity of 300 million metric tons per annum (MTPA) and a total crude steel demand/production of 255 MTPA. Additionally, the policy envisions enhancing the operational capacity of crude steel production of Steel Authority of India Limited (SAIL) from 19.51 MTPA to around 35.65 MTPA by 2030-31.

Opportunities for overseas technology and equipment companies abound in India's steel sector. In the upstream segment, partnerships with domestic firms can be formed for iron ore mining. utilizing advanced mining technologies and sustainable practices. India's limited reserves of coking coal present opportunities for overseas companies to supply high-quality coking coal and coke, essential for steelmaking.

In the downstream

segment, overseas technology companies can contribute their expertise in advanced steelmaking

> processes such as Electric Arc Furnaces (EAF), Continuous Casting, and Thin Slab Casting. This would enable Indian steel manufacturers to produce high-quality steel products efficiently.

Opportunities also exist in the production of valueadded steel products like galvanized steel, stainless steel, and special alloys, where collaborations with overseas companies specializing in these products can expand the product portfolio of Indian manufacturers.

Furthermore, overseas technology and equipment companies can provide state-of-the-art machinery and automation solutions for steel processing and fabrication. This would enhance the efficiency, precision, and quality of steel processing operations in India.

The Indian government has introduced the Productivity Linked Incentive Scheme (PLI) to boost domestic production of specialty steel. Under this scheme, 57 memorandums of understanding (MoUs) involving 27 companies have been signed, attracting committed investment of approximately ₹29,530 crore and creating potential employment for 55,000 individuals. Sustainability is a key focus in the steel industry, and India is actively promoting green steel production. Thirteen task forces have been formed to identify action points for each aspect of green steel production, and discussions are ongoing with stakeholders from the steel industry as well as relevant ministries and departments to promote decarbonization and implement sustainable practices.

In conclusion, the growth prospects of the steel industry in India are promising, driven by robust demand and various government initiatives. The sector offers significant opportunities for overseas technology and equipment



companies to contribute through partnerships, technological collaborations, equipment procurement, and the implementation of sustainable solutions. By leveraging these opportunities, India can strengthen its position in the global steel market, foster technological advancements, drive economic growth, and promote sustainable steel production practices.



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News Update

The automation in the steel industry is the need of the hour- Sri Atul Bhatt, CMD, RINL

At a program organized at RINL, Sri Atul Bhatt, CMD, RINL launched 'Open challenge progam 2.0', online today. The program is the second program in the series of OCP programs that are being launched by Kalpataru-CoE (Centre of entrepreneurship).

This open challenge program is for selecting the startups in the field of Industry 4.0 technologies.



Speaking on the occasion, Sri Atul Bhatt said that India is the second largest steel industry in the world and it is also of one fastest growing industry, with the emphasis given by the growth of infrastructure by our Govt. "The automation in the steel industry is the need of the hour and the scope of growth of automation and robotics is immense. The equipment developed by the startups will give return on investment by RINL very fast as they help in energy savings and will also help in running the process safely", Sri Atul Bhatt added.

The project, CoE (Centre of Excellence) on Industry 4.0, is being taken up jointly by STPI (software technology park of India), MeitY(Ministry of Electronics & IT) and RINL,



and Govt. of AP. This is expected to make India 'Atamanibhar' in the field of Industry 4.0 technologies. The CoE will have an IIOT (Industrial Internet of Things)

lab, an Industrial Automation Lab with AI & ML (Artificial intelligence & Machine learning) and AR & VR (Augmented Reality and Virtual reality) lab, one more industrial automation Lab with Robotics and Drone, a third Industrial automation lab with Robotics and 3D printing.

The CoE will incubate around 175 start-up companies over a period of 5 years. 50 startup companies will be incubated in physical mode and 125 companies will be incubated in Virtual mode.

The program was also graced by Sri A.K. Bagchi, Director (Projects) & additional charge Director (Operations) RINL and Member of PMG- Kalapataru, Sri CVD Ramprasad, Director STPI Hyderabad and COO STPINEXT, Dr. Suresh Batha, Additional Director and Officer In charge, STPI Visakhapatnam.

The start-up companies along with industry mentors will work on the problems of RINL and other industries in and around like HPCL, NTPC, BARC, HSY and BHEL.

Sri CVD Ram Prasad & Dr. Suresh Batha informed how STPI and STPINEXT through their Centre of Entrepreneurship and NGIS (Next Generation Incubation Schemes) is encouraging startups to grow.

Smt. Vyshali Sagar, Program manager AWS (Amazon web services) informed how AWS is helping startups to develop products/solutions using AWS. She informed that they are very passionate about working with startups and providing them with value.

"RINL presented the prestigious " Greentech Safety Award 2023"

RINL has bagged the prestigious "GreenTech Safety Award 2023" under Safety Excellence Category . RINL has received this award for its outstanding contribution to improve workplace safety in the year 2022-23.

The prestigious GreenTech Safety Award 2023 award was received by Shri A K Bagchi- Director (Projects) and Additional Charge Director (Operations), RINL on behalf of RINL from Sri Jagdish Mukhi, Former Governor of Assam at the 21st Annual Greentech awards function held at New Delhi, today (on 30th May 2023.)

21st GREENTECH SAFETY AWARD 2023 organised by the Greentech Foundation shall recognise and honour outstanding organisations that are taking responsibility for defining a commercial future by adding value through excellence in fire, safety, health and security management for corporate citizenship, transparent accountability, life cycle stewardship, strategic sustainability and conducting fair business in a disciplined manner that delivers a shared future for all stakeholders through commitment, dedication with a goal of zero injuries.

The Jury members of GreenTech foundation have applauded RINL for the Initiatives like use of Drone technology for inspection of high-rise structures, chimneys etc, development of Software application for tracking the usage of Safety harnesses and also for imparting Safety Trainings through Online platforms (Webinars).

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News Update

Sri ABCP Sharan - Chief Executive Officer, Greentech and several other dignitaries also graced the program.





Shri A K Bagchi- Director (Projects) & Addl Charge Director (Operations), RINL receiving the GreenTech Safety Award 2023 from Sri Jagdish Mukhi, Former Governor of Assam at the 21st Annual Greentech awards function held at New Delhi.

JSW Steel crude steel output grows 7% to 1.777 MT in April 2023



JSW Steel recorded a 7% growth in crude steel production on standalone basis at 1.777 MT in April 2023. The company had produced 1.667 MT steel during the same month last year, JSW Steel said in a statement.

In April 2023, the company said the production of its flatrolled products rose 16% to 1.392 MT from 1.2 MT a year ago.

However, its long-rolled products output fell 9% to 0.321 MT from 0.354 MT in April 2022.

"Production of rolled long-products is lower due to planned capital shutdowns taken at Salem and Vijayanagar plant locations during April 2023," it said.

Amarendu Prakash takes charge as Chairman SAIL



Amarendu Prakash has assumed the charge of Chairman, Steel Authority of India Limited (SAIL). Prior to taking charge as the Chairman, Shri Prakash held the post of Director in-charge, Bokaro Steel Plant (BSL), SAIL. A metallurgical engineer from BIT Sindhri, Shri Prakash joined SAIL in

1991 as a Management Trainee (Technical). After working in various positions of responsibilities in plants and units, Amarendu Prakash was selected as a Director in the SAIL Board in charge of Bokaro Steel Plant in 2020.

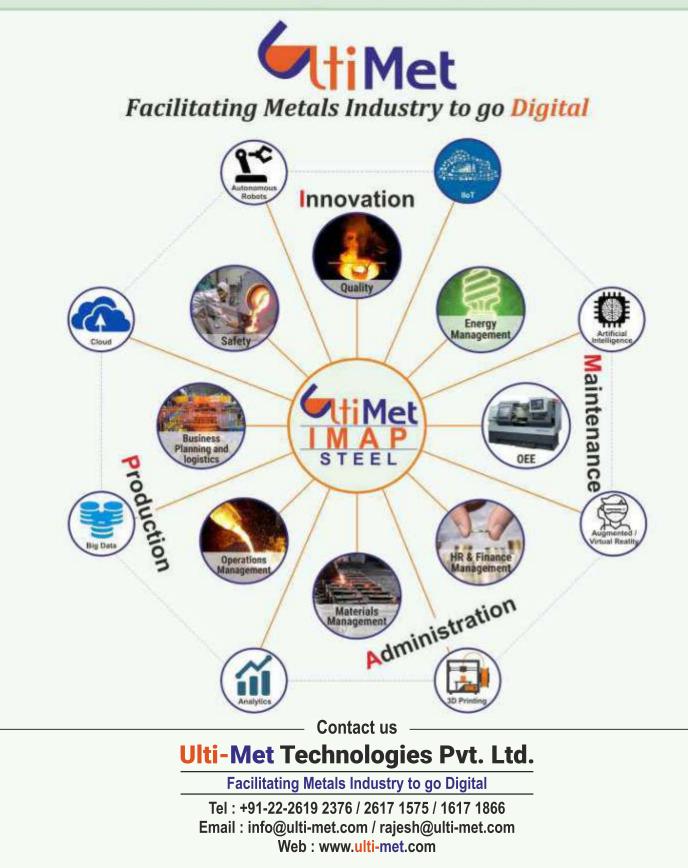
He is an accomplished technocrat. In his career of more than three decades in SAIL, Shri Prakash has had exposure to plant operations at shop level, exposure to corporate functions in the Head office and leading a large steel plant with mining operations. He was a key member of the team that was leading the business transformation and financial turnaround of SAIL in 2015-17.

After taking over as the Director in charge of Bokaro Steel Plant, he has led the Plant team to reach their best performance in all major parameters year on year. The improvement in performance has been both quantitative and qualitative. With his remarkable organizational skills and strategic planning acumen, Shri Amarendu Prakash has been instrumental in bringing about significant changes in business processes and project implementation. As a technically proficient leader, he has been spearheading the digitisation efforts of the company. As a key member of the Revenue Maximising Team, he has been instrumental in strategizing the overall production and sales plan for not only enhancing value for the organisation but also for the customers.

A visionary and energetic leader, he connects with the employees across levels and motivates them to excel through various initiatives. During his tenure at Bokaro as Director, he has taken several initiatives to encourage Sports including supporting the Special Olympics. Many social initiatives involving public participation have brought about positive changes in the city of Bokaro and peripheral areas.

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Statistics

Passenger vehicle wholesalers post record sales in May

Society of Indian Automobile Manufacturers (SIAM) has released the latest Indian auto industry performance report for the month of May, 2023. According to the data, the total production of passenger vehicles, three wheelers, two wheelers, and quadricycle stood at 21,24,235 units in May this year.

As per SIAM data, passenger vehicles sales in the country were 3,34,247 units in the last month, returning to a growth of 13.5%, compared to May 2022. Similarly, a total of 48,732 units of three-wheeler were sold in the country in May 2023, posting a growth of 70.4% compared to the same month last year.

In the two-wheeler category, sales were 14,71,550 units in May 2023. As compared to May 2022, the twowheeler sales in the country grew by 17.4%.

Commenting on sales data of May 2023, Mr Vinod Aggarwal, President, SIAM said, "All the segments viz. Passenger Vehicles, Two-Wheelers and Three-Wheelers have posted growth in double digits in May 2023, compared to May 2022. We anticipate this trend to continue supported by the prevalent economic environment. The Indian Automobile Industry is currently in a transition phase with new powertrain technologies offered to consumers ranging from Electrified, Bio-Fuels and Gaseous Fuel driven vehicles which are being enabled through sound policies of the Government."

Commenting on May-2023 performance, Mr Rajesh Menon, Director General, SIAM said, "Sales of Passenger Vehicles of May 2023 has been the highest ever in May, returning a growth of 13.5%, compared to May 2022. Two-Wheelers also posted a growth of 17.4% in May 2023, compared to last year, but are still lower than 2016-17 levels. Domestic sales of Three-Wheelers in May 2023 grew by 70.4% compared to May 2022, although on a low base, but is still lower than the 2018-19 levels."

		SL4M						
Segment wise Compar	ative Production, Dom	estic Sales & Ex	xports data for t	he month of May	/ 2023			
		(Number of Vehicles)						
Category	Producti	on	Domestic S	Sales	Exports			
Segment/Subsegment	May		Мау		May			
	2022	2023	2022	2023	2022	2023		
Passenger Vehicles (PVs)*								
Passenger Cars	1.58.310	1,63,619	1,24,060	1.20.364	37,824	35,806		
Utility Vehicles (UVs)	1,27.424	1.66,178	1,16,255	1,55.184	19.041	16,274		
Vans	11,107	13,770	10,736	12,821	23	1,157		
Total Passenger Vehicles (PVs)	2,96,841	3,45,567	2,51,051	2,88,369	56,888	53,237		
Three Wheelers								
Passenger Carrier	49.892	61,700	20,174	38.590	26.989	25,442		
Goods Carrier	8,143	8,027	6,952	7,531	507	196		
E-Rickshaw	1.399	1,552	1,273	2,314	-	-		
E-Cart	225	370	196	297	-	-		
Total Three Wheelers	59,659	71,649	28,595	48.732	27,496	25,638		
Two Wheelers								
Scopter/ Scooterettee	4.17.348	4,90,007	3,98,099	4,46.593	27,080	40,687		
Motorcycle/Step-Throughs	11.54.746	11.77,673	8,19,940	9,89.120	3.20.619	2,19,204		
Mopeds	36.820	38,974	35,148	35.837	48	54		
Total Two Wheelers	16,08,914	17,06,654	12,53,187	14,71,550	3,47,747	2,59,945		
Quadricycle	202	365	28	35	96	312		
Grand Total	19,65,616	21,24,235	15,32,861	18,08,686	4,32,227	3,39,132		
* BMW Merceces JLR Tata Motors and Volvo Auto data is not av	ailable							
Society of Indian Automobile Manufacturers (13/06/2023)								

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Statistics

Summary Report: Cumulat	ive Production. Domes	tic Sales & Expo	orts data for the	period of April -	May 2023					
				<u></u>		Report I				
(Number of										
Category	Producti	on	Domestic {	Sales	Exports	ŝ				
Segment/Subsegment	April-Ma	ay	April-M	ay	April-May					
	2022-23	2023-24	2022-23	2023-24	2022-23	2023-24				
Passenger Vehicles (PVs)*										
Passenger Cars	3,09,70B	3,06.552	2.36,983	2,46,122	67.275	58,752				
Utility Vehicles (UVs)	2,75,030	3,30.487	2.43,537	3,03,189	35.962	33,984				
Vans	22,575	24,691	22,247	23,329	149	1,441				
Total Passenger Vehicles (PVs)	6,07,313	6,61,730	5,02,767	5,72,640	1,03,386	94,177				
Three Wheelers										
Passenger Carrier	91,468	1,16.409	32,729	73,198	62.364	48,439				
Goods Carrier	15,709	14,210	14,300	12,898	912	293				
E-Rickshaw	1,868	3,290	2,103	4,905	-	-				
E-Cart	493	501	460	516	-	-				
Total Three Wheelers	1,09,538	1,34,410	49,592	91,617	63,276	48,732				
Two Wheelers										
Scooter/ Scooterattee	8,26,608	9,86,203	7,86,541	9,10,982	63,240	9 0,222				
Motorcycle/Step-Throughs	22,40,289	22,23,444	15.55,300	18,28,394	6,89.892	4,27,856				
Mopeds	72,780	75.409	73,928	70,762	54	54				
Total Two Wheelers	31,39,677	32,85,056	24,15,769	28,10,138	7,53,186	5,18,132				
Quadricycle	303	679	54	96	162	608				
Grand Total	38,56,831	40,81,875	29,68,182	34,74,491	9,20,010	6,61,649				

				-	SIA M							
	Category & C	Company wis	e Summary I	Report for th	e month of Ma	ay 2023 and	Cumulative f	or April-May	(2023			
												Report II
												of Vehiclas)
Category		Produ				Domestic				Expo		
Segment/Subsegment	Me		April		Ma		April-I		May		April-N	
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	1,237	820	2,578	2,006	928	734	1,314	1,292	248	361	S14	768
Force Motors Ltd	49	94	14B	96	50	8	144	8	-	-	-	-
Eonda Cars India L.d	10,552	6,425	19,674	11,376	8,168	4.680	16.052	9,973	1.997	587	4 031	2 950
Hyundai Motor India Ltd	48,300	53,177	1,07,300	1,13.668	42.293	48,601	\$6,294	98,302	8.970	11.000	21 170	19 500
Isuzu Motors India Pot Ltd	677	23	900	54	60	39	BB	73	194	-	194	-
Kia Motors India PvI Ltd	24,225	24,869	51,375	54,771	18,718	18786	37 737	41 982	5 376	5 008	13 453	13 753
Mahindra & Mahindra Ltd	23,734	31,022	43,300	64.241	26.904	32,386	49,430	67,584	594	1.078	1 237	1 957
Maruti Suzuki India Eld	1,60,450	1,76,21B	3,13,413	3,20,315	1,24,474	1,43.700	2,46.439	2.81.028	27.018	26.287	45 234	43 121
MG Motor india Pv. Etc.	3,715	6,120	6,928	11,538	4,008	5,006	6,016	9,557				
Nissan Motor India Pvt Ltd	5,245	4,814	11,245	8.215	2.131	2,618	4,241	5,235	5.693	2.013	6 922	2 G46
PGA Notors Pvt. Ltd	22	1,929	57	2,853	24	506	75	1.800	-	12	-	308
Renault India Pvt 10	8,240	3,649	16,308	6,517	5,010	4,625	12,604	8,948	3 765	1 475	4 882	1 550
SkodaAuto India Pvt Ltd	3,482	4,464	7,869	8.353	4.604	3,547	9,756	7,556	-	163	-	327
Toyota Kirloskar Motor Evi Ltd	3,950	27,877	12,694	47,823	10,151	19.075	24.920	32.976	18	1.031	32	2 379
Volkswagen ind a Pvf Ltd	2,892	4,362	7,528	9,642	3,502	3,286	7,114	8,318	3 015	3 222	5 817	4 488
Total Passenger Vehicles (PVs)	2,96,841	3,45,567	6,07,313	6,61,730	2,51,051	2,88,369	5,02,767	5,72,640	56,688	53,237	1,03,386	94,177

	SL1.M											
	Category & C	>ompany wis	e Summary	Report for th	e month of N	May 2023 and	d Cumulative	for April-Ma	y 2023			
												Report I
											(Numtier	of Vehicles
Category	Production Domestic Sales Expor							rts				
Sagment/Subsegment	M.		April			ay	April					-May
Manufacturer	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24	2022	2023	2022-23	2023-24
Three Wheelers												
Atal Auto Lid	1,751	983	3.310	1.726	1,418	1,101	2,766	1 583	376	151	621	294
Baja, Auto Ltd	29,416	46,360	54.409	87,619	16.178	33,555	25,096	64 838	10.067	13,550	30.120	25,203
Continental Engines Pv1 Ltd	549	386	97C	870	593	353	1,075	741	-	-	-	-
Loroe Motors Etd	164	336	304	54H					308	448	392	588
Mahindra & Mahindra Ltd	3,744	5,607	6.287	10.456	3.645	5,851	0,654	11 403	-	7	18	13
Piaggio Vehicles Pvt Ltd	8,865	7.122	15.871	12.778	5,508	6,530	11,395	10 035	2.076	1.470	3,518	2,799
TVS Motor Company Ltd	15,170	10,855	28.387	20,407	1.255	1,312	2,603	2 917	14.669	10,002	28.607	19,835
Total Three Wheelers	59,659	71,649	1,09,538	1,34,410	28,595	48,732	48,592	91,617	27,496	25,638	63,276	48,732
Two Wheelers												
Athen Energy Pvt. Ltd	3,658	9,742	7.315	10.927	3.667	9,070	7,361	10416	-	-	-	-
Baja, Auto Eld	2,86,483	0 22.018	5.72.877	5.79.856	96,102	1,94,684	1.89,335	3 76 374	1.53.397	1.12.865	3,41,875	2,19,042
Chetak Technology Ltd	-	122	-	495	-	127	-	265	-	-	-	-
Here MotoGorp Ltd	4,50,699	4 68.930	8.56.368	5.99.696	4,66,463	5,08,309	8.64,956	8 94 493	20.298	11.135	40,369	21,085
Honda Matarcycle & Scooter India Pvt I td	3,40,212	3 28,563	6 96 583	6,91,491	3,20,857	3,11,144	6.33.591	6 49 434	32 036	18,249	74,331	54,707
India Kawasaki Motors Pvt Ltd	221	289	338	359	268	304	G02	720	-	-	-	-
India Yamaha Motor Pvt Ltd	68,325	75.518	1.36.809	1.45.057	44,937	53,571	68,875	1 06 510	20.574	15.642	50,837	35,288
Mahindra Two Wheelers Ltc	53	-	n 3	-	34	-	43	-	-	-	-	-
Okinawa Aufotech Pvt. Ltc	10,320	-	20.431	-	10,542	581	20,734	617	-	-	-	-
Plaggio Vehicles PvLLtd	7,043	3,930	14 198	9,208	4,731	2,601	S.954	5 591	1 SUC	1,457	3,620	2,503
Roya -Enfield (Unit of Eicher Motors)	70,096	82,012	1.37.816	1,53,026	53.525	70,795	1,07,377	1 39 676	10.118	6,696	18.421	10,821
Suzuki Motorcyclo India Pvt Lld	72,550	87.806	1.35.817	1.74.742	60,510	67,040	1.14,845	1 34 299	11.008	24.276	25,666	45,748
Triumph Motorcycles Incia Pvt Ltd	29	13	89	47	58	34	176	97				
TVS Motor Company Ltd	2,99,222	3 27.706	5.61.283	0.14,142	÷,91,452	2,82,690	3.72,015	4 B5 646	95.570	60.605	,95,065	1,28,435
Total Two Wheelers	16,08,914	17.06,654	31.39.677	32,85,056	12,53,187	14,71,550	24,15,769	28.10.138	3.47.747	2,59,945	7,53,186	5,18,132
Quadricycle												
Bajal Auto Lld	202	365	303	679	20	35	54	30	00	312	162	605
Total Quadricycle	202	365	303	679	28	35	54	96	96	312	162	608
Grand Total	19,65,616	21,24,235	38,56,831	40,81,875	15,32,861	18,08,685	29,68,182	34,74,491	4,32,227	3,39,132	9,20,010	6,61,649
Soplety of indian Automobile Manufacturers (15/03/2023)												

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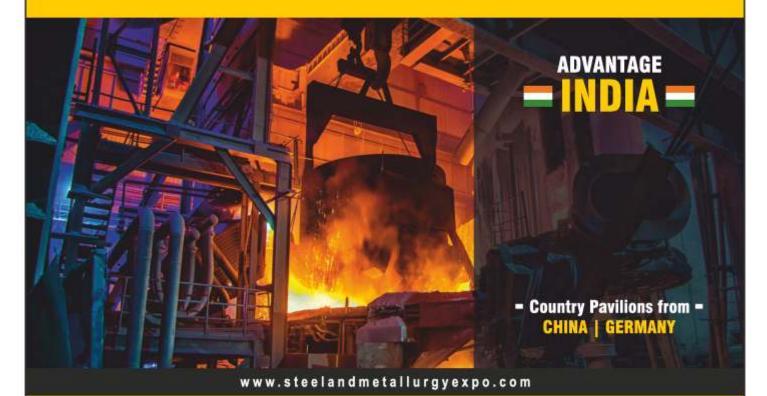
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- Highly advanced and proven European Technology to maximize production, manufactured in India
 - Renowned and acclaimed technical as well as OEM partners
 - Wide range of supply from conventional to the most advanced equipment
 - Proven competency in efficient handling of green field, brown field or revamping projects
 - Higher productivity / yield
 - Superior product quality

Compact Mill for Bar & Wire-Rod, Structural and Narrow Strip Mill



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