

## **The Dawn of 2025, Part 11: The Future of Steelmaking: DRI & HBI Revolutionizing Green Steel Production**

Updated on : Jan 21, 2025

*Synopsis: Direct Reduced Iron and Hot Briquetted Iron are pivotal to the transformation of the steel industry towards more sustainable, low-carbon production methods. As global steelmakers strive to reduce their environmental footprint, these innovative processes provide cleaner, more efficient alternatives to traditional steelmaking methods. This article delves into the advancements in DRI and HBI technologies, their role in green steel production, and the country-specific developments in their production.*

## **China's 2024 GDP Sees 5% Growth with Q4 Surge at 5.4% Amid Recovery Policies**

Updated on : Jan 21, 2025

*Synopsis: China's GDP for 2024 grew by 5%, reaching a total of Yuan 134.9 trillion (\$18.4 trillion). The fourth quarter saw a stronger growth of 5.4%, surpassing analysts' expectations, thanks to expansionary policies that helped boost the economy. The tertiary sector continued to be the main contributor, with key industries like information services and transportation leading the way.*

## **China's 2024 Fixed Asset Investment Rises by 3.2%, Property Market Faces 10.6% Decline**

Updated on : Jan 21, 2025

*Synopsis: China's fixed asset investment increased by 3.2% in 2024, totaling Yuan 51.44 trillion, but the property sector saw a sharp decline of 10.6%, with investments dropping to Yuan 10.03 trillion. Residential housing investments and property sales both continued to decrease, reflecting ongoing challenges in the real estate market.*

## **Steel Demand in China's Manufacturing Sector Soars, Reaching 50% in 2024**

Updated on : Jan 21, 2025

*Synopsis: China's manufacturing sector now uses 50% of the country's steel, a significant increase from 42% in 2020. This growth is driven by surging demand in new energy and infrastructure projects, with steel producers shifting towards high-end and specialty products. Demand is expected to continue growing in 2025, particularly for high-strength steel used in sectors like construction machinery and mining.*

### **Tumbling Dice: Ship Recycling Market Faces Uncertainty Amid Global Economic Shifts**

*Updated on : Jan 21, 2025*

*Synopsis: The ship recycling industry, affected by global economic turbulence, is seeing price fluctuations due to weaker currencies, sanctions, and declining steel plate prices. While the supply of vessels is expected to increase as 2024 draws to a close, the outlook remains uncertain, particularly with the fluctuating market conditions in Bangladesh and India.*

### **Nippon Steel & US Steel Challenge Biden's National Security Block on \$14.9 Billion Deal**

*Updated on : Jan 21, 2025*

*Synopsis: Nippon Steel and US Steel have filed a lawsuit against the Biden administration, challenging the president's decision to block their \$14.9 billion acquisition deal over national security concerns. The hearing for the lawsuit is scheduled for February and March 2025.*

### **ArcelorMittal's Newcastle Furnace Closure: A Looming Crisis for South Africa's Economy & Workforce**

*Updated on : Jan 21, 2025*

*Synopsis: Cosatu is sounding alarms about the devastating impacts of the impending closure of ArcelorMittal's Newcastle furnace, which will result in the loss of thousands of jobs and severely affect South Africa's steel and motor manufacturing industries. The labor federation calls for urgent, collective action to avert this crisis and ensure long-term sustainability in the steel sector.*

## **BHP's Half-Year Operational Review: Record Copper & Coal Production, Strategic Growth in 2024**

*Updated on : Jan 21, 2025*

*Synopsis: BHP has demonstrated strong operational performance in the first half of FY 2024, with significant increases in copper, iron ore, and steelmaking coal production. Copper output rose by 10%, reaching a 10-year production record at Escondida, while iron ore shipments from Western Australia achieved a new high. Additionally, steelmaking coal production increased by 14%. The company made notable progress in its future-facing commodities, especially copper and potash, and is on track for continued success into the second half of the year.*

## **Hadeed's SAR 25 Billion Investment Pushes Saudi Arabia Toward Global Steel Leadership**

*Updated on : Jan 21, 2025*

*Synopsis: Saudi Iron and Steel Company Hadeed has announced a massive SAR 25 billion investment to increase its steel production capacity to 10 million metric tons annually. This move aligns with Saudi Arabia's strategic vision for economic growth, particularly in infrastructure, and includes a partnership with China's Baosteel to meet domestic steel needs.*

## **Hibuild Steel Eyes Regional Dominance with Expansion of Production Capacity**

*Updated on : Jan 21, 2025*

*Synopsis: Hibuild Steel Building System International, based in the UAE, is set to boost its production capacity to 60,000 metric tons annually by 2028, in line with the growing demand for structural steel driven by mega projects like Expo City Dubai and large-scale residential developments.*

## **Colakoğlu Modernizes Hot Strip Mill to Produce Advanced Wear-Resistant Steel Grades**

*Updated on : Jan 21, 2025*

*Synopsis: Colakoğlu Metalurji AS in Turkey is upgrading its hot strip mill with SMS group to produce wear-resistant steel grades for industries like mining and construction. The modernization includes a new laminar cooling system and downcoiler enhancements to improve product quality and reduce operating costs.*

### **Steel Industry Surge: Museveni Set to Launch Two Major Factories in Uganda's Busoga Region**

*Updated on : Jan 21, 2025*

*Synopsis: President Yoweri Museveni is set to commission two new steel factories in Uganda's Busoga region, located in Iganga and Jinja. These new additions, by Abyssinia Steel and Tembo Steel, mark a significant boost for local manufacturing and the country's economic development. The launch forms part of Museveni's Parish Development Model tour.*

### **Nigerian Steel Ministry Faces Allegations of Ghost Projects & Financial Irregularities**

*Updated on : Jan 21, 2025*

*Synopsis: During a budget defense session on January 17, 2025, the National Assembly Joint Committee on Steel Development uncovered fraudulent activities within Nigeria's Ministry of Steel Development. Allegations of ghost contractors, non-existent projects, and financial mismanagement have sparked concerns about the misuse of public funds.*

### **Algerian Qatari Steel Achieves Record Export Milestone of 700,000 Metric Tons in 2024**

*Updated on : Jan 21, 2025*

*Synopsis: In 2024, Algerian Qatari Steel exported 700,000 metric tons of steel products, contributing over \$360 million to the country's economy. The company has expanded its market reach by meeting international quality standards, earning recognition as the best Algerian exporter to Africa.*

## **The Lasting Legacy: 30 Years Since the End of Belval Steelworks' Blast Furnace Era**

Updated on : Jan 21, 2025

*Synopsis: On January 19, 1995, the final blast furnace at Belval steel plant, Furnace C, was shut down, signaling the start of the end for the iconic steelworks. This article marks the 30th anniversary of this momentous event, exploring the history, impact, and ongoing reverberations of the closure of one of Luxembourg's most significant industrial sites.*

## **Transforming Wastewater Woes: How Maskam Water Revolutionized Stainless Steel Operations**

Updated on : Jan 21, 2025

*Synopsis: The National Stainless Steel Centre in Gauteng faced escalating wastewater issues and rising operational costs. By adopting the Maskam Fusion® Wastewater Plant, NSS transformed its approach to water use, reducing expenses and contributing to sustainable water management during a regional crisis.*

## **Peru Launches Anti-Dumping Probe on Chinese Steel Welded Pipes Amid Domestic Concerns**

Updated on : Jan 21, 2025

*Synopsis: On January 16, 2025, Peru initiated an anti-dumping investigation into hot-rolled carbon steel welded pipes from China, following complaints from local steel producers. The investigation focuses on various types and sizes of pipes and will examine potential damage to the Peruvian steel industry caused by unfair trade practices.*

## **Vietnam Imposes Anti-Dumping Duties on Steel Wire Ropes from Malaysia, Thailand, & China**

Updated on : Jan 21, 2025

*Synopsis: Vietnam's Ministry of Industry and Trade has announced the imposition of anti-dumping duties on prestressed steel wire rope products from Malaysia, Thailand, and China, ranging from 9.79% to 28%. This ruling will remain in effect for five years and aims to protect Vietnam's domestic industry from unfair trade practices.*

### **Dendritic Corrosion in 316L Stainless Steel Welds: A Critical Study in NaCl–MgCl<sub>2</sub> Molten Salt Loops**

*Updated on : Jan 21, 2025*

*Synopsis: This study investigates the corrosion behavior of 316L stainless steel, particularly focusing on its weld joint, in a NaCl–MgCl<sub>2</sub> molten salt loop. The results reveal that while the base metal forms dense voids, the weld joint exhibits dendritic corrosion, which may pose significant challenges for material selection in molten salt reactors.*

### **Hot Deformation Dynamics & Microstructural Insights into the Advanced Weathering Steel YQ550NQR1**

*Updated on : Jan 21, 2025*

*Synopsis: This article delves into the hot deformation behavior and microstructural characterization of the advanced weathering steel YQ550NQR1. Through hot compression tests and electron backscatter diffraction analysis, the study aims to understand the material's flow stress, processing maps, and microstructure to enhance its hot working techniques, contributing to improved industrial applications.*

### **Triple-Attention Mechanism for Enhanced Steel Surface Defect Detection**

*Updated on : Jan 21, 2025*

*Synopsis: This article introduces a novel Triple-Attention mechanism to improve the detection of surface defects on strip steel. By refining feature extraction from three distinct perspectives, the TADet model enhances accuracy and robustness, setting a new standard for steel defect detection.*

## **Unveiling the Impact of TiN Inclusions and Segregation Bands on Ballistic Resistance in Steel**

*Updated on : Jan 21, 2025*

*Synopsis: The study investigates how TiN inclusions and segregation bands affect the mechanical properties and ballistic performance of low-alloy high-strength steel. The findings show different impact resistance outcomes based on these material features during ballistic tests.*