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Vol. 29 No. 11

**November 2023** 

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The Stainless Steel Industry is at a transformative stage"



- GSSE Expo 2023 Achieved Remarkable Success
- Steel Industry pursuit of Green Technology to achieve net-zero emission goal
- Primetals Technologies' modernization of automation systems at roughing mill boosts production



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### **Editor**

Dear Readers,

'Asian Metallurgy' show was launched as a bi-yearly exhibition & conference in 1997 in Mumbai. First few editions were held at Nehru Center but later it was shifted to BEC. Goregaon for want of bigger space. In the next decade or so, it was regarded as the most acknowledged trade show for the metallurgical industry in Asian region, covering both ferrous and non-ferrous sectors. It featured the 'Steel & Metal Expo,' a global exhibition highlighting cuttingedge technology, equipment, and products, along with the specialized seminars addressing the challenges faced by various sub-sectors. The global pandemic of covid – 19, which struck the world in Jan/Feb 2020, altogether changed the human life in all the spheres including the industry. It not only changed the way industry functions but it changed the mindset of people who were running it. While everything else was bad, bitter and dark about covid-19 pandemic, it gave us few wisdom tips as well. 'Work from home' or 'Digitalization' were old concepts but they got a big boost during covid days and today even after the pandemic is completely subsided, these concepts are still being used. Especially

### **Editorial Desk**



Digitalization has revolutionized the manufacturing industry and is being improvised every day. We too brought the concept of digitalization in the way trade shows were conducted and the Asian Metallurgy show, which was traditionally held on ground, saw a successful transition to the digital format in last three years or so. Not only 'Asian Metallurgy' show but all the other events such as 'Special Steels Convention', 'Iron & Steel Summit' etc. Are being successfully conducted on digital platform since last few years.

Participating in this digital B2B event offers significant advantages. It provides extensive global reach. You can have exhibitors, speakers, participants from all over the world. The event can really become 'global' in true sense. The second big advantage is cost effectiveness. While it takes few lacs of rupees to participate in a good ground exhibition, it takes only few thousand to participate in such digital expo. The third big advantage is 24/7 accessibility. The visitor can visit the expo and your booth any time from anywhere in the world. Of course one must admit that in such virtual events, there is no opportunity to have physical interaction and develop personal rapport.

With more and more use of Artificial Intelligence (AI), Virtual Reality (VR), Augmented Reality (AR), in our daily lives as well as in the industry, I am sure the digital space and opportunity for trade shows is here to stay and expand in the future. It brings the regional economies closer and facilitates global trade.

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

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### Disclaimer:

The views and opinions expressed in the articles are solely of the authors. The Editor may not subscribe to these.

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- » EOT CRANES

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# RAIPUR

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- ROLLING MILL DUTY
- TUBE MILL DUTY
- WARE HOUSE
- WORKSHOP

## MATERIAL HANDLING EQUIPMENT OF ROLLING MILL

- ROLLER TABLES
- COOLING BEDS
- CHAIN TRANSFER



















### ENQUIRIES WELCOME

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**UNIT-II: RAIPUR (CG)** 

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PLOT NO. 26 & 27, CSIDC METAL PARK, PHASE 1, RAWABHATA, RAIPUR, CHHATTISGARH, 492003





With over 35 years of experience, Mr. Sharma has steered diverse roles in the areas of corporate affairs, sales, distribution, corporate branding, marketing & business development, strategy formulation, supply chain management, market research & product development, customer outreach & satisfaction in stainless steel & automotive industries. He also has been overseeing profitability of the service center chains of the Jindal Stainless Group in India and in Spain.

### 1. What is the present status of the stainless steel industry? How do you see its future in India?

The stainless steel industry in India is at a transformative stage. About two decades ago, nearly 80% of stainless steel was used in making utensils, but its applications have now diversified in a big way. Now, its consumption has reached around 65% in other sectors like architecture, building and construction (ABC), automotive, railways and transportation (ART),

consumer durables, process and engineering industries, and other new age applications. Being the most sustainable and green metal, it is also the ideal choice for all sustainable infrastructure. We now see stainless steel footover bridges in our country.

Despite these advancements, there is still ample room for growth. India's per capita consumption of stainless steel is at 2.8 kg, which is significantly lower than the global average of approximately 6 kg.
However, the government's commitment to infrastructure development and manufacturing sector, is expected to enhance the demand for stainless steel in the country.

Moreover, the stainless steel consumption in India is expected to reach 12.5-12.7 million tonnes (MT) and 19-20 MT by fiscals 2040 and 2047, respectively, as per the Stainless Steel Vision 2047 document by CRISIL and the Indian Stainless Steel Development Association (ISSDA). This demonstrates a positive trajectory for the industry's growth in India.

## 2. What are the present product offerings from Jindal Stainless Ltd.?

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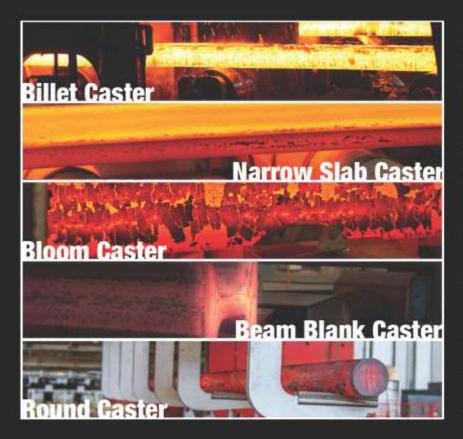
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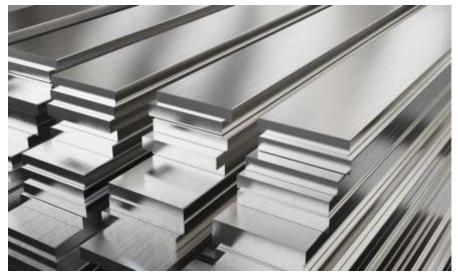


### **Face to Face**

lineup encompasses a diverse range, including stainless steel slabs, blooms, coils, plates, sheets, precision strips, blade steel and coin blanks.

3. What are the future prospective markets for stainless steel?

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towards excellence through
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regular basis, we have
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As sustainability becomes a key driving force in the era of climate change, stainless steel emerges as the ideal material choice. Its attributes, such as corrosion resistance, low life cycle cost, 100% recyclability, and a robust strength-to-weight ratio, establish it as the most sustainable metal. While stainless steel has a stronghold in traditional applications as mentioned earlier, its usage is now extending to emerging strategic sectors such as defence, aerospace, renewable energy, agriculture, the green and blue economy, among others.

# 4. What is the research being carried out in the field of Stainless Steel at JSL & elsewhere?

Jindal Stainless has been a pioneer in the field of

about 85 grades for specific applications in last two decades. We are thankful to our esteemed customers for handholding in these initiatives for our mutual growth.

To give you a very recent example, we developed and supplied a special, high strength alloy grade that has been used in the motor casing of India's ambitious third lunar mission, the Chandrayaan-3. The specialised grade supplied to the Indian Space Research Organisation (ISRO), usually imported from several countries, has been meticulously developed over a span of three years with the help of advanced refining process, bolstering India's race to space while meeting the stringent quality standards and specifications of the crucial project. In fact, the historic Chandrayaan-3 mission has catapulted our stainless steel to the lunar surface, both in letter and in spirit.

Talking about research, we also strive for continuous improvement in collaboration with academia. We have recently signed an MoU with IIT Bombay to further research dedicated to the stainless steel sector. We have also signed an MoU with the Confederation of Indian Industry to fight the "war against corrosion." It covers creating awareness on how corrosion impacts the economy and also includes research projects on how corrosion risks can be mitigated on life cycle costing basis.



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### **GSSE Expo 2023 Achieved** Remarkable Success



The second edition of the 3day grand expo focused on International b2b exhibitioncum-conference connecting all stainless steel stakeholders and end-users under one roof manufacturers, buyers, influencers, regulators, various industry associations and media. The main objective of the expo was to create a mega platform for the stainless steel industry to connect, network and explore business opportunities. The expo was a crossroad where the entire stainless steel industry came together to showcase the latest developments in the industry, share knowledge and expertise, participate in discussions on new-age cutting edge technologies. GSSE 2023 was inaugurated by esteemed dignitaries which included Chief Guest, Shri Hemant Sharma, Principal Secretary, Industries, Government of Odisha, Shri Abhyuday Jindal, Managing Director, Jindal Stainless Ltd., Dr. Aruna Sharma, GSSE Steering Committee Member and Former Secretary, Ministry of Steel and Smt. Anitha Raghunath,

Director, Virgo Communications and Exhibitions.

In his inaugural address, Shri Abhyuday Jindal, Managing Director, Jindal Stainless and Title Partner said. "It won't be an exaggeration to say that stainless steel is omnipresent, and even for a big event like the G20, stainless steel adorned the roads. Be it the art installations in Lutyens Delhi or the security barriers, stainless steel made its presence felt. It was a historic moment to witness stainless steel reach the moon when the Chandrayaan-3 made a soft landing on the lunar surface recently." He also touched upon the industrial park in the making in Odisha by his company and said it is the first-ever stainless steel Industrial Park in India with the vision to strengthen the industry. He stated that "Opportunities for stainless steel are plenty but the growing industry concern is about challenges like



subsidised imports from China that are dumped into the domestic market and have reduced our MSMEs from manufacturers to traders".



At the event, the Odisha Government unveiled an ambitious Special Subsidy Scheme to boost the stainlesssteel Industry within the state further solidifying Odisha's commitment to becoming the 'Stainless Steel destination' for the world. Regarding the salient features of the scheme, the Chief Guest said: "Under this scheme, businesses investing in the stainless steel downstream sector in Odisha will receive a substantial 20 per cent capital investment subsidy on their investments. This lucrative incentive is designed to stimulate growth and innovation within the sector". The state government of Odisha will provide the subsidy over a period of 5 years and there will be no cap on the investment limit. The scheme also provides for businesses operating in the stainless steel downstream sector a power tariff subsidy of Rs 2/unit and a 100 per cent exemption on electricity duty, a









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### **Industry Update**

move which will significantly reduce the operational costs of the entities and enhance the overall competitiveness of the industry". To further support the workforce and promote job creation, the scheme provides for a 100 per cent reimbursement of Employee State Insurance (ESI) and Employee Provident Fund (EPF) contributions for up to five years, and land allocation for projects on a priority basis". These industry development schemes position the state as a critical player in the raw materials supply chain for various industries, including steel and aluminium.



GSSE 2023 witnessed the participation of key stakeholders from the stainless steel ecosystem and was well supported by leading trade associations / bodies like Stainless Steel Pipe & Tube Manufacturer





Association (SSPTMA), All India Stainless Steel Industries Association (AISSIA), Stainless Steel Merchants Association (SSMA), Process Plant & Description of India (PPMAI) and Non-Ferrous Metals Association-Karnataka (N'MAK).

GSSE managed to draw

diverse stakeholders, key decision makers, CXO's and distributors and decision makers to exhibit, network and learn other industry leaders from across the globe. It served as a perfect platform to showcase India and presented a unique opportunity to explore, network, discuss investment opportunities in the world's second fastest growing

market.

A comprehensive Advertising and extensive coverage plan was well executed with more than 20 leading Media / Publication to target key industries like Construction, Infrastructure, Railways, Metro Trains, Water Distribution, Alcobev, Elevators & Escalators, Petrochemicals & Refinery, Dairy, Chemical & Pharma, Machine Tools & Equipment manufacturing. GSSE got wholehearted support from India's stainless steel industry to augment and align with Ministry of Steel's vision for Atmanirbhar Bharat, Vocal for Local, PLI scheme, MSME focus and Brand India. GSSE attracted a total of 8500 trade visitors from more than 25 States and 30 countries.







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# SAIL declares financial results for Q2 and H1 FY'24

New Delhi, 10<sup>th</sup> November, 2023: Steel Authority of India Limited (SAIL) has declared its financial results today for the quarter and half year ending 30<sup>th</sup> September, 2023. Key highlights:





### Performance of H1 FY 24 (Standalone) at a glance:

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	Unit	H1 22-23	H1 23-24		
Crude Steel Production	Million				
	Tonne	8.63	9.47		
Sales Volume	Million				
	Tonne	7.37	8.65		
Revenue from Operations	Rs. Crore	50,275	54,071		
Earnings Before Interest, Tax,					
Depreciation and Amortisation					
(EBITDA)	Rs. Crore	3,780	6,132		
Profit Before Exceptional Items					
and Tax	Rs. Crore	523	2,313		
Exceptional Items	Rs. Crore	-	415		
Profit Before Tax (PBT)	Rs. Crore	523	1,898		
Profit After Tax (PAT)	Rs. Crore	391	1,390		

### Performance of Q2 FY 24 (Standalone) at a glance:

	Unit	Q2 22-23	Q1 23-24	Q2 23-24
Crude Steel Production	Million			
	Tonne	4.30	4.67	4.80
Sales Volume	Million			
	Tonne	4.21	3.88	4.77
Revenue from Operations	Rs. Crore	26,246	24,358	29,714
Earnings Before Interest,				
Tax, Depreciation and				
Amortisation (EBITDA)	Rs. Crore	1,174	2,090	4,043
Profit Before Exceptional				
Items and Tax	Rs. Crore	(516)	202	2,111
Exceptional Items	Rs. Crore	-	-	415
Profit Before Tax (PBT)	Rs. Crore	(516)	202	1,696
Profit After Tax (PAT)	Rs. Crore	(386)	150	1,241

The Company has achieved its best ever performance in production and sales for H-1 and Q2 of the current financial year. The crude steel production and sales volume have registered a growth of 9.7% and 17.4% respectively during H1 FY'24 over CPLY. Similarly, in Q2 of this financial year, crude steel production and sales volume have increased by 11.6% and 13.3% respectively over CPLY.

The consistent efforts by the Company towards increasing its volumes have had a positive impact on the financial performance despite the significant decline in the price realization in the market. The Company remains committed towards improving capacity utilization, value addition and cost competitiveness besides De-carbonisation efforts.



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## Steel Industry pursuit of Green Technology to achieve net-zero emission goal

Global Steel Industry is a large emitter of polluters which is estimated to emit around 8-9% of Carbon Emission globally. In India it is estimated at 12% of country's total emission. So it's imperative that steel industry adopt technology that reduces it emissions to net zero in a time bound manner

Indian steel production is ranked second in global ranking with a production capacity of around 160 million tons. Production during FY 23 was estimated around 131 mt. Govt of India has set an overall target of net zero emission by 2070. However, steel industry needs to find an appropriate technology to achieve this goal faster- a technology which is cost effective in all respect, keeping the socio-economic condition in mind for a developing country like India. Many large Indian Steel producers like Tata Steel, JSW, AM/NS, SAIL have started trial of various technologies to find a solution. Adoption of Green Hydrogen in steel making is in the fore front of such trials. Alternate technology like Carbon Capture, utilization & storage is also being looked at. However, non of these so far provide a cost effective route. All

these technologies are still in trial stage and far from being adopted by various steel players.

How are Indian steel mills gearing up to address the decarbonisation challenge?

#### Tata Steel approach:

"Tata Steel is pursuing a twopronged approach towards sustainability: a) carbon direct avoidance (CDA) and carbon capture and use (CCU)," a senior company official informed at a recent industry event.

Despite the fact that the emissions-intensive BF-BOF route is the mainstay of the company's operations, successive measures to attain material and process efficiencies have resulted in significant reduction in direct and indirect CO2 emissions from steel-making. Emissions per tonne of crude steel (tcs) have inched down to 2.45 tCO2/tcs in FY'23 from 3.12 tCO2/tcs in FY'05.



Tushar Kanti Sahu Sr. Advisor, Construction Industry Development Council

Dr. Debashish Bhattacharjee, Vice President of Technology and R&D at Tata Steel, asserts that the primary objective of the steel sector today is to decarbonize in a manner that is both technologically and economically sustainable and says "While the current carbon footprint associated with the steel industry is untenable, the existing iterations of clean hydrogen face formidable challenges such as exorbitant operational costs and energy losses. Determined to surmount these obstacles. Tata Steel has launched the 'Tata Steel - Sprint to Zero 2023' platform, fostering collaboration between academia and industry's brightest minds. This visionary partnership with the UK Government is set to usher in a remarkable convergence of









innovation policymakers, R&D firms, start-ups, hubs, investors, research groups, and Catapults from both India and the UK."

### Initiatives by Ministry of Steel, Govt. of India

India's Ministry of Steel has unveiled a resolute commitment to decarbonise the Indian steel sector, setting the stage for a transformative journey towards sustainability. The government charts a three-pronged strategy, encompassing short-term, medium-term, and long-term measures to achieve the monumental goal of net-zero emissions.

In the short term, the focus centres on reducing carbon emissions through energy and resource efficiency initiatives, along with a concerted push for greater utilization of renewable energy sources.

Embracing the vision of green hydrogen based steel

making and Carbon Capture, Utilisation, and Storage mark the medium-term endeavours, ushering a new era of sustainability and ecoconsciousness.

In the long term, the steel sector envisions a disruptive wave of alternative technological innovations that can seamlessly usher in the net-zero transition, fostering a sustainable future for generations to come. At the heart of this ambitious undertaking lies a coordinated effort, with the establishment of thirteen Task Forces comprising industry leaders, academia, think tanks, S&T bodies, and various Ministries, all working in unison to unravel the levers of decarbonization.

The most important initiative though is the National Green Hydrogen Mission (NGHM), under which the Ministry of Steel has been allocated 30% of the pilot project budget, i.e., ₹14.66 billion (\$ 177

million), to promote the use of green hydrogen in steelmaking.

According to industry estimates, to make hydrogen technology viable for expansion, the required price should be around \$1-2/kg and a carbon penalty of at least \$50 per tonne of emissions should be applicable on steel manufactured through traditional methods. This can make green steel competitive and catalyse a 150 million tonne shift from coal-based to hydrogen-based steelmaking.

### THREAT OF CARBON BOARDER ADJUSTMENT MECHANISMS (CABM) BY European Union:

European Union's has passed a Law for implementation of a mechanism titled "Carbon Border Adjustment Mechanism (CABM) to reduced carbon emission footprint in imported steel into EU. It will be implemented w.e.f 1st October 2023. With a mere three months remaining until the



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initiation of reporting embedded CO2 emissions on imported goods, proactive measures become paramount.

The window spanning from October 1 to December 31 signifies the inaugural trading period subjected to emissions reporting under the new regulations, while the European Commission finalizes the intricate details of CBAM's execution.

During the initial transitional phase, extending until the close of 2025, CBAM exclusively encompasses the collection and reporting of importers' carbon data. The payment of tariffs and potential fines will solely become applicable when CBAM officially supplants the existing EU Emissions Trading System (EU ETS) in 2026.

At present, participants within the steel sector have been cordially invited to contribute their discerning insights and opinions on the proposed implementation process of CBAM through an ongoing consultation, which commenced on June 13 and concluded on July

11

The publication of the Commission's draft Implementing Regulation document, accompanying the launch of the consultation, proffers an initial glimpse into the projected CBAM reporting process. This comprehensive document elucidates the reporting procedure, the proposed methodology for calculating embedded CO2 emissions in imported products, and the potential penalties for noncompliance. Furthermore, the publication's annexes concisely summarize the information to be incorporated within CBAM reports.

As per the Commission's documentation, the filing and management of CBAM reports shall be facilitated through the CBAM Transitional Registry platform, meticulously designed to harmoniously integrate with prevailing customs systems.

It is estimated that the fully CBAM compliant steel will cost any where between

Euro 200 – 300 per mt more than conventional steel produced at present.

### Encouraging Results from Tata Steel Trial of using Green Hydrogen injection in BF

Tata Steel plans to scale up use of hydrogen in the steel making process after the successful completion of the pilot project at it's Jamsehedpur plant. In April 2023, Tata Steel commenced the first of its kind experiment injecting hydrogen gas using 40% of the injection system in E-blast Furnace at its steel plant in Jamshedpur, Jharkhand.

"It was very successful, we will scale it up. But eventually we need to have green hydrogen available in Eastern India that will determine how it can be used", TV Narendran, MD & CEO Tata Steel said to PTI. Injection of hydrogen in blast furnaces help reduce consumption of coal leading to reduction of carbon footprint.

"This is the first time in the world that such a large quantity of hydrogen gas is being continuously injected in a blast furnace", he said.







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# SMS group to build new electric arc furnace for SSAB for fossil-free steel production

### SMS @ group



The scope of supply includes a 190-ton Alternate Current-Electric Arc Furnace (AC-EAF) capable of processing various raw materials, including fossilfree Direct Reduced Iron (DRI) or Hot Briquetted Iron (HBI), and scrap. With an upper shell diameter of 9.3 meters, the new EAF is one of the largest installations in the world for similar applications, and it will help SSAB to scale up the decarbonization of its production processes.

SSAB is revolutionizing steelmaking with two unique steels with virtually zero fossil carbon emissions: SSAB Fossil-free and SSAB Zero.

SSAB Zero is based on recycled steel and SSAB Fossil-free is based on sponge iron reduced with hydrogen instead of coke coal. Both are heated in EAFs powered by fossil-free electricity and other fossil-free fuels. SSAB's ambition is to be a virtually fossil-free company in around 2030. SMS will supply all

automated features including the slag handling and Eccentric Bottom Tapping (EBT) operations, the advanced electrode control X-Pact® SynReg, which, together with advanced robotics applications, such as the X-Pact® Sampler, ensure operational safety as well as better precision and productivity without human intervention.

The automation system for the new plant is setup in the X-Pact® Plug & Work test center from SMS in Germany, connected with a virtual process and production simulation. This concept of integration testing allows for a shorter ramp-up, high product quality and a stable production environment. During the X-Pact® Plug & Work integration test, SMS experts will provide training for SSAB's personnel.

The implemented process control and automation ensures a reliable "tap-to-tap time" (t-t-t), resulting in lower energy consumption and high production efficiency. The new EAF will produce high-quality liquid steel, facilitating SSAB's smooth transition from the integrated route to the electric route without significant disruptions. Side-wall burners, lime/carbon injectors and off-gas analyzers guarantee



optimized chemical energy utilization.

The scope of supply further includes an unparalleled yard management system for plantwide raw material handling with efficient tracking and noise reduction thanks to an exceptionally large number of special containers. The project also represents an extension order to the Manufacturing Execution System (MES), which is currently been implemented at SSAB by SMS.

In addition, SMS group's digital twin for SSAB, which includes Genius CM and DataXpert, will provide the digital representation of the EAF and serve as a central interface for predictive maintenance.

"The collaboration between both companies represents a pioneering step towards a sustainable and environmentally conscious steel industry. By integrating innovative technologies and



using fossil-free materials, the companies are demonstrating their commitment to reducing  $CO_2$  emissions and leading the industry towards a greener future," said Olaf Stalfort, Chief Sales Officer Region Europe for SMS group.



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# Primetals Technologies' modernization of automation systems at roughing mill boosts production



German steel producer BGH Edelstahlwerke has recently signed the preliminary acceptance certificate(PAC) with Primetals Technologies for the modernization of an automation system at roughing mill No. in its longrolling plant located in Freital, Germany.

In 2021, Primetals

Technologies upgraded the automation system for roughing mill No. 1, with the result exceeding BGH Edelstahlwerke's expectations, mainly thanks to the tailormade nature of the solution, additional consulting services, and effective and timely project execution. Therefore, in late 2022, Primetals Technologies was awarded the new project, which

The modernization project was executed within a

introduces a similar

roughing mill No. 2.

automation concept to

limited time frame, and the new automation solution has been in operation since July 2023. Well-thought-out, standardized, and adaptable technology as well as an experienced project team made it possible to meet the tight deadline.

Thanks to the upgrade, BGH Edelstahlwerke benefits from an automation system that is easier to operate and, at the same time, is more reliable. Obsolete hardware was replaced with a modern automation platform, the Totally Integrated Automation Portal (TIA Portal), and an ET200SP process interface. In addition, the Minimum **Tension Control software** stabilizes the rolling process, which results in a higher level of productivity. Upgraded automation for the shears is also a part of the project. Shear 0 and 1 were modernized with the Long

Rolling (LR) shear solution from Primetals Technologies that is part of the TIA Portal. The new software ensures higher yield and therefore increased production capacity, as the shears cut away less material.

BGH has a rich history spanning more than 550 years of steelmaking in Germany. Today, high-alloy steels are produced in Freital, with thicknesses ranging from 5 to 160 millimeters. Two rolling mills equipped with state-ofthe-art control systems are rolling high-speed steel (HSS) and nickel-based alloys. The steel produced is used for many different applications, in sectors such as the automotive, energy, and medical industries.

Primetals Technologies and BGH Edelstahlwerke have partnered in several projects over the last few years, among them the modernization of an electric arc furnace and the supply and implementation of a 50-ton AOD converter



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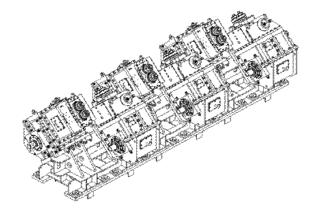
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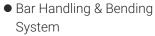
In the year 2019 we stepped into the Rolling Mill segment in aligning with our present product portfolio by taking over CVS Europe Srl based out of Udine, Italy. Which was involved in design and engineering of Continuous Casting Machine, Critical parts of Electric Arc Furnaces and Long Product Rolling Mills.

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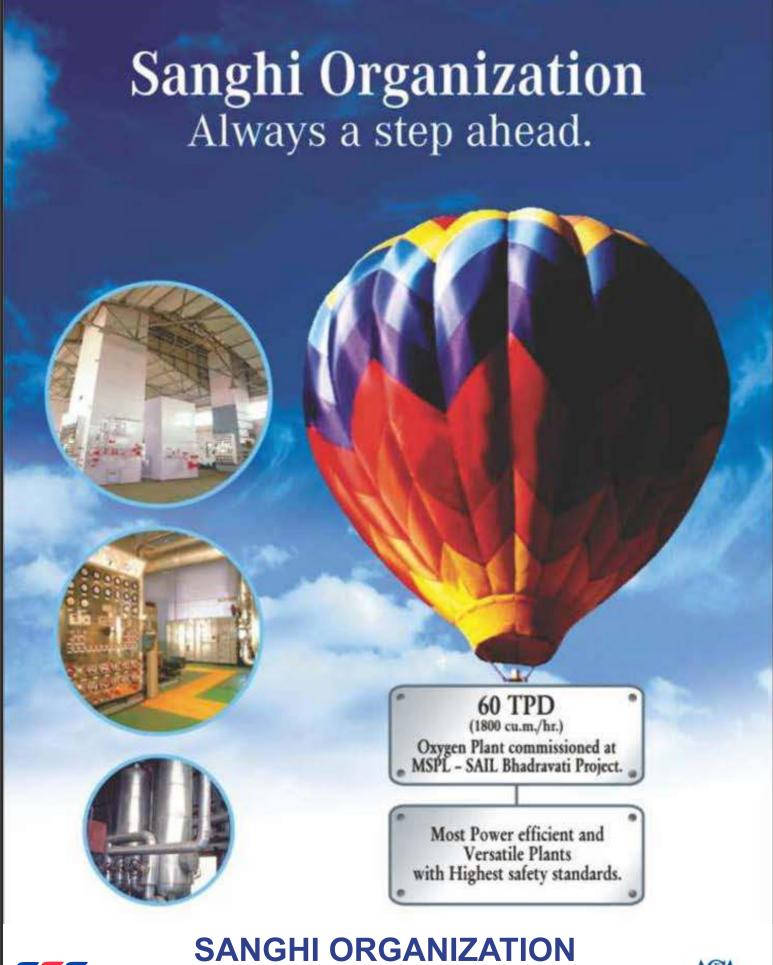


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### View Point





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Electrotherm is constantly seeking opportunities for business growth and development, while also prioritizing customer satisfaction through the creation of innovative products for rolling mill manufacturing.





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# Success Story: Greasing the wheels of progress in steel industry ExonMobil

The Indian steel industry has been a pioneer in the country's industrialization process. Today India is the world's second largest producer of crude steel and is estimated to grow at 4-7% to 123-127 MT in FY24.In line with global trends, the Indian steel sector is embracing technological advancements to stay competitive. Digitalization, artificial intelligence, and machine learning (AI/ML) are being integrated into various facets of steel production and management. These technologies are helping

streamline operations, optimize resource allocation, and enhance overall efficiency. Additionally, the industry is actively adopting the principles of Industry 4.0, leveraging automation, data analytics, and the Internet of Things (IoT) to create smarter and more responsive manufacturing processes.

The steel industry relies on the utilization of robust machinery that is frequently exposed to challenging conditions. To withstand extreme weather conditions and the heavy workload

involved in processing raw materials, the machinery used in this sector requires exceptional durability and resilience. Consequently, highquality industrial lubricants have become an essential factor influencing the daily operational success. Mobil™ Lubricants has been a driving force in advancing lubrication technology for more than 150 years, leading the way in developing cutting-edge solutions that streamline fundamental industrial processes. By prioritizing specialized industrial lubricants. Mobil is guaranteeing efficiency,

### **View Point**



dependability, and productivity while providing excellent protection against wear and damage.



### **Partnerships for Progress**

A TMT Manufacturing unit based in Jalna Maharashtra, owned by Rathi Steel Pvt. Ltd. (Icon Steel) relies heavily on the functioning of an Electrotherm make continuous casting machine. This Electrotherm make machine withdrawal roller bearings were earlier being greased with a conventional EP2 grease with a 1-day interval. This small interval resulted in huge grease consumption and affected the operations and profitability of the unit. In addition to hampering productivity and causing a loss of resources.

To help the company overcome these challenges, ExxonMobil recommended Rathi Steel Pvt. Ltd. (Icon Steel) to switch to Mobilgrease XHP™ 462 for the withdrawal roller bearings on the continous casting machine. Exxon Mobil team also guided the team through on site through on best practices on re-lubrication interval, handling and maintenance practices.

The shift to Mobilgrease XHP 462 has extended the re-greasing interval by 3

times, reducing the grease consumption by 47% in the machine. Owing to the product's high-level chemical stability and excellent protection against rust and corrosion and the fine maintenance practices at sight, the machine has reported zero bearing failures over the past two years. This has also led to a reduction in equipment downtime, with 410 Hours of exposure reduction, 1260 Kgs of environmental improvement, and an overall revenue improvement of 17275 USD annually.

### Leading Lubrication Solutions



Mobilgrease XHP™ 460 greases are extended service lithium complex greases intended for a wide variety of heavy-duty applications and operating conditions. These greases were designed to outperform conventional products by applying high performance proprietary lithium complex manufacturing technology. They are formulated to provide excellent high temperature performance with excellent adhesion, structural stability and resistance to water contamination. These

greases have a high level of chemical stability and offer excellent protection against rust and corrosion. These greases feature high dropping points and maximum recommended operating temperature of 140° C (284°F). Mobilgrease XHP 460 greases are designed for a wide range of applications including the industrial, automotive. construction and marine sectors. Their performance features make them ideal choices for operating conditions including high temperature, water contamination, shock loading and extended re-lubrication operations.

By bringing a rich combination of superior lubrication solutions and quality service portfolio, Mobil has been aiding the performance of the industrial sector by ensuring smooth production and enhancing energy-efficiency. Due to its dependence on heavy machinery functioning in harsh temperatures, the steel industry relieson quality lubricants to achieve its full potential. Duly, Mobil has been innovating for the sector to aid the journey towards maximum productivity and profitability with assured efficiency in everyday operations.





# Deacero takes a big step into Scrap Processing by ordering Five New Shredder Plants

-The minimill producer selected Danieli Centro Recycling technology to be a step ahead in steelmaking
Leading Mexican long-product steelmaker Deacero has ordered five, Danieli Centro Recycling steel scrapshredding plants to process light domestic scrap and car bodies.

Each new plant will feature shredder machines, ferrous scrap cleaning and nonferrous separation lines.

Ferrous downstream lines will include magneticseparation ensuring a high level of scrap cleanliness (proler), while flexible inline/offline nonferrous separation will recover zorba, a high-purity nonferrous metals mix.

Four out of the five plants will operate 2000-hp shredders for 50 tph ferrous output each, while the fifth, equipped with a 4000-hp shredder, will guarantee 100 tph.

All shredders will be powered by Danieli-patented inverter drives, which guarantee lower operational costs due to energy consumption savings up to 15%.

The quality proler produced by the new scrap processing plants will be mainly used by Deacero to feed its Danieli meltshops in Mexico.

The heavy-duty equipment will be manufactured and assembled by the Danieli specialized workshops in Thailand and Italy.

This five shredders order confirms again Danieli Centro Recycling leadership in North and Central America.

# Copper rose as data showing increased Chinese exports signaled improving demand



Copper prices surged by 0.92%, settling at 721.75, driven by positive signals from China, including improved exports and increased demand prospects for the commodity sector. China's exports grew for the first

time in six months in November, indicating that factories in the world's second-largest economy are attracting buyers through discount pricing to overcome a prolonged slump in demand. Daily LME data revealed net cancelled warrants in LME-registered warehouses at 6,725 metric tons, providing additional support to copper prices. China's copper imports rose by 10.1% from the previous month to 550,565.6 tonnes in November, according to data from the General Administration of Customs. The increase in unwrought copper and copper product imports includes anode, refined, alloy, and semi-finished copper products. The premium to import copper into China remained around a one-year high at \$112.50 per

ton, indicating rising demand for the metal in China. Copper inventories in warehouses monitored by the Shanghai Futures Exchange increased by 16.0% from the previous Friday, as reported by the exchange. In Chile, the world's leading copper producer, exports of the red metal reached \$3.96 billion in November, marking a 3.8% increase from the previous year, according to the central bank

Technically, the market witnessed short covering, with a drop in open interest by -11.9% to settle at 4,603. Copper finds support at 716.1, and a breach below could test 710.5 levels. Resistance is now likely at 725.6, and a move above could see prices testing 729.5.

# Zinc dropped as global concern about the impact of rising Chinese government debt

Zinc prices closed lower by -0.48% at 216.55, reflecting global concerns over the surge in local Chinese government debt and a deepening property crisis in the second-largest economy. Inventories in SHFE warehouses dropped significantly by 30.30% from the previous Friday, indicating a tightening supply situation. The decline in zinc stocks continued after robust growth in November, with daily LME data showing net fresh cancellations of warrants at 21,225 tons. Despite hopes for an economic recovery in China, driven by stimulus measures from Beijing and an unexpected increase in the Caixin Manufacturing PMI in November, concerns over the impact of the property crisis and escalating debt weighed on market sentiment

Moody's downgrade of China's government credit rating outlook from stable to negative added to the uncertainties. Zinc stocks in LME warehouses surged to 226,250 at the end of November, reaching a more-than-two-year high. Looking at the global zinc market, it shifted to a deficit of 15,400 metric tons in September from a surplus of 28,000 tons in August, as reported by the International Lead and Zinc Study Group. The cumulative surplus for the first nine months of the year was 475,000 tons, a significant increase from a surplus of 47,000 tons in the same period last year.

Technically, the market is experiencing fresh selling, with open interest gaining by 2.15% to settle at 4,750. Zinc is finding support at 215.5, and a breach below could lead to a test of 214.4 levels. Resistance is likely at 218.6, and a move above could push prices to 220.6

### Kaiser Aluminum Advances Sustainable Practices with New Recycled Aluminium Alloy Patent

Kaiser Aluminum, a notable player in the aluminum industry, has recently filed a patent application for a groundbreaking aluminium alloy sheet, which integrates a significant portion of recycled material. The application, identified by the Publication Number US20230257853A1, details the composition and manufacturing processes of this innovative material.

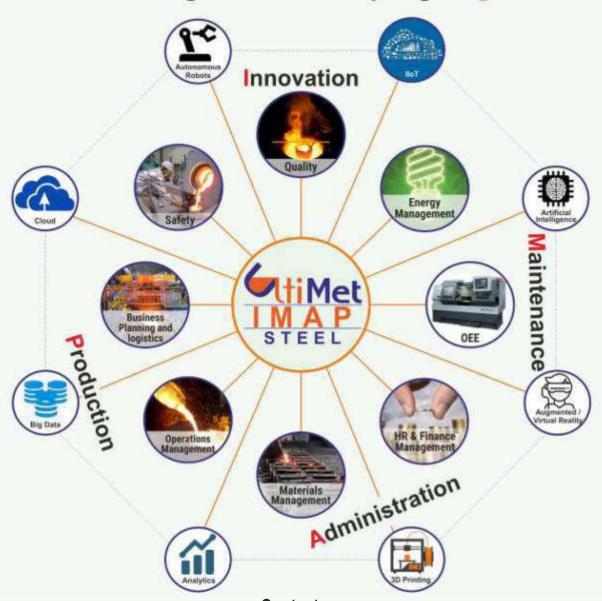
Central to the patent is the alloy sheet's composition,

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which consists of no less than 50% recycled material. This strategic inclusion of recycled content reflects a growing industry trend towards sustainability and environmental responsibility. The remaining portion of the alloy is made up of non-recycled materials, ensuring a balanced and robust formulation.

The aluminium alloy sheet, as per the patent, is designed to exhibit impressive strength characteristics. It boasts an ultimate tensile strength (UTS) range of 37 to 52 ksi (kilo-pound per square inch) – equivalent to 255 to 358 MPa (MegaPascals) – and a tensile yield strength (TYS) ranging from 34 ksi (234 MPa) to 47 ksi (324 MPa). These figures are indicative of the alloy's ability to withstand significant stress without permanent deformation, a critical factor in many industrial applications.

In addition to its high recycled content, the alloy also stands out for its potential to include a third component made from mill scrap, further underscoring Kaiser's commitment to recycling and sustainable practices. This flexibility in composition allows for an increase in the recycled content of the alloy up to at least 70%, significantly reducing the environmental footprint of the production process.

The sources for the recycled material in this alloy are diverse, encompassing various scrap aluminium associations. Conversely, the non-recycled material in the alloy can be sourced from prime aluminium, alloying elements, or a combination of both. The precise weight percentages for each element in the alloy composition are meticulously defined in the patent, highlighting Kaiser's attention to detail and quality.

Another notable aspect of the patent is its inclusion of a method for manufacturing aluminium packages using the alloy sheet. This method involves forming the sheet into the desired shape to create robust and functional aluminium alloy packages. These packages are particularly suited for processed food applications, offering a sustainable packaging solution that aligns with contemporary environmental concerns.

The filing of this patent by Kaiser Aluminum marks a significant step forward in the industry's efforts to enhance sustainability and reduce environmental impact. The development of an aluminium alloy sheet with such a high percentage of recycled content and exceptional tensile properties demonstrates a commitment to innovation and environmental stewardship. This move is likely to influence industry standards and encourage further advancements in sustainable manufacturing practices.

### **European Aluminium Urges EU to Expand Sanctions on Russian Aluminium**

In a significant move, European Aluminium, representing the aluminium industry in Europe, has issued an urgent call for the European Union to impose sanctions on Russian primary aluminium. This call is part of a concerted effort to contribute to the EU's peace and stability initiatives by limiting Russia's market access and



its capacity to continue its military actions.
The industry group expressed its disappointment that the majority of Russian aluminium exports to the EU, especially primary metal, are likely to be excluded

from the new sanctions. This concern arises despite the proposed inclusion of a limited range of aluminium products in the EU's 12th package of sanctions. European Aluminium emphasized that to effectively impact the Russian economy and its war capabilities, broader and more comprehensive measures are essential. With the ongoing conflict in Ukraine, the EU initially adopted a cautious stance due to its dependence on Russian aluminium, crucial for various European industrial sectors. However, after 21 months, the situation has evolved. The European aluminium industry has significantly reduced its reliance on Russian supplies. In 2022, Russian aluminium ingots constituted only 9% of EU imports and 5% of the total EU consumption. European Aluminium is confident that the combination of increased domestic production and imports from other regions can adequately meet the industry's demands. They argue that broader sanctions, including primary aluminium and anti-circumvention measures, would bolster Europe's downstream users by establishing more resilient domestic supply chains and reducing reliance on semi-fabricated products made from discounted Russian

The industry group has urged the European Commission to propose a comprehensive ban on Russian primary aluminium imports and to collaborate with the industry to mitigate any potential impacts on Europe's downstream sectors

In the letter, Paul Voss, Director General of European Aluminium, and leaders from several key industry players, including Gerald Mayer of AMAG Austria Metall AG, Einar Glomnes of Speira, Philipp Schlüter of TRIMET Aluminium SE, Jakob Stausholm of Rio Tinto, Arnaud de Weert of Alvance, Rob Van Gils of HAI Group, William F. Oplinger of Alcoa Corporation, and others, collectively emphasized the urgency of this matter.

The EU's consideration of the 12th package of sanctions, which includes bans on certain aluminium products, is deemed insufficient by the industry. European Aluminium's statement highlights the need for a broader scope of sanctions to make a significant impact. According to Eurostat, in the first nine months of 2023, the EU imported almost 500,000 metric tons (over 551,000 tons) of Russian aluminium and related products, valued at approximately €1.26 billion (US\$1.37 billion). An EU spokesperson commented that the decision on sanctions rests with the member states.

Data from Trade Data Monitor reveals that the EU imported over 2.4 million metric tons (around 2.65 million tons) of primary aluminium, with 11% originating from Russia. This is a decrease from 20% in the previous years. Pål Kildemo, CFO at Hydro, emphasized the necessity of comprehensive sanctions and strict rules to prevent circumvention.

Russian aluminium, primarily produced by Rusal, contributed to 6% of global supplies last year.



# Constellium and Morf3D Team Up to Advance Aluminium Alloy in Additive Manufacturing

Constellium, a leading aluminium specialist with headquarters in Baltimore, Maryland, USA, has formed a strategic partnership with Morf3D, Inc., a subsidiary of Nikon based in El Segundo, California. This collaboration marks a significant step in the development and application of aluminium in the field of Additive Manufacturing (AM). The primary focus of this partnership is to qualify Constellium's Aheadd® CP1 metal powder for use in the SLM®500 AM machines, a product of Nikon SLM Solutions.

The Aheadd CP1 aluminium powder, developed by Constellium, is tailored for higher production throughput in large-format AM. Dr. Alireza Arbab, Head of Constellium Additive Manufacturing, highlighted the powder's unique attributes in a press release. "Thanks to Morf3D and other customers using powerful platforms, we have now proven that the excellent processability of Aheadd CP1 powder enables to develop more optimised particle size distribution for customers who wish to lower the powder cost and increase the printing productivity for their specific applications." Dr. Behrang Poorganji, Chief Technology Officer of Morf3D, emphasized the importance of their partnership with Constellium.

"Our partnership with Constellium holds immense importance in advancing the development and qualification of advanced aluminium alloy for Additive Manufacturing, now particularly in the context of the SLM 500 platform. Together, we are pioneering the development and qualification of CP1 aluminium alloy to unlock new potential for lightweight, high-performance components such as heat exchangers produced by AM innovations."

In his concluding remarks, Dr. Poorganji underscored the transformative potential of the CP1 aluminium alloy, especially when used in the SLM 500 platform and future larger-size platforms. He noted, "The utilisation of CP1 aluminium alloy on the SLM 500 platform and future larger-size platforms promises to revolutionise our industry by offering enhanced design flexibility and material properties, ultimately pushing the boundaries of what's achievable in Additive Manufacturing using aluminium alloys."

This initiative is a response to the growing market demand for large-format AM. The partnership between Constellium and Morf3D is expected to drive significant advancements in the use of aluminium, particularly in the context of additive manufacturing technologies, contributing to more efficient and cost-effective production processes.

# Volvo Cars Enhances Climate Initiatives: . Targets 75% CO2 Emission Reduction by 2030

Volvo Cars, a leader in the automotive industry, has intensified its commitment to climate action. The company aims to slash  $\mathrm{CO_2}$  emissions per car by 75% by 2030, using 2018 as the baseline. This ambitious goal complements Volvo's aspiration to achieve climate neutrality by 2040 and a 40% reduction in  $\mathrm{CO_2}$  emissions per car between 2018 and 2025. Notably, in the first nine months of 2023, the company reported a 19% decrease in  $\mathrm{CO_2}$  emissions per car compared to 2018.

This dramatic 75% reduction target necessitates a continued focus on selling fully electric cars by 2030, thereby eliminating tailpipe emissions from their lineup. As part of this strategy, Volvo Cars has joined the World Economic Forum's First Movers Coalition (FMC) and is investing in emerging clean technologies, particularly in the production of near-zero emission aluminum.

In addition, Volvo Cars is collaborating with the Swedish steel producer SSAB. They were the first car manufacturer to partner with SSAB to develop near-zero emission, high-quality steel for the automotive industry. By 2026, Volvo Cars plans to incorporate this sustainable steel into one of their car programs.

Javier Varela, the COO and deputy CEO of Volvo Cars, emphasized the urgency of collective climate action in a related press release.

"COP28 is a historic accountability moment for climate action. The world urgently needs to come together and act, to avoid the worst effects of climate change. We're committed to doing our part and we call on corporate and political leaders around the globe to also do theirs."

Volvo Cars has made notable strides in electrification, including the introduction of the fully electric EX30 small SUV, which boasts the lowest carbon footprint of any Volvo car to date. Electric vehicles comprised 16% of Volvo's total sales in the first nine months of 2023. The company also plans to phase out internal combustion engines, with the last diesel-powered car scheduled for early 2024, and has ceased investments in new internal combustion engines.

To meet its 2030 target, Volvo Cars is focusing on reducing  $\mathrm{CO}_2$  emissions across its supply chain and operations, aiming for a 30% cut by 2030 from the 2018 baseline. Remarkably, 69% of the company's operations utilized climate-neutral energy in 2022, and they have recently achieved 100% climate-neutral electricity in all their plants globally. Moreover, Volvo Cars has transitioned 86% of its intercontinental ocean freight from fossil fuel to biofuel, reducing  $\mathrm{CO}_2$  emissions from ocean freight by 84%.

Jonas Otterheim, head of climate action at Volvo Cars, spoke about using COP summits to drive collective climate action.

"We have previously used the COP summits to push collective climate action and COP28 will be no different.



What we and other like-minded companies are trying to do is develop and scale up transformational technologies to decarbonize sometimes ancient industrial processes. By joining the FMC and showing tangible progress in our partnership with SSAB, we hope to demonstrate that this vital shift is not just possible but is already underway."

COP28 will take place against the backdrop of the United Nations' Global Climate Stocktake Report, which reveals that despite some progress, the world is still not on track to limit global warming to 1.5 degrees above pre-industrial levels. The report recommends, particularly for the automotive industry, the phasing out of internal combustion engines and the use of electric vehicles for significant mitigation potential. Volvo Cars' actions align closely with these recommendations.

# Hyundai Motor's Ulsan EV Plant: A Future-Proofed Leap in Aluminium-Intensive Electric Vehicle Production

Hyundai Motor Company's groundbreaking ceremony for its new electric vehicle (EV) plant in Ulsan heralds a significant advancement in the use of aluminium in the automotive industry. As the company reinforces its commitment to electrification, the new plant, deeply rooted in Hyundai's heritage, is poised to become a pivotal hub for aluminium-intensive EV production. More than half a century after Founding Chairman Juyung Chung established Hyundai's first major manufacturing base in Ulsan, the new EV plant stands on a 5.9 million square feet (548,000 m²) site, with an annual capacity to produce 200,000 EVs. This significant expansion, costing approximately KRW 2 trillion (US\$1.53 billion), is set to commence construction in late 2023, aiming for mass production by early 2026.

The plant's focus on aluminium in EV manufacturing is a strategic move. Aluminium, known for its lightweight yet strong properties, is crucial in enhancing the efficiency and range of electric vehicles. By incorporating more aluminium components, Hyundai aims to optimize vehicle performance while adhering to its sustainability goals. The Ulsan plant, therefore, represents not just an expansion in capacity but a leap forward in material innovation for EVs.

The facility is designed to be people-centric, emphasizing optimal working conditions for safety and efficiency. It will utilize innovative manufacturing platforms, integrating advanced technologies that align with the shift towards aluminium usage in vehicle production. The groundbreaking event, featuring a brand heritage exhibition, highlighted over fifty years of Hyundai's commitment to innovation and automotive excellence.

Key figures such as Euisun Chung, Executive Chair of Hyundai Motor Group; Jaehoon Chang, President and CEO; and Dong-seock Lee, Executive Vice President, graced the ceremony. Their presence underscored the importance of the Ulsan plant in Hyundai's electrification strategy and its role in advancing aluminium-based manufacturing technologies in the EV sector.

Executive Chair Chung emphasized the plant's role in shaping the future of electrification and Ulsan's transformation in a press release.

"The new EV-dedicated Plant in Ulsan is the beginning of a promising future for the next 50 years and the era of electrification. I am honoured to share our dream of a 100-year company here. Just as the dream of building the best car in the past made Ulsan an automotive city today, Hyundai will work together to make Ulsan an innovative mobility city that leads the way in the era of electrification, starting with a dedicated EV plant."

Meanwhile, Ulsan Mayor Doo-gyeom Kim recognized Hyundai's pivotal role in the city's growth.

"It is undeniable that Hyundai Motor Company has played the biggest role in the growth of Ulsan. We will continue to do our best to draw a new future together in line with the changes in the global automotive industry."

Vice Minister Youngjin Jang noted the benefits for the broader automotive industry.

"I believe that Hyundai Motor will stand out as a powerhouse in the electric vehicle era with decisive investments. The government will prioritise supporting the improvement of the business investment environment, including bold tax incentives and eliminate regulations that inhibit economic growth."

The Ulsan EV plant is a testament to Hyundai Motor's enduring commitment to innovation, especially in the use of aluminium for vehicle construction. This approach is critical in the era of electric vehicles, where weight reduction is paramount for enhancing range and efficiency. The new plant will be a key player in producing aluminium-intensive EVs, aligning with global trends in sustainable and efficient vehicle manufacturing.

With the integration of AI, robotics, and smart logistics systems, the plant is not just a manufacturing facility but a symbol of Hyundai's vision for the future of mobility. It represents a strategic pivot towards aluminium in the automotive sector, reflecting the company's commitment to innovative, sustainable, and efficient EV production.

The groundbreaking ceremony and heritage exhibition at the Ulsan Plant were not only a reflection of Hyundai's storied past but also a bold statement about its future direction. By focusing on aluminium-intensive EV production, Hyundai is positioning itself at the forefront of the automotive industry's transformation.

### Rio Tinto and Giampaolo Group Finalize Joint Venture in Aluminium Recycling

Rio Tinto, a leading global mining group, and Giampaolo Group, a prominent player in the aluminium industry, have officially completed their transaction to form the Matalco joint venture. This new alliance positions them as a powerhouse in North America's aluminium sector, focusing on meeting the surging demand for low carbon materials among manufacturers.

The deal was sealed with Rio Tinto acquiring a 50% equity stake in the Matalco business from Giampaolo Group. This transaction was valued at US\$700 million, subject to

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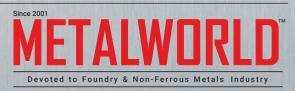
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The partnership marks a significant expansion in Rio Tinto's aluminium operations, particularly in the United States. The U.S. market is projected to witness over a 70% increase in recycled aluminium demand over the next decade, catering to industries such as transportation, construction, and packaging. Similarly, the consumption of recycled aluminium on a global scale is expected to grow by over 60% during the same period. Matalco, under this joint venture, will continue managing its six facilities across the United States and one in Canada. These sites collectively boast a production capacity of around 900,000 metric tons of recycled aluminium annually. Matalco's recent performance includes the production of approximately 400,000 metric tons of recycled aluminium over an eight-month period ending September 30, 2023. This production consisted of 78% billet and 22% slab, yielding an EBITDA of US\$165 per tonne.

Matalco has demonstrated remarkable growth over the past five years, more than doubling its production capacity. Rio Tinto and Giampaolo Group are now set to explore further expansion opportunities for Matalco, initially focusing on the North American market. Jakob Stausholm, Rio Tinto's Chief Executive, commented on the venture in a press release. "Creating the Matalco joint venture gives Rio Tinto a leading position in the rapidly growing North American recycled aluminium market, allowing us to offer a full complement of low-carbon recycled products. We look forward to working in partnership with Giampaolo Group to support the drive to net zero by expanding recycled production and providing closed-loop recycling solutions to help our customers reduce their carbon footprint." Echoing this sentiment, Giampaolo Group CEO Chris Galifi stated: "We are thrilled about beginning our partnership with Rio Tinto, on forming a joint venture for Matalco. This collaboration showcases our dedication to continuously evolving our production of high-quality, lowcarbon aluminium. We look forward to continuing to grow with our new partners while providing products that support

### Anglo American plans \$1.8 billion spending cuts to arrest downturn

Global miner Anglo American (AAL.L) aims to cut capital expenditure by \$1.8 billion by 2026, it said on Friday, as it grapples with a fall in demand for most of the metals it mines and a writedown for its British fertiliser project. Anglo joined peers including Rio Tinto (RIO.L), (RIO.AX), Teck Resources (TECKb.TO) and Glencore (GLEN.L) in reporting lower profits and returns in the first half of the year, as lacklustre economic growth hit commodity prices.

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Anglo, however, has underperformed its London peers,



with a 36% drop in its share price so far this year. Shares were down 7.5% by 1110 GMT, making the global miner the biggest loser among the FTSE 100.

The London-listed miner, which had already targeted saving \$500 million by cutting corporate jobs and some costs including at head offices in Johannesburg and London, aims to cut an additional \$500 million by 2024.

"In the near term, given continuing elevated macro volatility, we are being deliberate in reducing our costs and prioritising our capital to drive more profitable production on a sustainable basis," Chief Executive Duncan Wanblad said in a statement.

Sources familiar with the matter told Reuters on Thursday that Anglo was preparing sweeping cost cuts.

Global economic weakness has lowered the demand outlook for some metals.

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Peers Antofagasta (ANTO.L) and Glencore (GLEN.L) for example cut production guidance for copper and nickel respectively this year.

Anglo American said on Friday it will reduce production at its South African unit Kumba Iron Ore (KIOJ.J), where stockpiles had grown to 9 million metric tons by September following worsening rail bottlenecks.

Its cost-cutting measures also include focusing on highermargin production for its platinum group metals (PGMs) operations in South Africa and putting one processing plant at its Los Bronces copper mine in Chile on care and maintenance.

"The company has significantly reduced its production profile for 2024-26, missing consensus estimates by 13-19% (in copper), largely on account of larger cuts of unprofitable volumes at Los Bronces," Morgan Stanley analysts said.

"First take - we see 10-15% downside risk to our 2024 EBITDA forecasts as a result of today's update," they added.

Anglo's core profit is expected by a group of 11 analysts to be at \$10.2 billion in 2023, down from \$14.5 billion last year.

Anglo said it is reviewing its operations at Anglo American Platinum (AMSJ.J).

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"If we cannot see sustainable value on every ounce we mine, then we'll take those ounces out," Wanblad told investors, referring to the platinum business.

Amplats' CEO Craig Miller said in a separate call that the review of its entire cost structure will try to ensure the unit's assets are placed at the lower half of the cost curve to make the business profitable even at current lower prices.

Overall production across the resources Anglo mines will be reduced by 4% in 2024, taking unit costs down by 2%, it said.

Capital expenditure in 2024 will be around \$5.7 billion, \$800 million lower than previously expected.

Anglo is developing the \$9 billion Woodsmith fertiliser project in Britain for which it announced a \$1.7 billion writedown in February.

Asked on Friday whether Anglo would be open to find other investors in Woodsmith, Wanblad said:

"The syndication process is something that we will do and will be done at the right time and for value, given an asset of this nature."

# Bank of China eyes de-dollarization move in Africa, pushing the yuan in a top copper producer

The Bank of China's office in Zambia is pushing the yuan to be used in more trades with the African nation and its neighbors.

The state-owned lender, which is the world's fourth biggest by assets, is China's only bank in Zambia and serves as a clearing facility.

"We will earnestly act upon our responsibility and leverage our role in Zambia to support other African countries to provide holistic services and products related to RMB and to promote the use of RMB in bilateral trade and economic activities," said Lin Jingzhen, the bank's vice president, according to Bloomberg.

While China has been a champion of the de-dollarization trend of countries attempting to reduce their dependence on the greenback, Beijing also has a key supply-chain interest in Africa.

Zambia is Africa's second largest — and the world's seventh largest — copper producer, and China is the world's largest consumer of the metal.

Copper also contributes to 70% of Zambia's foreign export earnings, and its economy has been wobbling in the aftermath of the pandemic, with high inflation driving the kwacha to a record low this year. In June, China helped the country strike a deal to restructure \$6.3 billion in debt owed to foreign governments.

# Director-General welcomes Steel Standards Principles for decarbonization, launched at COP28

Director-General Ngozi Okonjo-Iweala welcomed on 1 December the endorsement by standard setting bodies, international organizations, steel producers and industry associations of a set of principles aimed at aligning how greenhouse gas emissions are measured in the steel sector. This novel partnership was announced at a Business and Philanthropy Climate Forum roundtable on the first day of the COP28 UN Climate Change Conference in Dubai, United Arab Emirates.

Director-General welcomes Steel Standards Principles for decarbonization, launched at COP28

Director-General welcomes Steel Standards Principles for decarbonization, launched at COP28

The Steel Standards Principles, developed by standard setting bodies, international organizations, steel producers and industry associations, recognize that the iron and steel sector accounts for approximately 8% of annual global greenhouse gas emissions and that these emissions will need to be reduced by at least 90% for the sector to play a credible role in achieving climate targets. The Principles call for establishing common methodologies on measuring greenhouse gas emissions within the iron and steel sector in order to accelerate the transition to near-zero emissions. Improving the transparency, interoperability and mutual recognition of such methodologies can promote investment in, and adoption of, innovative near-zero emission technologies and products, while easing trade frictions that arise from divergent and incompatible measurement standards. At the roundtable, the Director-General announced the WTO Secretariat's support and said: "Fragmented and uncoordinated trade policies make it harder for the steel industry to decarbonize. They add uncertainty for producers, hamper cross-border movement of green technologies and inputs, and slow investments in clean

technology."

More than 35 key steel producers, industry associations, standard setting bodies, international organizations and initiatives have endorsed the Steel Standards Principles.

Annie Heaton, CEO of ResponsibleSteel, a multistakeholder standard and certification initiative, said: "The diversity of standards for measuring steel carbon emissions makes assessing how one tonne of steel compares to another extremely challenging. The Steel Standards Principles establish the key foundations of a common framework that is needed for driving the decarbonisation of the industry globally."

Nicola Davidson, Vice President for Sustainable Development and Corporate Communications at steel

Development and Corporate Communications at steel producer ArcelorMittal, said the Principles "will help create broader alignment on how to define low carbon steel. This is particularly important in a hard to abate sector like steel."



### Passenger vehicle sales reach to all-time high in November: SIAM

The Indian passenger vehicle segment achieved its highest-ever sales in November 2023, reaching 3.34 lakh units. This figure reflects a 3.7 per cent year-on-year growth compared to November 2022 when sales were at 3.22 lakh units.

As per the recent data released by the Society of Indian Automobile Manufacturers (SIAM), indicates a positive trend in the automotive industry.

The passenger vehicle category spearheaded the growth, witnessing a substantial increase in sales during November 2023. With 3.34 lakh units sold, it surpassed the previous year's figures, contributing significantly to the overall positive trend in the automotive market.

Three-wheelers reported a remarkable growth rate of 30.8 per cent compared to the previous year. November 2023 saw sales reaching about 59,738 units, approaching the peak observed in November 2017 when sales touched 45,664 units.

Two-wheelers, a crucial segment in the Indian automobile market, showcased a remarkable sales figure of approximately 16,23,399 units in November 2023. This marked a substantial growth of 31.3 per cent compared to the same month in 2022. The segment's performance was only slightly below the peak recorded in November 2018.

The SIAM report noted that data for prominent auto manufacturers such as BMW, Mercedes, JLR, Tata Motors, and Volvo Auto were unavailable and hence not included in the sales data.

Reflecting on the robust growth across all segments during the festival season ending in early November, Vinod Aggarwal, President of SIAM, commented on the industry's positive outlook.

Aggarwal said, "All segments of the automobile industry witnessed robust growth during the festival season which ended in the first part of November. For the month, Passenger Vehicles sales grew moderately, and Two-Wheelers and Three-Wheelers segments posted high double-digit growth. Commercial Vehicle sales matched last year's levels. Supported by strong economic growth, the industry is optimistic about ending the year 2023 on a high note and expects the trend to continue into 2024."

Rajesh Menon, Director General of SIAM, highlighted the significant achievement in the passenger vehicle segment, reaching record-breaking sales in November 2023.

Menon said, "Passenger Vehicles posted the highest ever sales in the month of November 2023 of 3.34 Lakh units, albeit with a growth rate of 3.7 per cent, in the backdrop of a high base last November. Three-Wheelers reported significant growth of 30.8 per cent, compared to the previous year, posting sales of about 0.60 lakh units in November 2023, just below the peak of November 2017. Two-Wheelers also reported sales of about 16.23 Lakh units with high growth of 31.3 per cent, compared to November 2022 and is also slightly below the peak to November 2018."

The November 2023 sales report underscores the resilience and upward trajectory of India's automotive industry, providing a positive outlook for the coming months.

The optimism is fuelled by strong economic indicators and the industry's anticipation of continued growth in 2024.

		SIAM				
Segiment wise	Comparative Production,	Domestic Sales &	Exports data for the	month of Novembe		
						per of Vehicles
Category	ary Production		Domestic Sales		Exports	
Segment/Subsegment	November		November		November	
	2022	2023	2022	2023	2022	2023
Passenger Vehicles (PVs)*						
Passenger Care	1 72,008	1,33.651	1.30,142	1 02,558	37.599	36,223
Utility Vehicles (UVs)	1 94,154	1,86.123	1.38,780	1 75,278	16.336	17,410
Vens	7,313	19.323	7,309	10,226	24	459
Total Passenger Vehicles (PVs)	3,43,505	3,30,097	2,76,231	2,88,062	53,959	54,092
Three Wheelers						
Passenger Carrier	\$6,340	67.621	33,848	47,602	30.652	25,689
Cooda Carrier	9,075	10.268	8,989	9,281	237	460
E-Rickshaw	2,930	2.942	2,601	2,563		-
E-Cart	235	287	230	292		-
Total Three Wheelers	78,580	81,118	45,664	59,738	30,889	26,146
Two Wheelers						
Spacier/ Spacierettee	4 92,222	6,42,500	4.12,824	5 09,119	25,459	40,381
Motorcycle/Step-Throughs	10 87,748	12,33.816	7.88,893	10 70,798	2,61.086	2.37,797
Mopeds	40,479	45.889	34,469	43,482	192	39
Total Two Wheelers	16,20,449	18,17,205	12,36,282	16,23,399	2,87,037	2,78,214
Quadricycle	151	323	60	63	132	300
Grand Total	20,42,685	22,28,743	15,58,237	19,71,262	3,72,017	3,58,752
		,			,	
* BMVV. Merceces JLR. Tata Morois and Volvo Aurolitate						
Society of Indian Automobile Manufacturers ( 12/12/2020)						

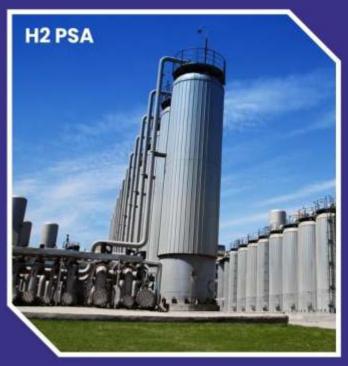


Summary Report:	Cumulative Production	, Domestic Sales &	Exports data for the	period of April-Nov	ember 2023	
					íNum	Report I ber of Vehicles
Category	Product	Production Domestic Sales		ales	Exports	
Segment/Subsegment	April-November		April-November		April-November	
	2022-23	2023-24	2022-23	2023-24	2022-23	2023-24
Passenger Vehicles (PVs)*					·	
Passenger Cars	14,33.030	13 21,007	11,51.088	10,42.825	2 72,344	2,86.904
Util ty Vehicles (UVs)	14,26,905	17 13,984	12,62,488	15,60,587	1 49,513	1,52,619
Vans	90,980	98,102	90,672	96,987	268	5,343
Total Passenger Vehicles (PVs)	29,50,895	31,31,093	25,04,148	27,00,399	4,22,125	4,44,766
Three Wheelers						
Passenger Carrier	4,90.653	5 88,658	2,16.652	3,78.711	2 74,623	2,04.753
Goods Čarrier	65.255	74,159	62,308	70.731	2,647	2,081
E-Rickshaw	15,714	24,017	15,350	24,677	-	-
E-Cart	2,167	1,992	2,120	2,249	-	-
Total Three Wheelers	5,73,789	6,88,826	2,96,430	4,76,368	2,77,270	2,06,834
Two Wheelers						
Scooter/ Scooterettee	39,88.840	42 87,804	36,90.501	39,64.293	2 83,234	3,49.388
Motarcycle/Step-Throughs	95,85,679	97.99,957	72,15,905	79,74,760	23 93,693	19,04,911
Mopeds	3,04,579	3 20,001	3,06,723	3,19,551	2,274	1,098
Total Two Wheelers	1,38,79,098	1,44,07,762	1,12,13,129	1,22,58,604	26,79,201	22,55,397
Quadricycle	1,283	2,911	421	603	960	2,378
Grand Total	1,74.05,065	1.82.30.592	1,40,14.128	1.54.35.974	33,79,556	29,09.375











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