

# GLOBAL ECONOMY and GRAPHITE ELECTRODE INDUSTRY JANUARY 2024 & OUTLOOK 2024

12 February 2024

# ALTech Group presents AST-ARC



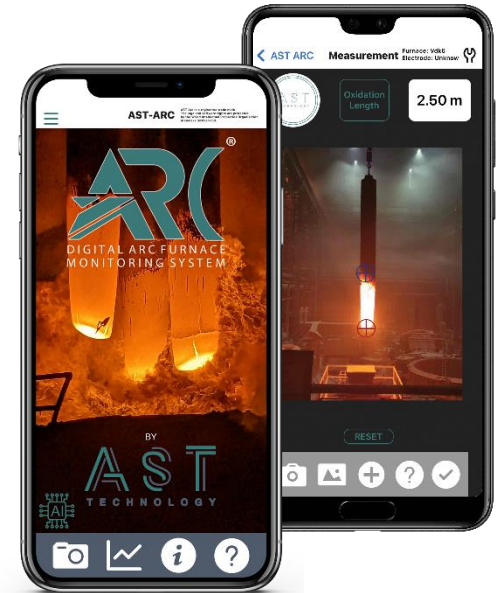
## APP STORE



## PLAY STORE



## WhatsApp Channel



### Leaflet

**AST-ARC Application**  
(By AST Technology part of ALTech group)

- Easy to use application
- Available on Mobiles and Tablets (Android and IOS)
- Monitor and benchmark Electrode Performance (On-site real-time and Off-site historical)
- Beta version with AI capabilities

**AST-ARC is your gate for ARC FURNACE AI Digital Monitoring**

**Performance improvement through digital data and image analysis**

- Graphite Electrode specific consumption is a significant part of the steel conversion cost. Realtime and historical of electrode performance monitoring and analysis is key to achieve optimal steel conversion cost.
- AST-ARC application enables you to monitor among others the realtime oxidation rate in a very accurate and very cozy manner.

ISO column view, picture camera, zoom in the tip video.

When this is on each basket, the substitution rate including dissolution are calculated, jump at the tip and consumption by dissolved by kWh, M.L. power on time, gas consumption such as: chinking, shro losses, breakage, are also captured and analyzed by the AI algorithm.

AST-ARC is a red dotted mark and the spot one is protected by Intellectual Property Rights.

Available on the Google Play Store and the App Store.

Android: Scan the QR code or download the app from the Google Play Store.

iOS: Scan the QR code or download the app from the App Store.

Use QR Code Scanner to capture the QR code.

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## AST ARC Promotional Video

**AST-ARC®**  
www.ast-arc.com

The Ultimate AI Arc Furnace Graphite Electrode optimization at your fingertips

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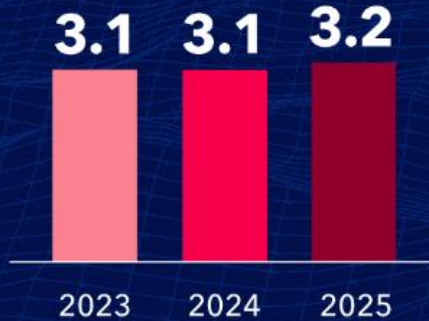
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WORLD ECONOMIC OUTLOOK UPDATE JANUARY 2024

# GROWTH PROJECTIONS

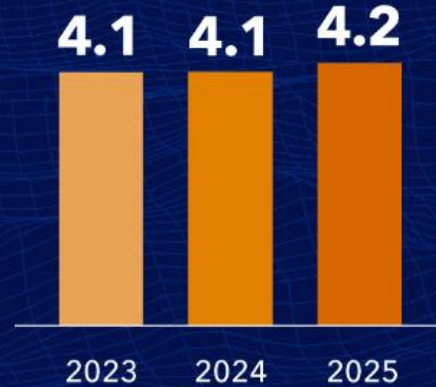
## GLOBAL ECONOMY



## ADVANCED ECONOMIES



## EMERGING MARKET & DEVELOPING ECONOMIES



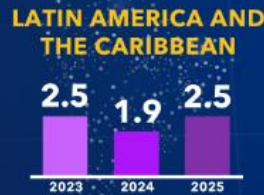
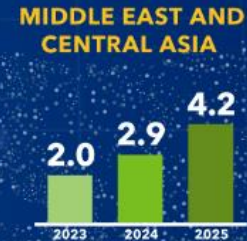
INTERNATIONAL MONETARY FUND

Source: <https://www.imf.org/>

## WORLD ECONOMIC OUTLOOK JANUARY 2024

# GROWTH PROJECTIONS BY REGION

(PERCENT CHANGE)



IMF.org #WEO

Source: IMF, *World Economic Outlook Update*, January 2024.

Note: Order of bars for each group indicates (left to right): 2023, 2024 projections, and 2025 projections.

Source: <https://www.imf.org/>



(Real GDP, annual percent change)	ESTIMATE	PROJECTIONS	
	2023	2024	2025
<b>World Output</b>	<b>3.1</b>	<b>3.1</b>	<b>3.2</b>
<b>Advanced Economies</b>	<b>1.6</b>	<b>1.5</b>	<b>1.8</b>
United States	2.5	2.1	1.7
Euro Area	0.5	0.9	1.7
Germany	-0.3	0.5	1.6
France	0.8	1.0	1.7
Italy	0.7	0.7	1.1
Spain	2.4	1.5	2.1
Japan	1.9	0.9	0.8
United Kingdom	0.5	0.6	1.6
Canada	1.1	1.4	2.3
Other Advanced Economies	1.7	2.1	2.5

Source: <https://www.imf.org/>

(Real GDP, annual percent change)	ESTIMATE	PROJECTIONS	
	2023	2024	2025
<b>Emerging Market and Developing Economies</b>	<b>4.1</b>	<b>4.1</b>	<b>4.2</b>
<b>Emerging and Developing Asia</b>	<b>5.4</b>	<b>5.2</b>	<b>4.8</b>
China	5.2	4.6	4.1
India	6.7	6.5	6.5
<b>Emerging and Developing Europe</b>	<b>2.7</b>	<b>2.8</b>	<b>2.5</b>
Russia	3.0	2.6	1.1
<b>Latin America and the Caribbean</b>	<b>2.5</b>	<b>1.9</b>	<b>2.5</b>
Brazil	3.1	1.7	1.9
Mexico	3.4	2.7	1.5
<b>Middle East and Central Asia</b>	<b>2.0</b>	<b>2.9</b>	<b>4.2</b>
Saudi Arabia	-1.1	2.7	5.5
<b>Sub-Saharan Africa</b>	<b>3.3</b>	<b>3.8</b>	<b>4.1</b>
Nigeria	2.8	3.0	3.1
South Africa	0.6	1.0	1.3
<b>Memorandum</b>			
<b>Emerging Market and Middle-Income Economies</b>	<b>4.2</b>	<b>4.0</b>	<b>4.0</b>
<b>Low-Income Developing Countries</b>	<b>4.0</b>	<b>5.0</b>	<b>5.6</b>

Source: <https://www.imf.org/>

- **World trade growth is projected at:**
  - **3.3 %** in 2024 and
  - **3.6 %** in 2025,It is below its historical average growth rate of 4.9%
- **Rising trade distortions** and **geo-economic fragmentation** are expected to continue to weigh on the level of global trade
- Countries imposed:
  - About **3,200** new restrictions on trade in 2022
  - And about **3,000** in 2023
  - Up from about **1,100** in 2019, according to Global Trade Alert data
- **These forecasts are based on assumptions:**
  - Fuel and nonfuel commodity prices will decline in 2024 and 2025
  - Interest rates will decline in major economies
  - Annual average oil prices are projected to fall by about 2.3% in 2024,
  - Nonfuel commodity prices are expected to fall by 0.9%

Source: <https://www.imf.org/>



Brent crude futures held above \$81 per barrel and were set to advance nearly 6% this week as persistent geopolitical tensions in the Middle East continued to drive up oil prices.



Source: <https://www.tradingeconomics.com>





# Iron Ore Price- 63.5% iron content



63.5% iron ore for Tianjin delivery dropped to \$128/MT in February 2024, the lowest in 3 months. Signs of a worsening macroeconomic backdrop magnified pessimism in the financial sector and its effect on construction demand. The latest data showed that Chinese deflation rose to its highest in 14 years. Also, new home prices in China sank at the sharpest pace since 2015 in December



Source: <https://www.tradingeconomics.com>



# Steam Coal Price



Newcastle coal futures rose to \$120/MT due to increased demand amid a cold wave and the Lunar New Year holiday. Despite these factors, prices remain near the lowest since May 2021 due to excessive supply. China's coal production surged to 4.66 billion MT in 2023, up 2.9% from the previous year, while coal imports reached a record high of 474.42 million MT, up 61.8%.



Source: <https://www.tradingeconomics.com>



# LME Steel Scrap CFR Turkey – USD / MT



Price



Source: <https://www.lme.com>



# LME-HRC Steel-FOB China (USD/MT)



Price



Source: <https://www.lme.com>



# LME- Nickel Price- (USD/MT)



Nickel futures stabilized around \$16,000/ MT, a 3-year low, aligning with the broader downward trend in base metals amid a subdued industrial outlook, as China struggled to boost its economy. According to the forecast by the International Nickel Study Group, nickel's supply was projected to surpass demand by 239,000 MT in 2024.



Source: <https://www.lme.com>





# LME-Aluminium Price (USD/MT)



Aluminum futures held above \$2,240/MT, rebounding from the 2-week low of \$2,213 touched on February 3rd. Prices were also supported by growing expectations that the EU may sanction aluminum imports from Russia. Such a measure would extend the of aluminum wires, tubes, pipes, and foil. However, according to European Aluminium, an industry association, the imposed restrictions only accounted for 12% of EU imports, prompting a call for a broader ban.



Source: <https://www.lme.com>



# LME- Copper Price (USD/MT)



Copper futures in the US fell to under \$3.7 per pound in February, the lowest in nearly 3 months and sinking more than 5% since the start of the month amid a strong US dollar and pessimistic industrial sentiment in China. Persistent macroeconomic headwinds in China, continued to hamper the outlook for base metals.



Source: <https://www.lme.com>



# LME- Lead Price (USD/MT)



Lead increased 21.25 USD/MT or 1.04% since the beginning of 2024  
Historically, Lead reached an all-time high of 3989 in October of 2007.



Source: <https://www.lme.com>





Zinc prices fell under \$2,400/MT, their lowest since the end of August 2023, pressured by growing inventories and demand worries amid continued weakness in the real estate sector of China. Since zinc is mainly used for galvanized steel, half of the demand for the commodity comes from construction.



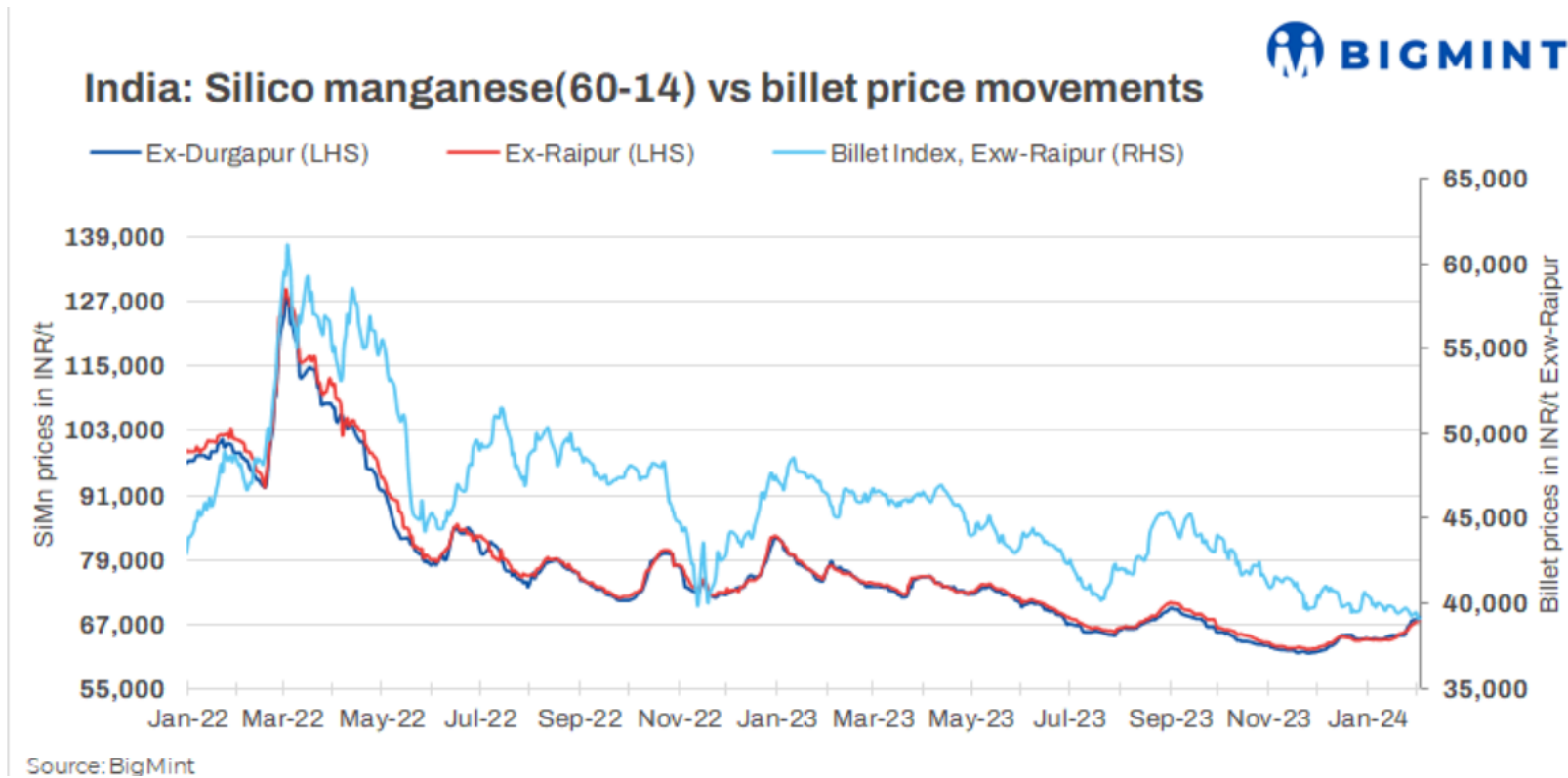
Source: <https://www.lme.com>



# Ferro Alloys: Ferro Silico Manganese Price Trend



Indian prices of silico manganese in India rose by around INR 1,700/MT (\$21/MT) w-o-w reaching a 4-month high, as these levels were last seen in September 2023. Improved inquiries for exports and domestic demand led to supply tightness.



Source: <https://www.steelmint.com>

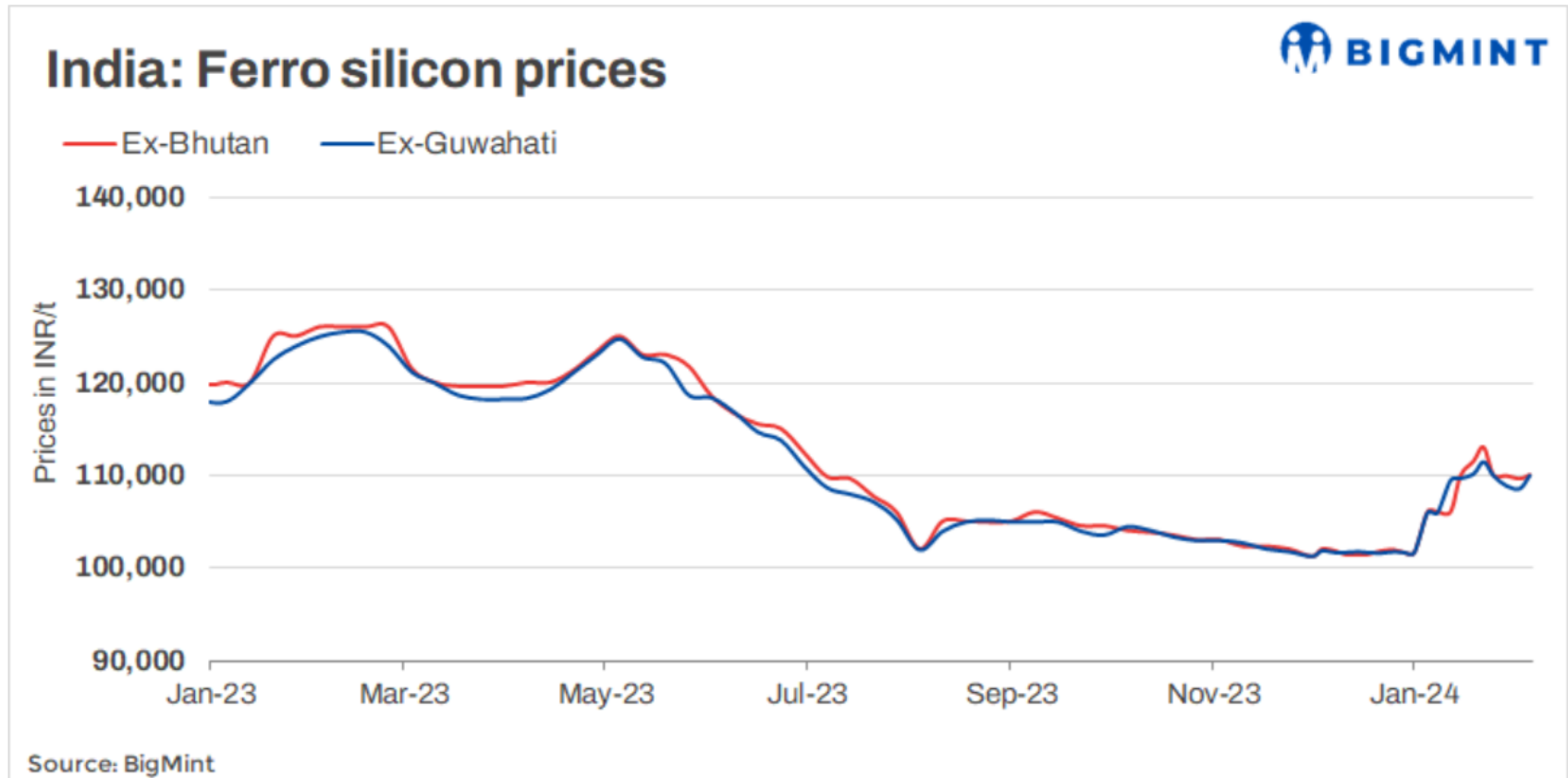




# Ferro Alloys: Ferro Silicon Price Trend



Indian ferrosilicon (70%) prices saw a w-o-w increase of INR 1,000/MT (\$12/MT) as compared to the previous assessment on 29 January



Source: <https://www.steelmint.com>



## Freightos Baltic Index ( FBX) Global Container Index Freight movement for the last one year



Source: <https://fbx.freightos.com/>





## Key takeaways

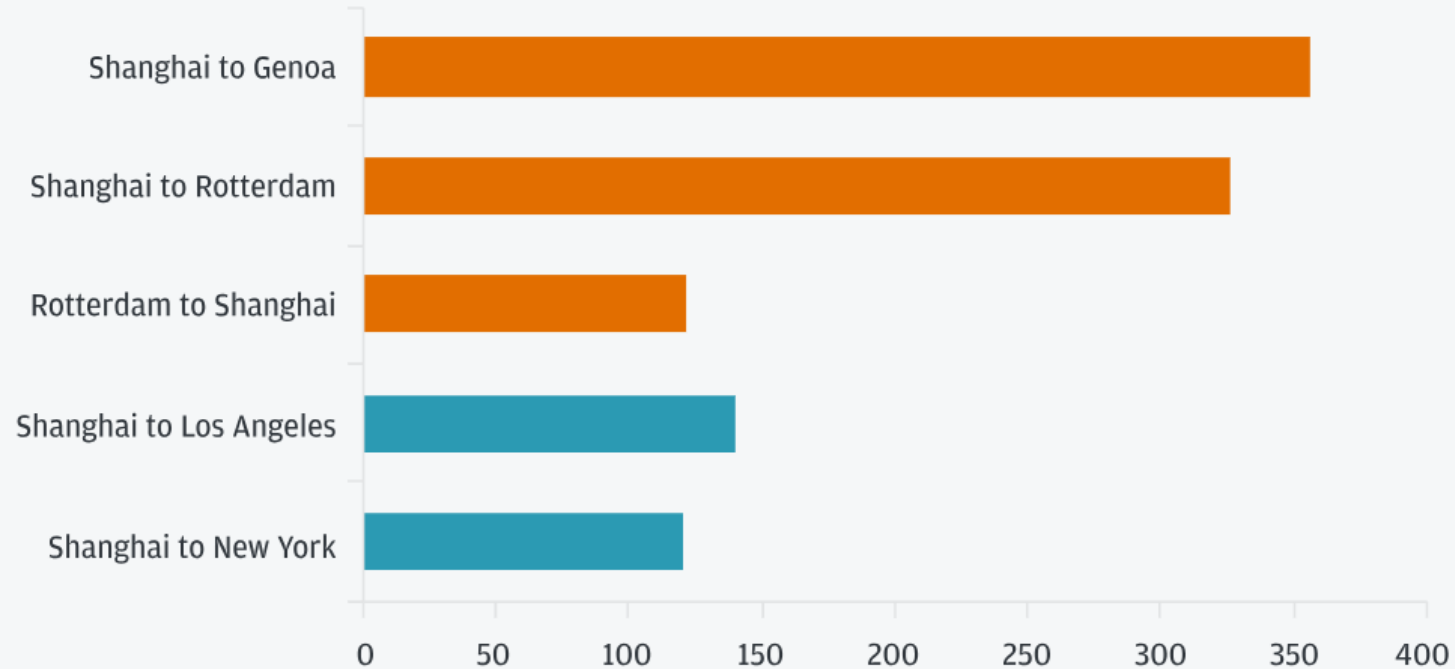
- With 30% of global container trade transiting through the Suez Canal, the Red Sea shipping crisis is upending supply chains
- It is also increasing shipping costs, causing the prices of some routes — particularly from Asia to Europe — to surge nearly five-fold
- Higher shipping costs are likely to pass through to imported goods prices with a lag, depending on both the duration and intensity of the crisis
- J.P. Morgan Research estimates the disruptions could add 0.7 percentage points to global core goods inflation, and 0.3 percentage points to overall core inflation, during the first half of 2024





## Recent increase in shipping costs by route

% chg, from Dec 1, 2023



Source: Drewry's World Container Index, J.P. Morgan



# Global Crude Steel



# Global Crude Steel Production CY 2023



World crude steel production in CY 2023 was 1849.7 million MT, a **0.1%** decrease compared to CY 2022

Regions	Dec-23 (MT)	% change Dec 23/22	Jan-Dec 2023 (MT)	% change Jan-Dec 23/22
Africa	1.9	17.7 ↑	22.0	5.7 ↑
Russia & other CIS + Ukraine	7.1	11.8 ↑	88.1	4.5 ↑
Middle East	4.9	9.6 ↑	53.2	1.3 ↑
Asia and Oceania	96.4	-9.7 ↓	1367.2	0.7 ↑
North America	9.3	5.3 ↑	109.6	-1.7 ↓
Europe, Other	3.9	19.4 ↑	41.7	-4.6 ↓
South America	3.2	-3.2 ↓	41.5	-5.7 ↓
EU (27)	9.1	2.7 ↑	126.3	-7.4 ↓
Total 71 countries	135.7	-5.3 ↓	1849.7	-0.1 ↓

Asia shows a marginal growth of 0.7% and with the EU, North and South America register a negative growth

Source: <https://www.worldsteel.org/>

# Top 10 Crude Steel Producing countries



Countries	Dec-23 (MT)	% change Dec 23/22	Jan-Dec 2023 (MT)	% change Jan-Dec 23/22
India	12.1	9.5 ↑	140.2	11.8 ↑
Russia	6.0	4.3 ↑	75.8	5.6 ↑
South Korea	5.4	2.7 ↑	66.7	1.3 ↑
United States	6.8	7.6 ↑	80.7	0.2 ↑
China	67.4	-14.9 ↓	1019.1	0.0 ↔
Japan	7.0	1.1 ↑	87.0	-2.5 ↓
Germany	2.6	-2.3 ↓	35.4	-3.9 ↓
Türkiye	3.2	21.2 ↑	33.7	-4.0 ↓
Brazil	2.5	0.9 ↑	31.9	-6.5 ↓
Iran	2.9	12.1 ↑	31.1	1.8 ↑

China showed a flat performance, and India registered a tremendous growth of almost 12%.

Source: <https://www.worldsteel.org/>



## China's Region-wise Steel Exports in 2023



JKT: Japan, South Korea, Taiwan | USMCA: United States–Mexico–Canada Agreement | CIS: Commonwealth of Independent States  
 All above figures are rounded off. | Quantity in million tonnes (mnt) | % change in year-on-year (y-o-y) | Source: China Customs, BigMint



Source: [BIGMINT](#)





- **China's steel exports crossed:**
- **90 million MT** mark in 2023 ending with a volume of **91.20 million MT**
- A **35% increase** over **67.45 million MT** seen in 2022
- Supply-demand mismatch boosts overseas sales
- Currency devaluation a boon for exporters
- Sluggish winter restocking may support exports in the near term
  
- **Country-wise breakup**
  - **SEA** retains the top importer slot
  - **MENA** in second spot





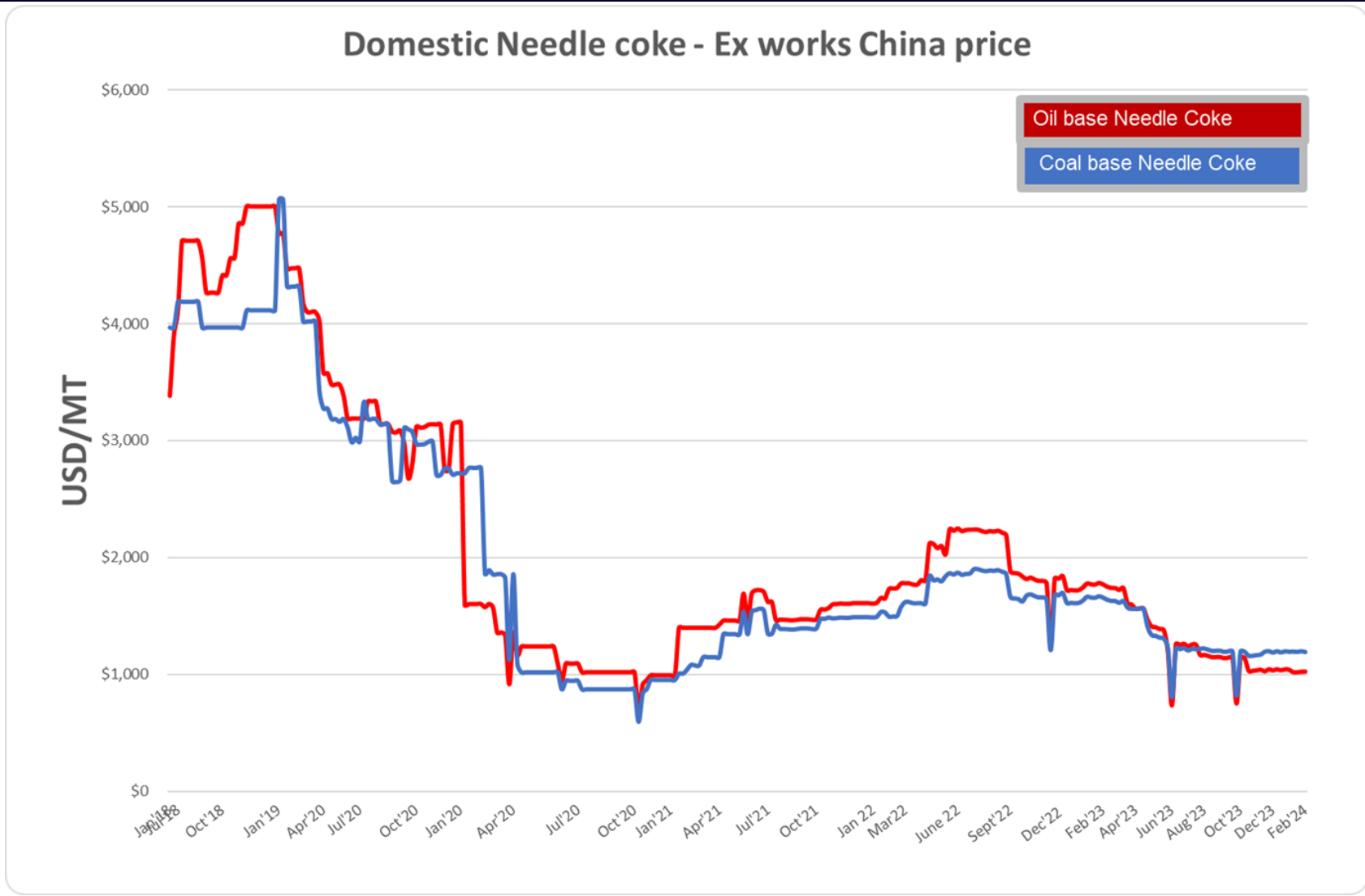
- **Country-wise breakup**

- **SEA: 35% increase to 27 million MT** vs 20 million MT in 2022
- **Vietnam:** Top importer with **9.25 vs 5.46 million MT** in 2022 a **70%** growth
- **MENA region** Buying quite heavily from China, in 2nd position with **26 million MT**, up **44%** from 18 million MT seen last year.
- **Turkiye** and the **UAE** -top two importers.
  - Volumes to Turkiye up **64% to 4 million MT**
  - UAE imports surged **87% y-o-y to 4 million MT**
- The Middle East has seen massive infra projects being announced which would require huge volumes of steel.
- Turkiye, has some positives because of restocking demand from the EU although its inflation and currency slide are still major challenges
- The **EU's** energy prices have stabilized - a rise in its domestic prices is making the region eye cheaper imports





# Graphite Electrode Outlook



Source: <http://www.iccsino.com>



- As reported in our last month's market outlook report, from January to November 2023, China's total export of graphite electrodes was 271,400 tons, an increase of 0.37%, (approximately 10,000 MT more)
- An increase in steel export by 23.75 million MT in CY 2023 from China globally bringing about a drop in local steel production in importing countries
- The above two factors resulted in graphite electrodes producers reporting a lower production rate
- Red Sea crisis had severely hit the topline of Graphite Electrode producers globally





- The January 2024 World Economic Outlook Update projects global growth to be steady at 3.1% in 2024 and 3.2% in 2025
- The Red Sea crisis results in increasing shipping costs, causing the prices of some routes — particularly from Asia to Europe — to surge nearly five-fold
- World crude steel production in CY 2023 was 1849.7 million MT, a 0.1% decrease compared to CY 2022
- China's steel exports up 35% in 2023
- Graphite electrode producers reporting a lower production rate.
- The Red Sea crisis had severely hit the topline of Graphite Electrode producers globally



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OUR SPEAKER :

**Geraldo FERREIRA**

Wednesday, March 13, 2024  
03:30 PM – 04:00 PM  
Lamination room

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The Synthetic Graphite Industry:  
The Achilles heel of Green Steel and  
Green Mobility through the lens of  
announced shortages and  
geopolitical disruptions



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OUR SPEAKER :  **Fabrizio MASIA**

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- Warehouse

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