

[Exceptional Opportunity: Acquire the Advanced 'DANIELI' Flexible Section Rolling Mill with 600,000 TPY Capacity](#)

Updated on : Mar 03, 2025 10:07 am

Synopsis: Hilco Industrial is offering the sale of a state-of-the-art 600,000 metric tons per year 'DANIELI' Light & Medium Flexible Section Rolling Mill. Commissioned in 2011 and operational until 2024, this advanced facility, previously owned by Stahl Gerlafingen, presents a rare opportunity for businesses in the steel industry to acquire a high-capacity, flexible production system. Built to offer versatility in producing beams, sections, and flat bars, this mill is equipped with advanced Siemens electrical and automation systems. Due to high energy costs and trade restrictions, Stahl Gerlafingen has made the decision to close the facility and sell the equipment, creating an opportunity for interested buyers to acquire these assets for their steel manufacturing needs.

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[Cleveland-Cliffs Steel Plant Transformer Blows, Sparks Grass Fire Amid High Winds in Plymouth Township](#)

Updated on : Mar 03, 2025 10:06 am

Synopsis: On March 1st, a transformer malfunction at the Cleveland-Cliffs steel plant triggered a fire in Plymouth Township. The incident involved multiple downed high-voltage lines and resulted in a grass fire. Local fire departments worked swiftly to contain the blaze, with no injuries reported.

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[Smt. Priyadarshini Gaddam Ascends to NMDC Board as Director \(Personnel\), Paving Path for Inclusive Leadership](#)

Updated on : Mar 03, 2025 10:06 am

Synopsis: Smt. Priyadarshini Gaddam has been appointed as Director (Personnel) on the Board of NMDC, bringing over three decades of experience in the mining industry. Her leadership has been instrumental in promoting workplace safety, women's empowerment, and inclusive policies at NMDC, setting the stage for continued growth and innovation in the sector.

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[Youth-Led Lawsuit Challenges Posco's Coal-Based Furnace Expansion Over Climate Impact](#)

Updated on : Mar 03, 2025 10:05 am

Synopsis: A group of youth activists in South Korea is suing Posco, one of the world's largest steel producers, over its plan to extend the life of its coal-based blast furnace. The lawsuit argues that this expansion violates their right to a healthy environment, marking the first such legal challenge since a constitutional ruling recognized the state's obligation to protect citizens from climate change.

[Read on...](#)

[POSCO's Strategic Leap: Expanding LNG Supply with High Manganese Steel Innovation](#)

Updated on : Mar 03, 2025 10:05 am

Synopsis: POSCO, a global steelmaking giant, is revolutionizing the liquefied natural gas (LNG) industry with its innovative use of high manganese steel (HMS), a cost-effective and durable alloy developed in-house. This material, primarily used in LNG storage and transport, is now gaining global recognition, thanks to POSCO's pioneering efforts in expanding its applications for the LNG sector and beyond.

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[Steel Revolution: US Steel's Lightweighting Triumph for SUVs & Trucks](#)

Updated on : Mar 03, 2025 10:05 am

Synopsis: Americans' increasing preference for larger vehicles like SUVs and trucks often comes with the drawback of lower fuel efficiency. U.S. Steel is changing that dynamic with its XG3™ Ultra High-Strength Steel. This innovation allows automakers to create vehicles that are not only stronger and more durable but also lighter and more fuel-efficient. U.S. Steel's collaboration with manufacturers is shaping the future of American trucks and SUVs, enabling drivers to enjoy powerful, spacious vehicles without compromising on fuel economy.

[Read on...](#)

[British Steel & Infrabel Forge Strong Partnership to Revolutionize Rail Profile Development](#)

Updated on : Mar 03, 2025 10:04 am

Synopsis: British Steel, in collaboration with Belgian railway operator Infrabel, has developed the exclusive 50E2 rail profile tailored specifically to Belgium's rail network. This strategic partnership solidifies British Steel's role as a leading supplier in the rail industry, ensuring long-term collaboration. The 50E2 rail profile is designed to meet Belgium's unique track conditions, optimizing performance and strengthening British Steel's commitment to technological innovation and custom rail solutions. This collaboration sets the stage for expanding the supply of rail profiles worldwide.

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[NMDC Steel Achieves Prestigious CE Certification, Opening Doors to European Market](#)

Updated on : Mar 03, 2025 10:04 am

Synopsis: NMDC Steel Limited has been awarded the CE Certification by TUV NORD, recognizing the steel producer's adherence to European standards. This certification enables NSL to expand its market by exporting products to European countries, reinforcing its commitment to quality, safety, and sustainability.

[Read on...](#)

[Petronas Seals Pact with Sabah Energy to Boost Natural Gas Supply for Steel Industry Growth](#)

Updated on : Mar 03, 2025 10:04 am

Synopsis: Petronas has signed an agreement with Sabah Energy to supply an additional 104 million standard cubic feet per day of natural gas. This deal supports the steel industry and contributes to the region's energy security and sustainable development.

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[FabArc Steel Supply Secures \\$100 Million Automotive Project, Driving Historic Growth with 'Project Armstrong'](#)

Updated on : Mar 03, 2025 10:04 am

Synopsis: FabArc Steel Supply, Alabama's largest steel subcontractor, has secured a major \$100 million contract for Project Armstrong, an automotive venture in New Carlisle, Indiana. The project, involving the supply of around 25,000 metric tons of steel, marks a pivotal moment in the company's 46-year history. This win positions FabArc as a key player in the rapidly expanding electric vehicle (EV) battery manufacturing sector, propelling its growth to unprecedented levels.

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[Hindustan Zinc Set to Double Metal Production by 2030, Eyes Key Growth in Critical Minerals](#)

Updated on : Mar 03, 2025 10:03 am

Synopsis: Hindustan Zinc, a prominent Vedanta Group company, is determined to double its metal production to 2 million metric tons per annum (MTPA) by 2030, capitalizing on India's growing infrastructure and steel sectors. The company is also expanding into critical minerals and adopting cutting-edge technologies, such as AI, to enhance production efficiency.

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[Ship Recycling's Roller Coaster Ride: Chaos, Tensions, & Uncertain Markets Amid Global Shifts](#)

Updated on : Mar 03, 2025 10:03 am

Synopsis: In a week marked by fluctuating global dynamics, ship recycling markets in India and Bangladesh saw a surprising influx of tonnage arrivals despite broader uncertainty. As geopolitical tensions mount, oil prices fall, and freight rates surge, the industry faces a volatile landscape where currency fluctuations and political crises impact recycling operations.

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[Argentina's Steel Chamber Urges Dialogue with U.S. Amid Tariff Tensions](#)

Updated on : Mar 03, 2025 10:03 am

Synopsis: The Argentine Steel Chamber calls for constructive dialogue with the United States regarding the tariffs imposed by President Trump. The chamber highlights the productive complementarity between both nations' steel industries and the impact of the tariffs on their trade relations.

[Read on...](#)

[Mexico's Optimistic Outlook on Tariff Agreement Amidst U.S. Trade Talks](#)

Updated on : Mar 03, 2025 10:00 am

Synopsis: Mexico's President, Claudia Sheinbaum, expresses confidence in reaching a tariff agreement with the United States. She highlights the notion of "reciprocity" in tariffs, emphasizing the absence of tariffs between the two nations and the current continuation of trade practices.

[Read on...](#)

[Brazil's Steel Surge: Record Imports Highlight Growing Demand for Global Steel](#)

Updated on : Mar 03, 2025 10:00 am

Synopsis: In January, Brazil reached a historic milestone in steel imports, with a significant 49.4% increase compared to the previous year. Steel imports accounted for 22.8% of the country's total consumption, indicating a growing demand for foreign steel.

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[Steel's Global Shift: Chile's Steel Industry Faces New Challenges Amid U.S. Tariffs](#)

Updated on : Mar 03, 2025 10:00 am

Synopsis: As the U.S. imposes tariffs on steel imports, global trade dynamics are shifting, and Chile's steel market is poised to face new challenges. The country must enhance technical specifications and oversight to ensure the quality of imported steel, which accounts for a significant portion of its consumption.

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[Grupo CAP Expands Horizons with Strategic Acquisition in Canada & Brazil](#)

Updated on : Mar 03, 2025 10:00 am

Synopsis: Grupo CAP, a prominent Chilean company, has officially entered Canada and Brazil by acquiring a 10.18% stake in Aclara Resources. This acquisition marks the company's entry into the Carina project in Brazil and a rare earths separation plant in the United States.

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[Gerdau Tops Brazil's Most Respected Companies List, Leading Steel & Metallurgy](#)

Updated on : Mar 03, 2025 09:59 am

Synopsis: Gerdau, the leading steel producer, has been recognized in the prestigious Ranking Merco as one of Brazil's 100 most respected companies. It holds the top position in the mining, steel, and metallurgy category, solidifying its reputation as a leader in these industries.

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[Unveiling the Cr-Al Spinel Phase in Alumina-Dispersed 316 L Stainless Steel via Spark Plasma Sintering](#)

Updated on : Mar 03, 2025 09:59 am

Synopsis: In this groundbreaking study, researchers explore the formation of the Cr-Al spinel phase in alumina-dispersed 316 L stainless steel processed by spark plasma sintering (SPS). The research uncovers how alumina particles, dispersed at grain boundaries in the steel matrix, transform into a Cr-Al spinel phase with a Cr-rich composition and an accompanying silica phase. By using SPS, an advanced sintering technique, the researchers demonstrate how the transformation of alumina into the Cr-Al spinel phase is influenced by various factors, such as temperature and diffusion mechanisms, offering insights into the behavior of oxide dispersion-strengthened steel.

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[Laser Cladding of High-Entropy Alloy Coatings: A Paradigm Shift in Steel Durability & Corrosion Resistance Enhancement](#)

Updated on : Mar 03, 2025 09:59 am

Synopsis: The recent breakthrough in laser cladding technology, which applies high-entropy alloy coatings on 45# steel, offers an innovative solution to combat corrosion. This advancement significantly enhances the material's resistance to corrosion, improving both mechanical properties and longevity. The results suggest potential applications across industries that require durable and long-lasting metal components.

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[Lone Star Firefighters Tackle US Steel Blaze: Crews Prevent Major Damage at Facility](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: A fire broke out at a US Steel facility in Lone Star on Thursday afternoon. Crews from Lone Star, along with assistance from neighboring fire departments, responded promptly to control the fire at an oil derrick holding pond. Fortunately, minimal damage occurred, with the fire being fully extinguished in under an hour, preventing any further harm to the facility.

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[Dr. Ronald O'Malley Honored with Tadeusz Sendzimir Memorial Medal for Innovation in Steel Manufacturing](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: Dr. Ronald J. O'Malley, an esteemed faculty member at Missouri S&T, has been awarded the prestigious 2025 Tadeusz Sendzimir Memorial Medal for his groundbreaking contributions to steel manufacturing. Known for his innovative work using optical fiber sensors to monitor temperature and strain in steelmaking, O'Malley's research has significantly improved the efficiency and real-time monitoring of steel production. The recognition highlights his decades of dedication to the steel industry and his ongoing work to advance steel manufacturing technologies.

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[EUROFER Welcomes Franco-Italian Conference on Steel: Calls for Radical Solutions to Safeguard Europe's Future](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: The European Steel Association supports the ministerial conference convened by the French and Italian governments to address the future of the European steel industry. With ongoing challenges such as unfair trade practices, energy prices, and CBAM loopholes, EUROFER urges the EU to implement structural solutions for the steel sector's competitiveness, decarbonisation, and workforce transition. The

conference is seen as a critical step in shaping the Steel Action Plan and ensuring Europe's geopolitical and economic stability.

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[EUROFER Urges Radical Change in Clean Industrial Deal to Safeguard European Steel's Future](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: The Clean Industrial Deal unveiled by the European Commission on February 26, 2025, highlights the challenges faced by the European steel industry but lacks the necessary solutions. The European Steel Association warns that without urgent and decisive actions on key issues like global steel overcapacity, high energy prices, and loopholes in the Carbon Border Adjustment Mechanism, the European steel industry could face a significant decline in competitiveness and sustainability. The industry requires immediate, concrete measures to secure its future and continue contributing to Europe's sovereignty and economy.

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[Ancora Demands US Steel Delay Annual Meeting to Resolve Uncertainty Over Nippon Deal](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: Ancora Holdings, a growing shareholder in US Steel, has called for the postponement of the company's 2025 Annual Meeting of Stockholders. The company argues that shareholders should have clarity on the ongoing litigation surrounding the blocked sale to Nippon Steel before voting on future leadership. Ancora emphasizes that holding the election during this uncertain period would be a strategic maneuver, potentially unfair to stakeholders.

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[ArcelorMittal South Africa Closes Crucial Steel Mills, Facing Worsening Economic Conditions](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: ArcelorMittal South Africa, has confirmed its decision to shutter key steel mills, citing failed talks with the government and an increasingly challenging operating environment. The closure will result in significant job losses and a diminished steel production capacity due to rising energy costs, low-cost imports, and government policies that hinder competitiveness.

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[Bekaert Divests Steel Wire Solutions Businesses in Costa Rica, Ecuador, & Venezuela in Strategic Portfolio Shift](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: Bekaert has announced the sale of its Steel Wire Solutions businesses in Costa Rica, Ecuador, and Venezuela to Grupo AG, valued at approximately US\$ 73 million. This move, part of Bekaert's ongoing portfolio transformation, will strengthen its position in high-growth, high-margin markets. The sale is expected to close by the third quarter of 2025 and is projected to result in net proceeds of approximately US\$ 37 million.

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[Algoma Steel Temporarily Shuts Down Blast Furnace for Repairs Amid Transition to Electric Arc Furnaces](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: Algoma Steel has temporarily shut down its No. 7 blast furnace for repairs after an operational disruption. This shutdown comes amid its ongoing transition towards electric arc furnace steelmaking, with plans to complete the shift by 2027. Staffing levels were reduced during this period to manage operational costs, but the furnace will be back in operation soon.

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[Worthington Samuel Coil Processing to Close Cleveland Facility, Shifting Operations in Regional Restructuring](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: Worthington Samuel Coil Processing, a joint venture between Worthington Steel and Samuel, Son & Co., has made the decision to close its Cleveland facility by the end of May 2025 as part of a broader regional consolidation strategy. This decision follows an extensive analysis of its operations and aims to streamline processes and improve efficiency. As a result, production activities will be shifted to other nearby plants, including the Twinsburg facility, where some employees have been offered opportunities to relocate. Affected employees will be provided with severance packages and job placement assistance, ensuring a smooth transition.

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[GMH Gruppe Seeks a Visionary Owner for Stahlwerk Bous: Shaping the Future of Sustainable Steel](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: GMH Gruppe is seeking a new owner for Stahlwerk Bous GmbH as part of its strategy to focus on core business areas. Stahlwerk Bous, a leader in sustainable steel production with a strong presence in key industries like railway and energy, is looking for an investor to fully realize its potential, especially in low-CO₂ steel production.

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[Jindal Steel's Bold €4 Billion Move to Acquire Acciaierie d'Italia: The Battle for Europe's Steel Future](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: Jindal Steel & Power Ltd. has raised its bid to acquire the struggling Italian steelmaker Acciaierie d'Italia to €4 billion. This offer includes both an immediate payment for assets and a significant investment to revive the Taranto steel mill. Jindal's aggressive expansion strategy is part of a competitive race against other bidders, aiming to restore Acciaierie d'Italia's capacity and future in Europe's steel industry.

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[Kazakhstan & China Forge Strategic Steel Plant Partnership in Zhambyl Region with \\$1.2 Billion Investment](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: Kazakhstan has entered a strategic partnership with China's Fujian Hengwang Investment to construct a massive \$1.2 billion metallurgical plant in the Zhambyl Region, set to produce 3 million metric tons of steel annually. The project will utilize Kazakhstan's local resources, create 2,500 jobs, and significantly boost Kazakhstan's export potential by 2029.

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[GRSE to Strengthen Arunachal Pradesh's Defense Infrastructure with Modular Steel Bridge Supply](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: Garden Reach Shipbuilders and Engineers Limited has entered into a Memorandum of Understanding with the Indian Army to supply a 130-foot Single Lane Modular Steel Bridge 70R for Arunachal Pradesh. This project will bolster India's defense infrastructure in the region, enabling efficient connectivity in the strategically sensitive northeastern region. The MoU reflects GRSE's commitment to Make in India and Atmanirbhar Bharat initiatives, ensuring indigenous bridge solutions for military and civilian use.

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[SeAH Wind's £900 Million UK Plant Set to Revolutionize Offshore Wind Industry with Billions in Revenue](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: SeAH Wind, a subsidiary of SeAH Steel Holdings, is preparing to begin commercial operations at its £900 million offshore wind monopile plant in Teesside, UK, next month. With contracts already surpassing its initial investment, the plant is set to contribute billions in revenue. This strategic move positions SeAH Wind as a leader in the growing offshore wind industry, focusing on innovation, capacity, and global expansion.

[Read on...](#)

[Interpipe's Revolutionary Railway Integration: Paving the Tracks for a Unified European Future](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: Interpipe, a leading Ukrainian industrial company, is aligning its railway products with European standards DSTU EN 13262, marking a significant milestone in the country's European integration efforts. The company is focusing on supplying railway wheels, axles, and wheelsets to the domestic market, ensuring safety, reliability, and the unification of Ukrainian railway systems with the European Union.

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[Hung You Copper Strengthens Production with New 20-Hi Mill from Danieli](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: Hung You Copper, a division of Taiwanese company Prosperity Tieh Enterprise, has placed a significant order for a new 20-hi mill from Danieli, marking the second such order. The mill will be installed at their Kaohsiung site to produce thin copper and copper alloy strips, enhancing production capabilities in the nonferrous metal sector. The new mill will be operational by Q3 2026.

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[EU Readies Reciprocal Tariffs on US Steel & Aluminium Amid Trade Tensions](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: In response to the threat of 25% tariffs on European goods by the United States, French President Emmanuel Macron confirmed that the European Union will impose reciprocal tariffs on US steel and aluminium. This trade dispute intensifies the ongoing tensions between the US and its European allies, particularly over steel and aluminium imports.

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[Vietnam's Steel Sector Faces Challenges Amid Rising Imports & Tariff Proposals](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: Vietnam's steel industry is under increasing pressure from the rising imports of galvanized steel from China and Korea. This surge in foreign steel is threatening the survival of local producers, prompting the Vietnam Steel Association to request government-imposed tariffs. This proposal comes on the heels of the Vietnamese government's recent imposition of anti-dumping levies on Chinese steel products. Meanwhile, the U.S. is considering new tariffs on steel, adding complexity to the situation and further challenging Vietnam's steel sector.

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[Colombia Launches Antidumping Investigation on Chinese Welded Steel Pipes Amid Trade Concerns](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: On February 20, 2025, Colombia's Ministry of Commerce, Industry and Tourism initiated an antidumping investigation into welded steel pipes from China. The probe was launched following a complaint by TENARIS TUBOCARIBE LTDA, a domestic steel producer. The investigation focuses on pipes with a nominal diameter between 12.7 mm to 152.4 mm, used for cable protection. The parties involved are required to submit their responses and supporting materials within 30 working days from the publication date.

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[CBSA Extends Antidumping Duty Investigation for Turkish Steel Imports Amid Complexities](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: The Canada Border Services Agency has extended its antidumping duty investigation into corrosion-resistant steel sheets from Borçelik Çelik Sanayi Ticaret A.Ş., a Turkish steelmaker. Due to complexities and challenges in obtaining sufficient evidence, the preliminary decision will now be made by April 17, 2025, instead of the original deadline of December 5, 2024.

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[Russia's Steel Industry Faces Tensions Over Excise Tax Calculation Adjustments](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: In Russia, the Finance Ministry remains opposed to proposed adjustments in calculating the excise tax on liquid steel. The proposed changes, supported by the Ministry of Industry and Trade and the metal companies, would adjust the threshold for the excise tax on liquid steel, aiming to address current economic conditions and avoid a crisis in the metallurgy sector. However, the Finance Ministry's concerns about the impact on the federal budget deficit persist.

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[Acerinox's Strategic Transformation: Key Moves, Financial Resilience, & Future Outlook](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: In 2024, Acerinox demonstrated remarkable resilience amid a challenging market, with strategic acquisitions, divestitures, and a focus on high-value-added solutions. The company successfully navigated geopolitical volatility, raw material fluctuations, and operational disruptions, such as a strike at Acerinox Europa. Acerinox's strategic decisions, including the acquisition of Haynes International and the sale of Bahru Stainless, set the stage for future growth. Despite a drop in EBITDA, Acerinox maintained solid cash flow and positioned itself for a recovery in 2025. The company's ongoing expansion projects and investments underscore its commitment to long-term success.

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[Metallus Unveils 2024 Results: A Challenging Year with Promising Outlook for 2025](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: Metallus, a key player in the specialty metals and supply chain solutions sector, reported a difficult year in 2024, marked by weak demand and reduced sales. However, the company made significant investments, executed a share repurchase program, and is poised for a strong recovery in 2025, with improved order trends and profitability.

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[The Second Steel Window Association Awards: Honoring Excellence in Steel Window Craftsmanship](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: The second Steel Window Association Awards for 2025 have been launched, celebrating excellence in steel window design and craftsmanship across multiple sectors. With two new categories added, the awards aim to honor outstanding commercial, domestic, refurbishment, and supplier projects. Winners will be announced in June, with the SWA providing nationwide recognition for the best in the

industry.

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[Rashtriya Ispat Nigam Strikes Vital Iron Ore Deal with NMDC to Secure Operations](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: In a pivotal move to ensure its operational viability, Rashtriya Ispat Nigam Limited (RINL) has signed a long-term agreement (LTA) with NMDC Limited, India's government-owned iron ore miner. This agreement is critical for RINL, the only government-run steel mill without its own iron ore sources, helping to secure raw material supply and addressing financial stress, especially following a \$1.31 billion government rehabilitation package to revive the company.

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[JSW Seeks Research License for Expansive Coking Coal Field with 100 Million Metric Tons Reserve](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: Poland's leading coking coal producer, Jastrzebska Spolka Weglowa, has applied for a research license to explore the Dębieńsko 1 field, which holds over 100 million metric tons of potential coking coal reserves. This move aims to enhance JSW's resource base, extend the operational life of its mine, and bolster coal supplies critical for Europe's economy.

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[Advancing Corrosion Protection: Sol-Gel Hybrid Coatings for Stainless Steel with Enhanced Durability](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: A new study explores the creation of organic-inorganic hybrid coatings using commercial epoxy resin and the sol-gel method to significantly improve the corrosion resistance of 304 stainless steel. By incorporating SiO₂ nanoparticles, the researchers enhance the coating's protective properties, creating an effective, cost-efficient solution for industries requiring durable metal protection. These findings suggest a promising approach to preventing corrosion in metal structures and components.

[Read on...](#)

[Revolutionizing Structural Integrity: Self-Sensing Steel Fiber Bars for Smarter Monitoring](#)

Updated on : Mar 03, 2025 09:29 am

Synopsis: A groundbreaking study introduces self-sensing steel fiber-reinforced polymer

composite bars as a game-changer in structural health monitoring for reinforced concrete structures. Led by Yingwu Zhou, this research utilizes distributed fiber optic sensing technology integrated into SFCBs to provide real-time damage detection and more accurate assessments of safety, durability, and performance in buildings and infrastructure.