

Industry chapter – Steel intermediaries and Steel products

Draft report

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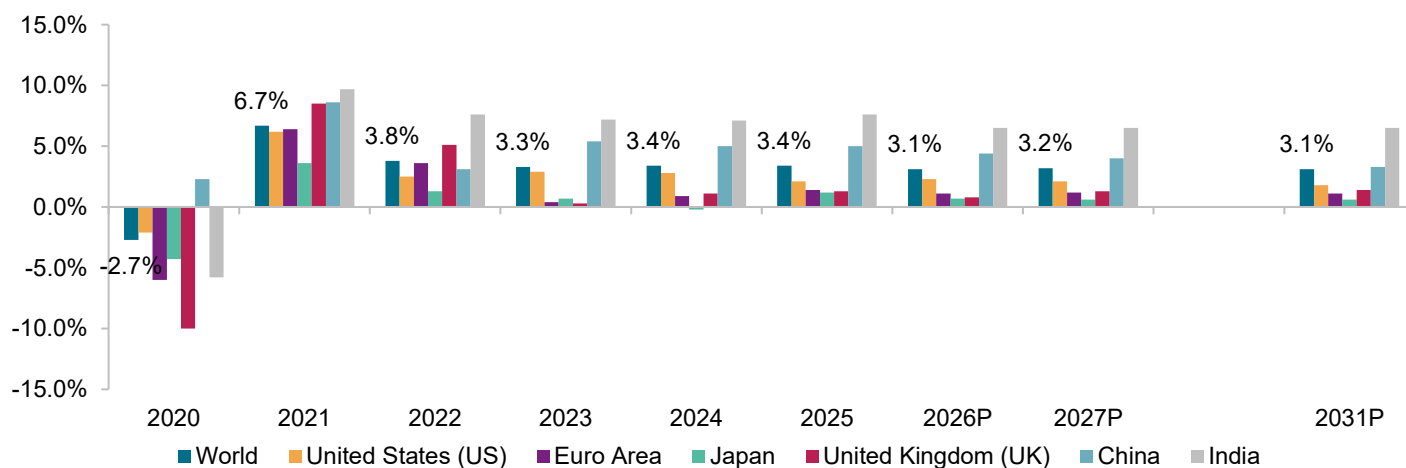
Global macroeconomic overview

Gross domestic product (GDP) – Historical trend and Forecast

Global economic growth has stabilized in recent years, with the economy expanding by 3.4% in both 2024 and 2025, reflecting a more moderate but sustainable growth trajectory supported by domestic consumption, infrastructure spending and continued expansion across emerging economies. While growth rates remain below the post-pandemic rebound levels, the stability observed in recent years highlights improving economic fundamentals, resilient labor markets and gradual normalization of global demand conditions. Global economic activity had experienced a sharp contraction of 2.7% in 2020 following the outbreak of the COVID-19 pandemic, which disrupted production, trade, investment and consumer spending across major economies. However, unprecedented fiscal stimulus measures, accommodative monetary policies and rapid adaptation by businesses supported a strong recovery, resulting in global growth rebounding to 6.7% in 2021. Thereafter, growth moderated to 3.8% in 2022 and 3.3% in 2023 amid elevated inflation, tighter monetary policies, supply-chain disruptions and geopolitical uncertainties, before stabilizing at current levels.

Looking ahead, global economic growth is expected to remain relatively stable, with the IMF projecting growth of around 3.1–3.2% through 2027 and approximately 3.1% by 2031. Growth is expected to be supported by investments in manufacturing, digitalization, energy transition and infrastructure development, with emerging economies, particularly in Asia, remaining the primary drivers of global economic expansion.¹

GDP growth rate - review and outlook



P – projected (years mentioned on the horizontal axis correspond to the calendar years)

Note: Unless mentioned otherwise, the years correspond to calendar years throughout the report, whereas India data is in fiscal years, 2020 being fiscal 2021 and so on.

Source: Crisil Intelligence, IMF, World Bank, S&P Global

Region- and country-wise economic review and outlook²

Real GDP (on-year growth)	2020	2021	2022	2023	2024	2025	2026P	2027P	2031P
World	-2.70%	6.70%	3.80%	3.30%	3.40%	3.40%	3.10%	3.20%	3.10%
Euro area*	-6.00%	6.40%	3.60%	0.40%	0.90%	1.40%	1.10%	1.20%	1.10%
The US	-2.10%	6.20%	2.50%	2.90%	2.80%	2.10%	2.30%	2.10%	1.80%

¹ All outlooks as stated by IMF unless stated otherwise

² All classifications according to IMF

China	2.30%	8.60%	3.10%	5.40%	5.00%	5.00%	4.40%	4.00%	3.30%
Germany	-4.10%	3.90%	1.80%	-0.90%	-0.50%	0.20%	0.80%	1.20%	0.60%
Japan	-4.30%	3.60%	1.30%	0.70%	-0.20%	1.20%	0.70%	0.60%	0.60%
India	-5.80%	9.70%	7.60%	7.20%	7.10%	7.70%	6.50%	6.50%	6.50%
The UK	-10.00%	8.50%	5.10%	0.30%	1.10%	1.30%	0.80%	1.30%	1.40%

*The euro area consists of member states of the European Union that have adopted the euro as their currency

P – projected

Source: Crisil Intelligence, industry, IMF

The US

The United States remained a key contributor to global economic growth during the review period, with growth accelerating to 2.9% in 2023 despite elevated inflation and tighter monetary conditions. Economic activity was supported by resilient consumer spending, a strong labor market, rising real wages and increased investment across infrastructure, manufacturing and technology sectors.

Growth remained robust in 2024 at 2.8%, driven by strong consumption and non-residential investment. Going forward, economic growth is expected to moderate to 2.3% in 2026, supported by fiscal policy measures and the positive impact of interest rate cuts implemented in 2025.

Euro area

Economic growth in the Euro area slowed sharply from 3.6% in 2022 to 0.4% in 2023 as higher energy prices, tighter financial conditions and geopolitical uncertainties weighed on industrial activity and consumer spending. Growth improved modestly to 0.9% in 2024 and is estimated at 1.4% in 2025, supported by easing inflation, recovery in exports and improving household purchasing power. However, growth is expected to moderate to 1.1% in 2026 amid renewed energy market uncertainties. Despite near-term challenges, the region remains an important industrial and manufacturing hub, particularly for automotive, engineering and capital goods industries that are significant consumers of steel.

Japan

Japan's economy expanded by 1.3% in 2022 and 0.7% in 2023, supported by recovering domestic demand, tourism activity and accommodative policy measures. Economic growth was aided by the reopening of the economy and improving service-sector activity following the pandemic.

Growth moderated slightly in 2024 with a contraction of 0.2%, before recovering to 1.2% in 2025. However, GDP growth is projected to ease to 0.7% in 2026 and stabilize at around 0.6% thereafter. Structural factors such as an ageing population, labor shortages and relatively weak domestic demand continue to constrain long-term growth prospects. Nevertheless, Japan's advanced manufacturing ecosystem and leadership in high-value industrial sectors remain key strengths supporting economic stability.

The UK

The United Kingdom's economy expanded by 5.1% in 2022 before slowing sharply to 0.3% in 2023 as inflationary pressures, elevated energy costs and tighter financial conditions affected consumer spending and investment activity. Businesses and households faced significant cost pressures, resulting in weaker economic momentum.

Growth improved to 1.1% in 2024 and 1.3% in 2025 as inflation moderated and monetary conditions gradually eased, supporting domestic demand. However, growth is expected to soften to 0.8% in 2026 before improving modestly thereafter. The UK's diversified economic structure, strong services sector and improving investment environment are expected to support moderate long-term growth despite ongoing global uncertainties.

China

China recorded strong growth of 8.6% in 2021 as economic activity rebounded following the pandemic. Growth subsequently moderated to 3.1% in 2022 before recovering to 5.4% in 2023. Economic expansion remained stable at 5.0% in both 2024 and 2025, supported by strong export performance, policy stimulus measures and continued investments in strategic sectors.

Looking ahead, growth is projected to gradually moderate to 4.4% in 2026, 4.0% in 2027 and 3.3% by 2031. The moderation reflects structural adjustments within the economy, slower expansion in the property sector and demographic challenges. Nevertheless, China is expected to remain the world's largest manufacturing economy and a major driver of global commodity consumption, industrial production and steel demand over the foreseeable future.

India

India has emerged as the fastest-growing major economy among large nations, recording GDP growth of 9.7% in 2021, followed by 7.6% in 2022, 7.2% in 2023 and 7.1% in 2024. Economic activity remained robust despite global headwinds, supported by strong domestic consumption, government capital expenditure and expansion across manufacturing and services sectors.

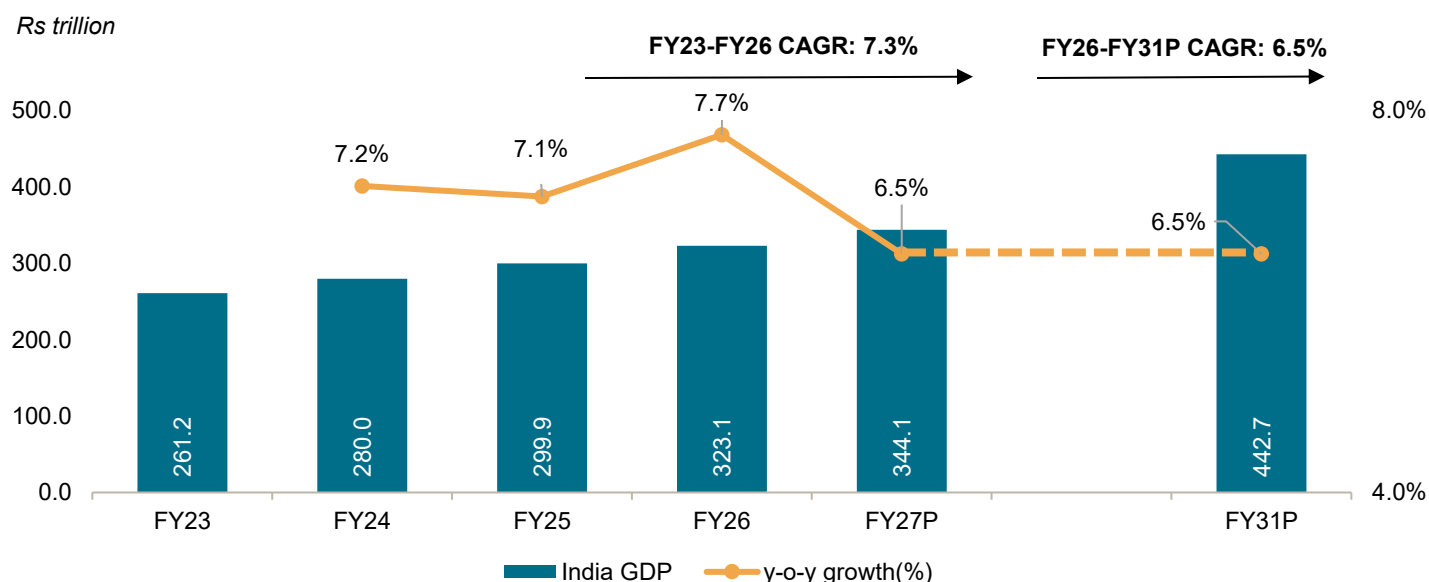
Growth accelerated to 7.7% in 2025 and is projected at 6.5% in both 2026 and 2027. India's economic performance continues to be supported by favourable demographics, rising urbanization, increasing infrastructure investments and policy initiatives aimed at strengthening manufacturing capabilities. Strong growth in sectors such as infrastructure, construction, automobiles, renewable energy and industrial manufacturing is expected to sustain economic momentum and support long-term steel demand.

Indian macroeconomic overview

Real GDP trend

India has maintained its position as one of the fastest-growing major economies globally, supported by strong domestic demand, government-led capital expenditure, improving manufacturing activity and a resilient services sector. India's real GDP increased from Rs 261.2 trillion in FY23 to Rs 322.6 trillion in FY26, representing a CAGR of 7.3% during the period. The economy demonstrated resilience despite global geopolitical uncertainties, elevated commodity prices and tight financial conditions across several major economies.

India's real GDP trend



P – projected; FY – fiscal year

Note: A new national accounts series was released with 2022-23 as the base year, superseding the 2011-12 series, with figures available for fiscal 2023 onwards

Source: National Statistical Office (NSO), Crisil Intelligence

Economic growth remained robust at 7.2% in FY24 and 7.1% in FY25, before accelerating to an estimated 7.7% in FY26. The improvement was driven by broad-based expansion across investment, construction, manufacturing and services sectors, supported by sustained government infrastructure spending and strengthening private demand. Strong domestic economic fundamentals helped offset the impact of external challenges, enabling India to outperform most major economies during the review period.

On the demand side, capital formation continued to play a significant role in supporting economic activity. Gross fixed capital formation is estimated to have grown by 8.2% in FY26 compared with 6.4% in FY25, reflecting continued investments in infrastructure, manufacturing, transportation, logistics and industrial capacity creation. Private final consumption expenditure also strengthened to 7.7% growth in FY26 from 5.8% in FY25, supported by improving income levels, moderating inflation and resilient consumer sentiment.

Going forward, India's GDP is projected to expand at a CAGR of 6.5% between FY26 and FY31, reaching approximately Rs 442.7 trillion by FY31. Growth is expected to be supported by favourable demographics, urbanization, infrastructure development, digitalization, manufacturing expansion and continued policy initiatives aimed at strengthening the country's

long-term economic competitiveness. Such structural growth drivers are expected to create a favourable environment for investment-intensive sectors such as steel, construction, transportation and industrial manufacturing.

Yearly demand-side real GDP growth

	FY21	FY22	FY23	FY24	FY25	FY26E
Private consumption	-5.3%	11.7%	7.5%	5.8%	5.8%	7.7%
Government consumption	-0.8%	0.0%	4.3%	0.6%	6.5%	5.5%
Gross fixed capital formation	-7.1%	17.5%	8.4%	7.3%	6.4%	8.2%
Exports	-7.0%	29.6%	10.3%	0.7%	6.6%	6.3%
Imports	-12.6%	22.1%	8.9%	-1.0%	5.3%	5.6%

E – provisional estimates; FY – fiscal year

Note: FY19-23 values are as per base year 2011-12 at constant prices and FY24-26 values are as per revised base year 2022-23 at constant prices

Source: Crisil Intelligence, NSO

GDP composition by expenditure

	FY21	FY22	FY23	FY24	FY25
Private Consumption (PFCE)	57.1%	58.1%	58.1%	56.1%	56.5%
Government Consumption (GFCE)	10.8%	9.9%	9.6%	9.5%	9.1%
Investments (GFCF)	31.2%	33.4%	33.6%	33.5%	33.7%
Net Exports	-2.1%	-1.0%	-0.7%	-3.2%	-0.9%

Source: Crisil Intelligence, RBI, MoSPI

India's economic growth continues to be predominantly driven by domestic demand, with private consumption remaining the largest component of GDP. During FY21-FY25, private final consumption expenditure consistently accounted for 56-58% of GDP, highlighting the importance of India's large consumer base in sustaining economic activity.

Government consumption contributed between 9.1% and 10.8% of GDP during the same period. Public expenditure has played an important role in supporting social welfare, infrastructure creation and economic stability, particularly during periods of external uncertainty and economic disruption.

Investments, represented by gross fixed capital formation (GFCF), accounted for 31.2-33.7% of GDP during FY21-FY25. The consistently high share of investments indicates the country's focus on infrastructure development, manufacturing expansion and capacity creation. Continued investment in transportation networks, industrial corridors, logistics infrastructure and urban development is expected to remain a key driver of future economic growth.

Net exports remained negative throughout the period, indicating that India's growth model continues to be primarily domestic-demand driven. The combined contribution of private consumption and investments consistently accounted for nearly 90% of GDP, creating strong demand fundamentals for infrastructure, construction, manufacturing and other steel-intensive sectors.

GVA trend

On-year supply-side GVA by economic activity

	FY21	FY22	FY23	FY24	FY25	FY26E
Agriculture and allied	4.0%	4.6%	6.3%	2.6%	4.2%	3.0%
Mining and quarrying	-8.2%	6.3%	3.4%	2.4%	11.7%	5.2%

Manufacturing	3.1%	10.0%	-1.7%	12.7%	9.3%	10.7%
Utilities*	-4.2%	10.3%	10.8%	10.7%	2.9%	1.7%
Construction	-4.6%	19.9%	9.1%	9.9%	7.3%	7.4%
Services^	-8.4%	9.2%	10.3%	7.0%	7.9%	9.3%

P – provisional estimates

*Utilities include electricity, gas, water supply and other utilities

^Services include those related to trade, hotels, transport, communication, broadcasting, finance, real estate, public administration, defence, and professional and other services

Note: Fiscal 2019-2023 growth rates are as per base year 2011-12 at constant prices, fiscal 2024-2026 are as per base year 2022-23 at constant prices

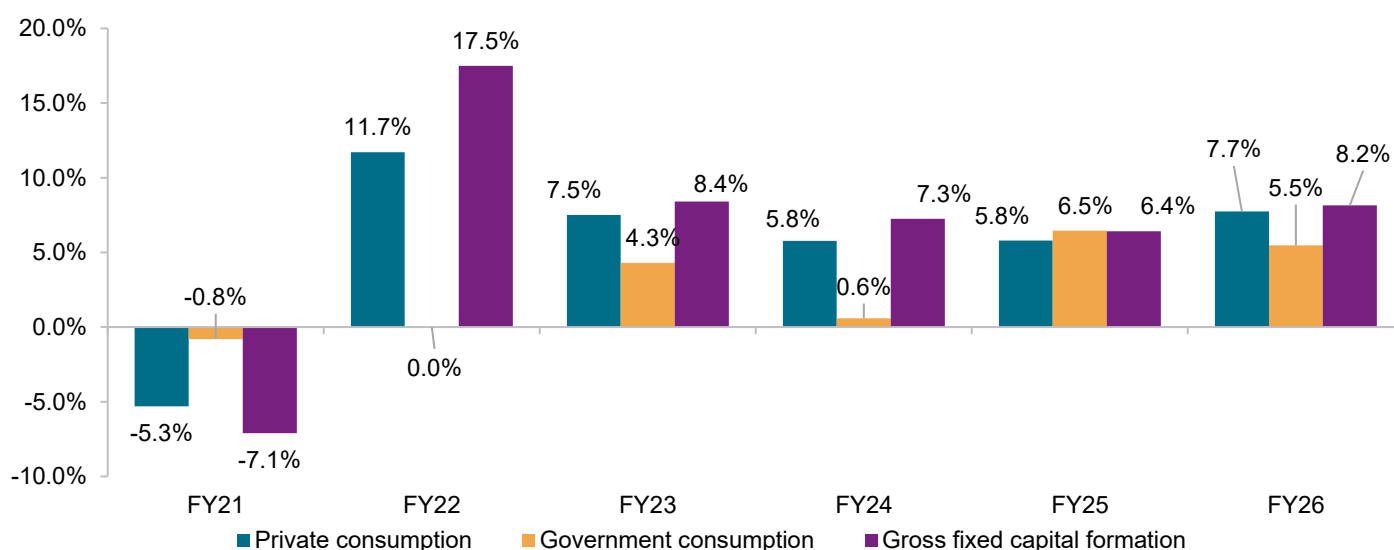
Source: Crisil Intelligence, CSO

India's Gross Value Added (GVA) growth reflects the broad-based recovery of economic activity across agriculture, industry and services following the pandemic. The primary sector remained relatively resilient, supported by stable agricultural output and mining activity, recording growth of 4.9% in FY25 and an estimated 3.2% in FY26. The sector continues to play an important role in supporting rural incomes, consumption and raw material availability for various industries.

The secondary sector emerged as a key growth driver, supported by strong performance in manufacturing and construction. Sectoral growth stood at 8.0% in FY25 and an estimated 8.8% in FY26, driven by increased industrial output and sustained investments in infrastructure, housing and urban development. The tertiary sector remained the largest contributor to GVA, growing by 7.9% in FY25 and an estimated 9.3% in FY26, supported by expansion in trade, transportation, financial services and real estate activities. Overall, the balanced growth across manufacturing, construction and services continues to support industrial investment, infrastructure development and long-term steel demand growth.

India's investment and consumption trend

Investment and consumption trend



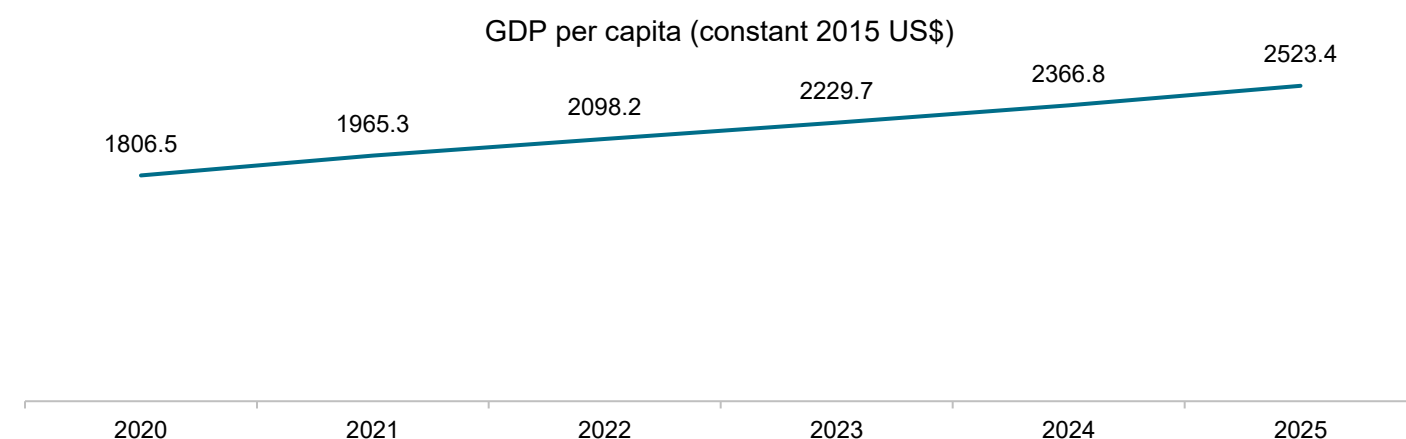
Note: Fiscal 2019-2023 growth rates are as per base year 2011-12 at constant prices, fiscal 2024-2026 are as per base year 2022-23 at constant prices

Source: Crisil Intelligence, CSO

The strong performance of investment and consumption indicators underscores the growing momentum of domestic economic activity and highlights the increasing role of industrial expansion in India's growth story. Among the various

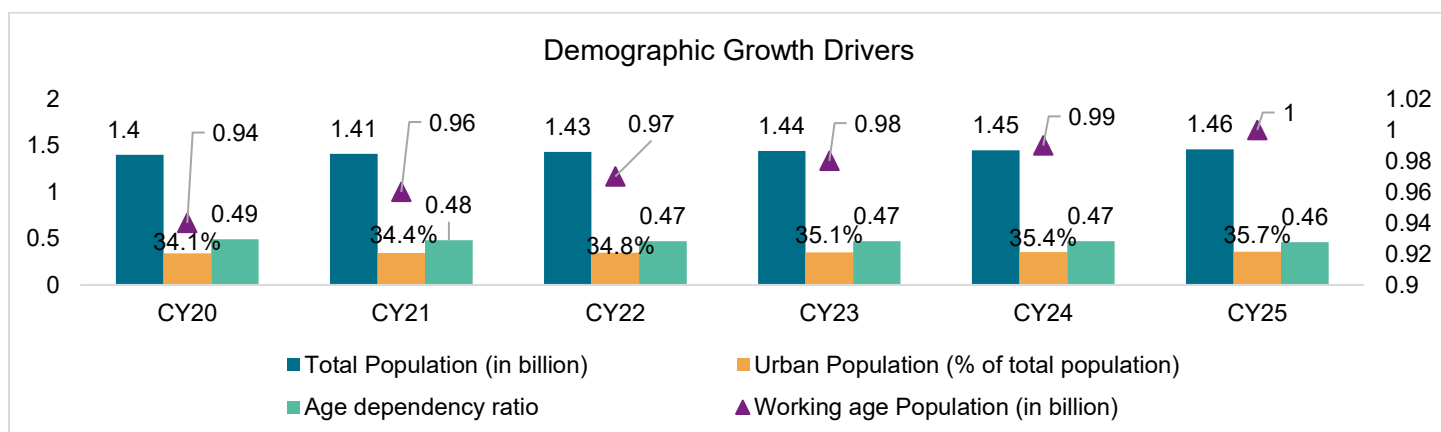
sectors of the economy, manufacturing occupies a particularly important position due to its contribution to employment generation, exports, capacity creation and value addition. As India seeks to strengthen its position as a global manufacturing hub through initiatives such as Make in India, Production Linked Incentive (PLI) schemes and infrastructure-led development, the performance of the manufacturing sector has become a key determinant of overall economic growth. Furthermore, manufacturing activity has extensive linkages with steel-intensive sectors such as automobiles, engineering, capital goods, construction and infrastructure. An analysis of manufacturing GVA trends therefore provides valuable insight into the evolution of India's industrial sector and the underlying drivers of long-term demand for steel and other industrial materials.

Demographic and structural growth drivers



Source: Crisil Intelligence, World Bank

India's GDP per capita increased from US\$ 1,806.5 in 2020 to US\$ 2,523.4 in 2025 (constant 2015 US\$), reflecting a steady improvement in income levels and overall economic prosperity. Rising per-capita income supports higher consumer spending, improved living standards and increased demand for housing, infrastructure and manufactured goods. The continued increase in purchasing power is expected to support long-term growth in steel-intensive sectors such as construction, automotive and consumer durables.



Source: Crisil Intelligence, World Bank

India's population increased from 1.40 billion in CY20 to 1.46 billion in CY25, highlighting the country's large and growing consumer base. Population growth drives demand for housing, transportation, healthcare, urban infrastructure and public

utilities, thereby creating sustained demand for steel and other construction materials. The large population also provides a sizeable workforce to support industrial and economic expansion.

The growth of India's working-age population, which increased from 0.94 billion in CY20 to 1.00 billion in CY25, and the rise in urbanization from 34.1% to 35.7% during the same period, continue to support economic expansion and industrial development. A larger employable population strengthens labor force participation, income generation and domestic consumption, while increasing urbanization drives investments in housing, commercial real estate, transportation and urban infrastructure. Together, these demographic trends provide sustained support to manufacturing activity, infrastructure development and long-term steel demand growth.

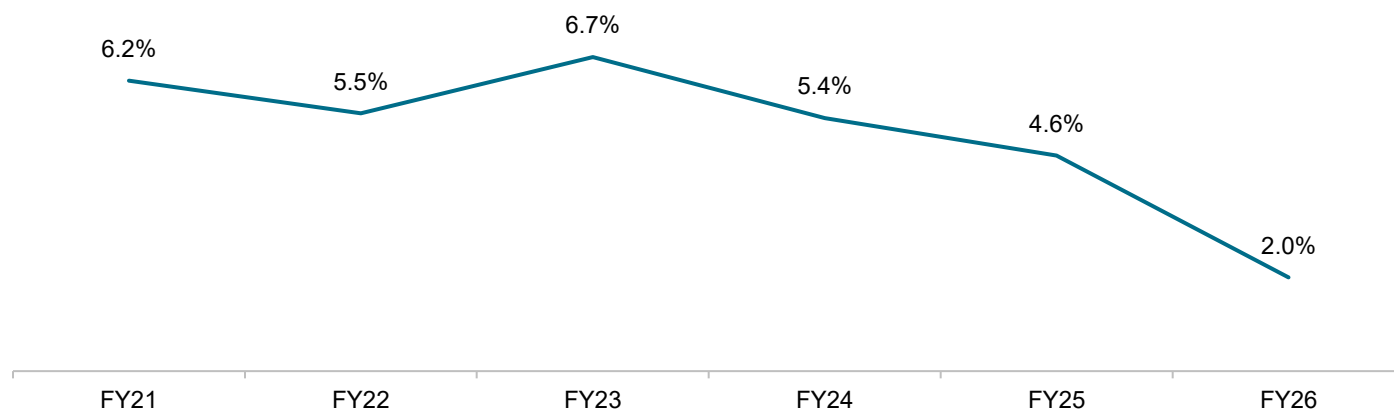
Monetary indicators

Consumer Price Index inflation trend

India's inflation trajectory has witnessed considerable fluctuations in recent years, primarily influenced by movements in food prices, commodity costs and global supply-chain conditions. CPI inflation remained around 5-6% between FY21 and FY22 before rising to 6.7% in FY23 due to elevated food inflation, higher global energy prices and persistent supply-side pressures. Thereafter, inflation moderated to 5.4% in FY24 and 4.6% in FY25 as supply conditions improved and policy measures helped contain price volatility.

Inflation declined further to 2.0% in FY26, supported by easing food prices, lower commodity inflation and stable core inflation. The moderation in inflation has strengthened household purchasing power, supported consumption demand and reduced pressure on business operating costs. A stable inflation environment is particularly beneficial for steel-consuming sectors such as construction, infrastructure, automobiles and capital goods, as it improves investment sentiment and demand visibility across the industrial value chain.

CPI inflation trend

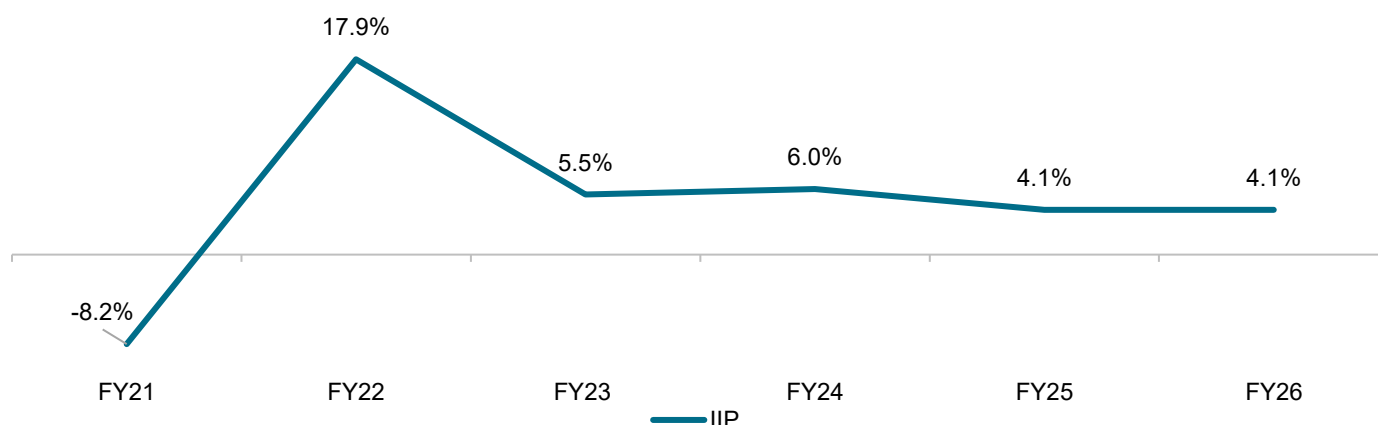


Source: NSO, Ministry of Industry and Commerce, Crisil Intelligence

Index of Industrial Production (IIP) trend

India's Index of Industrial Production (IIP) averaged 5.07% between fiscals 2021 and 2023, rising thereafter to 6.0% in fiscal 2024, led by a strong pick-up in the manufacturing of electrical equipment and basic metals, with an uptick in the consumer durables sector supporting the print. In fiscal 2025, however, IIP growth slowed to 4.1% primarily because of a slowdown in on-year growth in the manufacturing sector's GVA, and, thereafter, remaining stable in fiscal 2026.

IIP trend



Source: NSO, Ministry of Industry and Commerce, Crisil Intelligence

Repo rate changes

Particulars	May-22-2020	May-06-2022	Jun-08-2022	Aug-05-2022	Sep-30-2022	Dec-07-2022	Feb-08-2023	Feb-07-2025	Apr-09-2025	Jun-06-2025	Dec-05-2025
Repo Rate (%)	4	4.4	4.9	5.4	5.9	6.25	6.5	6.25	6	5.5	5.25
Change (%)	-0.4	0.4	0.5	0.5	0.5	0.35	0.25	-0.25	-0.25	-0.5	-0.25

Source: Crisil Intelligence, RBI

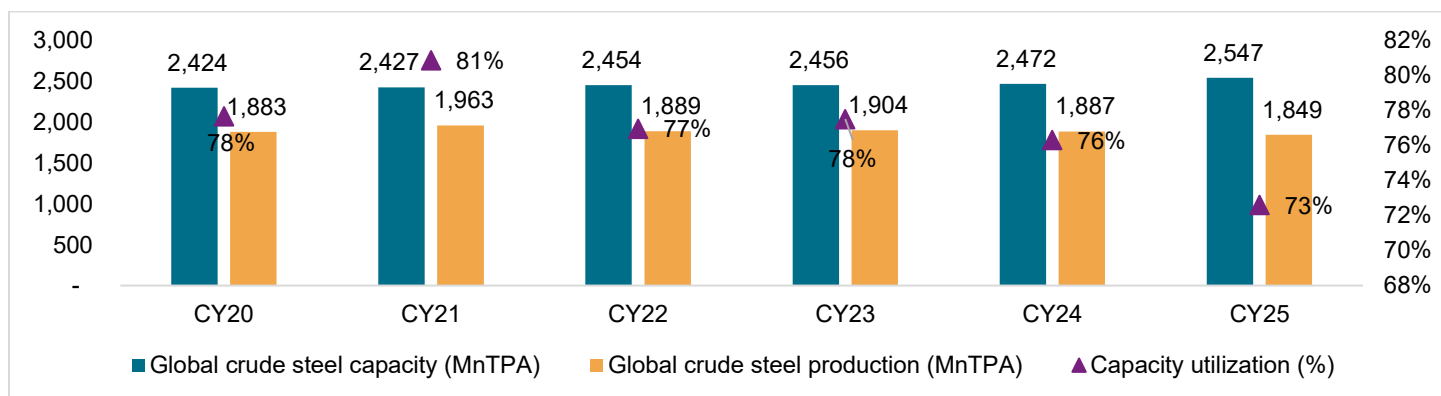
The Reserve Bank of India (RBI) has played a critical role in balancing economic growth and inflation management through calibrated monetary policy actions. As inflationary pressures intensified globally and domestically, the RBI shifted towards monetary tightening, increasing the repo rate from 4.0% in May 2022 to 6.5% by February 2023. Despite higher borrowing costs, India's economy continued to exhibit strong growth momentum, reflecting the strength of domestic demand and investment activity.

Subsequently, improving inflation dynamics allowed the RBI to gradually reduce policy rates, bringing the repo rate down to 5.25% by December 2025. The easing cycle is expected to support credit growth, private investment and consumer spending, while also benefiting capital-intensive sectors such as manufacturing, infrastructure, housing and steel.

Global steel industry overview

Global crude steel capacity and production

Global crude steel markets witnessed divergent growth trends during CY20–CY25, with India emerging as one of the fastest-growing major steel-producing nations. While global crude steel production remained broadly stable at around 1.8–1.9 billion tonnes during the period, India's crude steel production increased from 100.3 MnTPA in CY20 to 164.9 MnTPA in CY25, registering a CAGR of 10.5%. The strong growth in India was supported by rising infrastructure investments, manufacturing expansion, urbanization and increasing domestic steel consumption.



Note: CY: calendar year; MnTPA: million tonnes per annum

Source: Crisil Intelligence, World Steel Association

Despite continued additions in global steelmaking capacity, global crude steel production growth remained subdued during the period, largely due to production curtailments in China, the world's largest steel producer, amid weaker domestic demand, profitability pressures and evolving trade dynamics. In addition, higher interest rates, moderation in manufacturing and construction activity in certain regions, and geopolitical disruptions affecting raw material and energy supply chains contributed to relatively stable global crude steel production levels during the period.

Country-wise crude steel production trend (MnT) and % share in global crude steel production

Country	CY20		CY21		CY22		CY23		CY24		CY25		CAGR (CY20-25)
	Prod. (MnTPA)	Share (%)	Prod. (MnTPA)	Share (%)	Prod. (MnTPA)	Share (%)	Prod. (MnTPA)	Share (%)	Prod. (MnTPA)	Share (%)	Prod. (MnTPA)	Share (%)	
China	1,064.7	56.5%	1,035.2	52.7%	1,019.1	53.9%	1,028.8	54.0%	1,005.1	53.3%	960.8	52.0%	-2.0%
India	100.3	5.3%	118.2	6.0%	125.4	6.6%	140.8	7.4%	149.4	7.9%	164.9	8.9%	10.5%
Japan	83.2	4.4%	96.3	4.9%	89.2	4.7%	87.0	4.6%	84.0	4.5%	80.7	4.4%	-0.6%
US	72.7	3.9%	85.8	4.4%	80.5	4.3%	81.4	4.3%	79.5	4.2%	82.0	4.4%	2.4%
Russia	71.6	3.8%	77.0	3.9%	71.7	3.8%	76.0	4.0%	71.0	3.8%	67.8	3.7%	-1.1%
South Korea	67.1	3.6%	70.4	3.6%	65.8	3.5%	66.7	3.5%	63.6	3.4%	61.9	3.3%	-1.6%

Source: Crisil Intelligence, World Steel Association

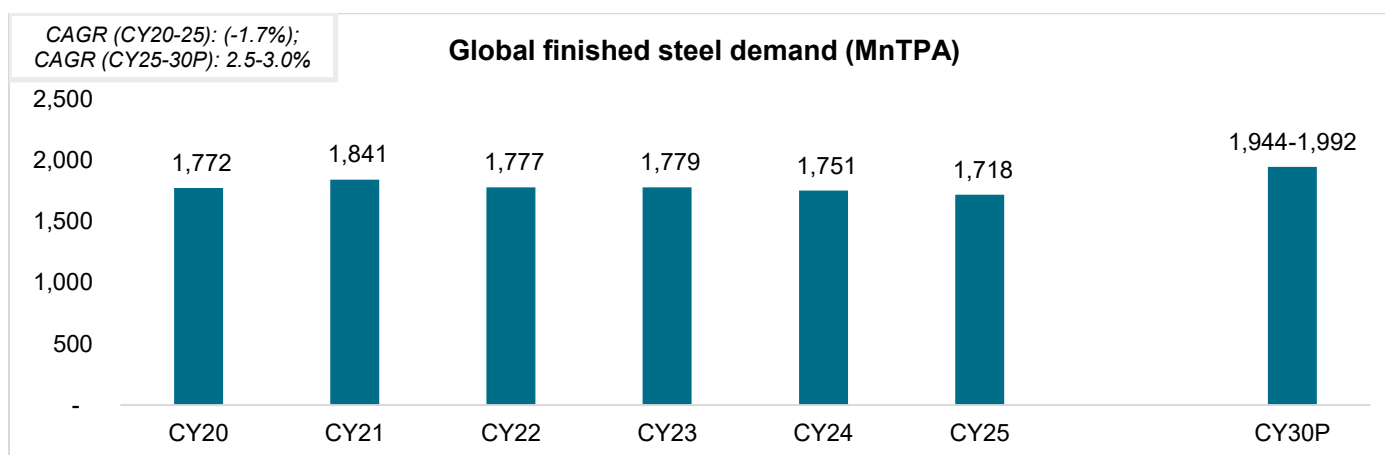
MnT: million tonnes per annum

Amid decreasing production levels in China, Russia, and South Korea and a near-flat production growth in Japan; India stood out by recording a crude steel production volume CAGR of over 10.0% between 2020 and 2025. This high growth in

India's crude steel production volume is attributed to strong growth in domestic steel demand owing to Indian government's strong push for infrastructure development and an increased demand from housing, automobile, energy, research and development, and capital goods sectors.

Global finished steel demand (CY 2020-2030)

Global finished steel demand remained supported by strong consumption growth in emerging economies, particularly India, which continued to outperform major steel-consuming nations owing to infrastructure development, urbanization and manufacturing expansion. While global demand remained largely stable at around 1.7–1.8 billion tonnes during CY20–CY25, growth was constrained by weaker steel consumption in China amid its property sector downturn, along with the impact of elevated interest rates and geopolitical uncertainties on construction and industrial activity. Nevertheless, improving demand across emerging markets and continued investments in infrastructure and manufacturing are expected to support a gradual recovery in global finished steel demand over the medium term.



P – projected; E- Estimated; MnTPA: million tonnes per annum

Source: Crisil Intelligence, World Steel Association

Going forward, the global demand for finished steel is expected to log a CAGR of 2.5-3.0% between CY 2025-2030P. Global steel demand is projected to contract by around 1.0% in 2026, primarily owing to weaker demand in China. India and a few Southeast Asian countries are expected to lead growth, with India's demand anticipated to rise by 7.0-9.0%. This growth will be driven by infrastructure spending and industrial activity. Government spending on infrastructure and export of industrial products will remain a key monitorable due to the commodity price volatility and uncertainty around gas and other fuel availability.

The global steel industry faces significant challenges, including overcapacity and tariff-based restrictions. Nevertheless, in the long term, emerging economies such as India and ASEAN nations are expected to drive demand growth, offsetting China's declining market share.

Global steel trade dynamics

Steel export volume by product categories (MnTPA)

Category	2020	2021	2022	2023	2024	2025
Semi-finished Steel	56.9	72.8	52.9	61.7	61.9	71.2
Long Products	94.7	110.1	96.3	98.4	101.7	106.2
Flat Products	195.5	239.3	211.1	224.4	241.8	234.4

Tubes & Pipes	32.5	35.5	35.4	37.9	39.1	39.9
Other Steel Products	2.7	3.3	3.4	3.5	3.6	3.6
Total	382.3	461.0	399.1	425.9	448.1	455.3

Source: Crisil Intelligence, World Steel Association

MnTPA: million tonnes per annum

Note: Other Steel Products include steel castings, steel forgings, Wheels (forged and rolled) and axles

Global steel trade demonstrated resilience during CY22–CY25, with traded steel volumes recovering from 399.1 MnTPA in 2022 to 455.3 MnTPA in 2025 following the normalization of manufacturing activity, infrastructure investments and construction demand across major economies. While trade volumes were impacted in 2022 by macroeconomic uncertainties, supply-chain disruptions and weaker industrial activity, subsequent recovery helped global steel trade approach pre-slowdown levels. Flat products remained the largest traded category, accounting for more than half of total traded volumes, followed by long products and semi-finished steel.

Flat product exports increased from 211.1 MnTPA in 2022 to 234.4 MnTPA in 2025, supported by demand from automotive, engineering, consumer durables and construction sectors. Long product exports rose from 96.3 MnTPA to 106.2 MnTPA during the same period, reflecting continued investments in infrastructure and urban development. Meanwhile, exports of semi-finished steel products increased significantly from 52.9 MnTPA to 71.2 MnTPA, supported by the globalization of steel value chains, while tubes and pipes exports grew from 35.4 MnTPA to 39.9 MnTPA owing to demand from energy, infrastructure and industrial sectors. Overall, the composition of global steel trade underscores the continued importance of manufacturing, construction and infrastructure activities in driving international steel demand.

Top steel exporting countries (MnTPA)

Country/Region	2020	2021	2022	2023	2024	2025
China	51.4	66.2	68.1	94.3	117.1	133.6
Japan	29.8	33.8	31.7	32.2	31.2	29.8
South Korea	27.6	26.8	25.5	27	28	27.9
European Union (27)	22.6	26	26	26	27.8	20.5
Germany	21.2	23.9	22.3	22.5	22.6	20.9
Türkiye	18.5	22.1	18	12.7	17	17.5
Russia	31.5	32.6	17.9	13.9	12.3	15.2
Italy	14.9	17.2	16	16.1	15	14.3
Belgium	12.9	15.5	14.7	14.6	15.4	14.7
Brazil	10.6	11.5	12.1	12.3	10.3	11
India	17.1	20.4	12.1	9.9	9.7	9.9
France	110.2	12.6	11.5	9.9	9.8	9.7
Vietnam	7.8	11.2	7.4	8.6	13.4	11.1
Indonesia	*	9.9	9.2	9.6	11.4	11.6
Taiwan, China	10.0	10.8	9.9	9.5	9.2	8.5
Others	53.0	36.3	33.2	48	45.6	44.3

Source: Crisil Intelligence, World Steel Association

MnTPA: million tonnes per annum; *: included in others for 2020

Note: Others include Netherlands, Spain, Malaysia, United States, Iran

Global steel exports during CY20–CY25 were increasingly influenced by China's expanding presence in international markets. China's steel exports more than doubled from 51.4 MnTPA in CY20 to 133.6 MnTPA in CY25, reflecting weak domestic demand, particularly from the property sector, and the country's substantial excess steelmaking capacity. The sharp increase in Chinese exports added pressure on global steel prices and export markets, prompting several countries, including India, to adopt trade measures such as safeguard duties to protect domestic producers from import surges and pricing pressure.

In contrast, India's steel exports declined from 17.1 MnTPA in CY20 to 9.9 MnTPA in CY25. The decline was primarily driven by the temporary export duty imposed in May 2022 and strong domestic demand from infrastructure, construction and manufacturing sectors, which encouraged producers to prioritize local markets. Overall, global steel trade continues to be shaped by China's export strategy, regional demand-supply imbalances and evolving trade policies, with growing focus on safeguarding domestic industries against import-driven market disruptions.

Top steel importing countries (MnTPA)

Country/Region	2020	2021	2022	2023	2024	2025
European Union (27)	32.6	48.1	48.1	39.2	42.8	43.7
United States	19.9	29.7	28.9	26.4	27.3	23.9
Germany	18.2	23.3	21	18.7	18.3	20.2
Italy	15.5	20.8	20.2	18.7	18.5	20.4
Türkiye	12.5	16.2	17.4	18	19.7	19.8
China	37.9	27.8	17.1	11	8.7	NA
South Korea	11.5	14.1	13.7	15	14.2	12.6
Thailand	13.1	15.7	13.4	13.7	13.5	15.5
Mexico	9.7	15.1	10.9	17.5	17.6	14.8
Vietnam	13.7	13	11.5	14	17.2	13.5
Indonesia	9.3	10.2	11.2	12.4	12.8	13
Belgium	10.4	13.7	12.5	11.6	11.9	12.6
France	11.8	13.3	12	11.8	11.2	11
Poland	10.8	13.7	12	11.6	11.5	12.6
India	NA	NA	NA	9.8	11.5	10.4
Others	44.2	47.3	44.2	35.3	47.6	57.2

Source: Crisil Intelligence, World Steel Association

MnT: million tonnes per annum

Note: Others include Netherlands, Spain, Canada, Taiwan, United Arab Emirates, Philippines, Saudi Arabia

The European Union and the United States remained the largest steel-importing regions during CY21–CY25, reflecting their continued reliance on international trade to supplement domestic production and meet demand from construction, automotive, machinery and manufacturing sectors. Steel imports into the European Union increased from 39.2 MnTPA in CY23 to 43.7 MnTPA in CY25, while the United States imported 23.9 MnTPA in CY25. Major European economies such as Germany, Italy, Belgium, France and Poland continued to rank among the leading steel importers, highlighting the integrated nature of regional steel supply chains and the importance of steel in downstream industrial activities.

Emerging Asian economies also remained significant steel importers, supported by rapid industrialization, urbanization and infrastructure development. Countries such as Indonesia, Vietnam, Thailand and India recorded substantial import

volumes during the review period, with Indonesia's imports increasing from 9.3 million tonnes in CY20 to 13.0 million tonnes in CY25. Overall, global steel import demand continues to be driven by infrastructure, construction and manufacturing growth in developing economies, while mature markets in Europe and North America rely on imports to balance domestic demand and access specialized steel products. Going forward, global trade flows are expected to be influenced by regional capacity additions, trade policies, supply chain diversification and evolving consumption patterns across key end-use sectors.

Key end-use sector driving global steel demand in 2025

End-use sector	Share of global steel use (%)	Steel consumption (MnTPA)
Building & Infrastructure	52%	893.5
Mechanical Equipment	16%	274.9
Automotive	12%	206.2
Metal Products	10%	171.8
Other Transport*	5%	85.9
Electrical Equipment	3%	51.5
Domestic Appliances	2%	34.4
Total Steel Use	100%	1,718.2

Source: Crisil Intelligence, World Steel Association

MnTPA: million tonnes per annum

Note: Others Transport* include Railway, Shipping

Global steel consumption continues to be dominated by the building and infrastructure sector, which accounted for approximately 52.0% of total steel demand in 2025, equivalent to nearly 893.5 MnTPA. The sector's leading share reflects the extensive use of steel in residential and commercial construction, transportation networks, industrial facilities, utilities and energy infrastructure. Mechanical equipment and metal products collectively accounted for around 26.0% of global steel consumption, highlighting the importance of manufacturing, industrial machinery, capital goods and fabricated metal products in driving steel demand.

The automotive sector remained another key consumer, accounting for approximately 12.0% of global steel demand in 2025, while transportation applications contributed an additional 5.0%. Other sectors, including electrical equipment and domestic appliances, together represented around 5.0% of total consumption. Overall, the diversified end-use profile of steel underscores its critical role in supporting infrastructure development, industrial production, mobility and economic growth across the global economy.

Impact of macro forces on global steel market

- **Geopolitical uncertainties:** The impact of geopolitical uncertainties on the steel industry is highly significant. For example, this can lead to supply chain disruptions, increased transportation risks and costs, volatility in raw material and consumable prices, uncertainty on the steel makers' and end-use industries' capital expenditure plans, reduction in demand from key end-use sectors, and energy price shocks.
- **Inflation:** Inflation increases the cost of key steelmaking inputs such as iron ore, coal, energy and logistics, putting pressure on steel producers' margins, particularly when weak demand limits their ability to pass on higher costs to customers. Sustained inflation may also slow capacity expansion by increasing interest rates and financing costs. For example, a sharp rise in natural gas prices in Europe during 2022 led to production cutbacks at several steel plants, while energy-rich regions were relatively better positioned to maintain stable industrial output.

- Trade policies and tariffs: Trade policies and tariffs can significantly influence global steel trade flows by redirecting exports to alternative markets, creating pricing pressures and increasing market uncertainty. Higher tariffs and retaliatory measures can adversely impact global economic growth and steel demand, while trade protection measures such as safeguard and anti-dumping duties help protect domestic producers from unfair imports and support the development of local steel industries.
- Environmental regulations: Increasing focus on environmental regulations such as the regulations on carbon emissions, air pollution, water usage, etc, force steel makers to make investments in emission control equipment, green technologies, and monitoring systems. This in-turn leads to an increase in capital and operating costs for the companies.

In general, developed economies follow stricter environmental regulations making their steel more expensive, thus creating trade imbalances. Policies such as carbon border adjustment mechanism (CBAM) are promoting green steel manufacturing as the steel makers across the globe wish to remain competitive in export markets. CBAM, which will impose carbon tariffs on imported steel from 2026, will significantly impact the steel exporters from countries like China and India which majorly manufacture steel through coal-heavy processes. As per CBAM, considering a typical blast furnace – basic oxygen furnace route of hot-rolled (HR) coil manufacturing which emits approximately 2.1 tonnes of CO₂ per tonne of HR coil production and an average 80 euros of carbon tax per tonne of CO₂ emissions, exporting one tonne of HR coil to the Europe Union will attract a carbon tax of approximately 168 Euros.

Further, any policies aiming to control carbon emissions will help the steel producers gain market access in those geographies where there are strict compliance norms with respect to import and use of sustainable steel. For example, India's Carbon Credit Trading Scheme, which aims to reduce greenhouse gas (GHG) emissions through carbon pricing, will help Indian steel producers gain customers in CBAM compliant European Union countries.

In addition to traditional macroeconomic drivers, several structural trends are reshaping the global steel industry. The ongoing China+1 strategy, under which global manufacturers are diversifying supply chains beyond China, is supporting investments in manufacturing and infrastructure across emerging economies, particularly in Asia. At the same time, the growing focus on decarbonization and green steel production is driving investments in energy-efficient technologies, scrap-based steelmaking and low-carbon production processes. The transition towards electric vehicles (EVs) is expected to increase demand for advanced and high-strength steel grades used in automotive applications, while the rapid expansion of renewable energy infrastructure, including solar, wind and transmission networks, is creating additional demand for steel-intensive products. Collectively, these structural shifts are expected to influence steel demand patterns, investment decisions and competitive dynamics across global steel markets over the medium to long term.

Global technological advancements and sustainability initiatives in steel manufacturing

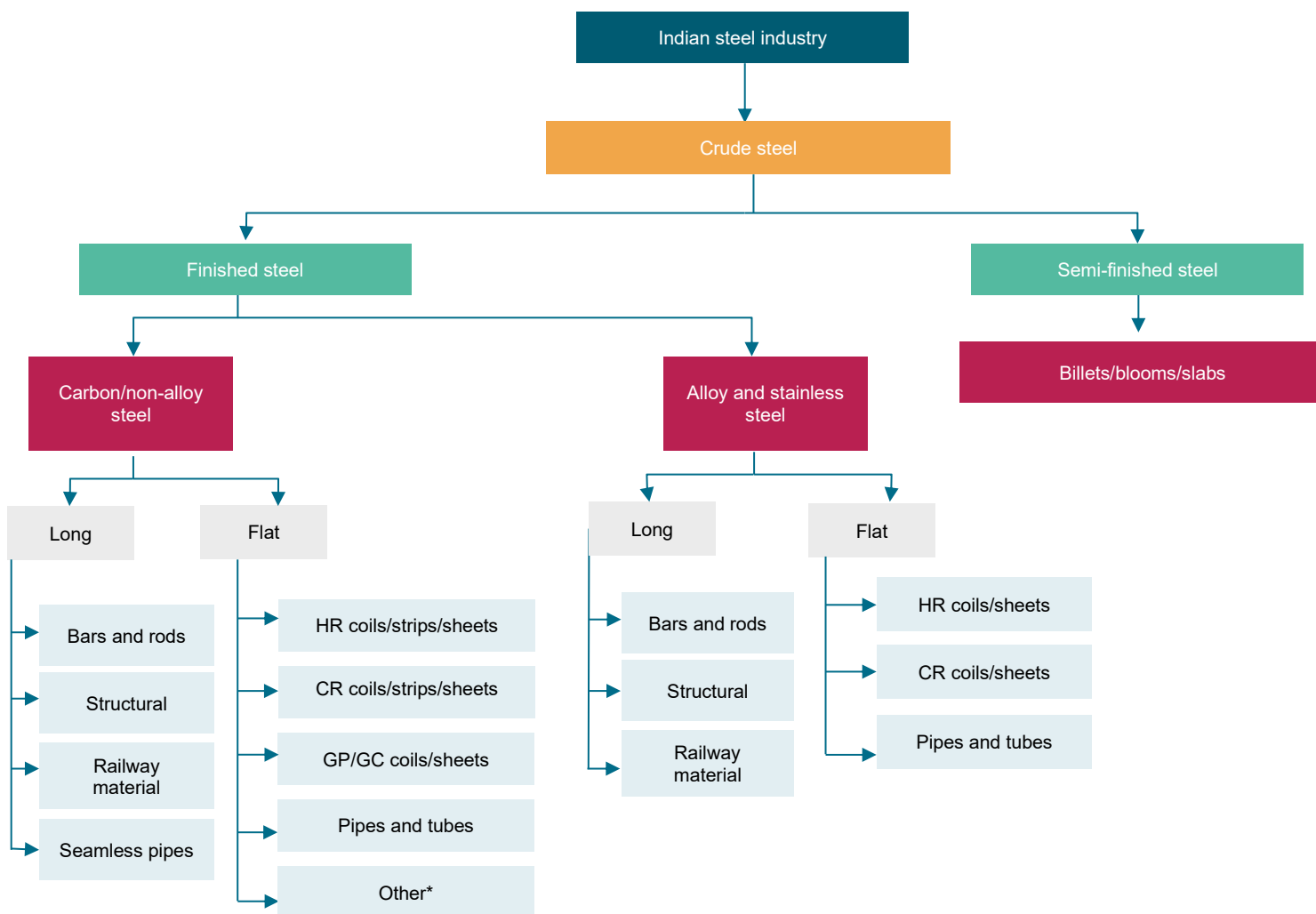
The global steel industry is increasingly focused on improving operational efficiency, reducing carbon emissions and enhancing resource utilization through the adoption of cleaner production technologies. While the blast furnace-basic oxygen furnace (BF-BOF) route continued to account for approximately 69.4% of global crude steel production in 2025, electric arc furnace (EAF) technology represented around 30.3% of output, reflecting the gradual transition towards less carbon-intensive steelmaking. The increasing use of recycled steel scrap in EAF production supports circular economy practices and reduces dependence on virgin raw materials.

Decarbonization remains a key priority for steel producers, driving investments in low-carbon technologies, direct reduced iron (DRI) production and process innovation. Global DRI production increased from 117.9 MnTPA in 2021 to 153.0 MnTPA in 2025, highlighting its growing importance in supporting cleaner steelmaking routes. In parallel, steel companies continue to invest in product innovation, process optimization and sustainability initiatives, with higher adoption of scrap-

based steelmaking, improved material efficiency and development of low-emission technologies expected to enhance the industry's long-term competitiveness and environmental performance.

Overview of India's steel industry

Structure of the industry



*Other includes prime plates, hot strip mill plates, colour-coated coils/sheets, electrical coils/sheets, tin plates, tin-free steel, tin mill black plates, pipes, etc.

HR: hot rolled; CR: cold rolled

Source: Crisil Intelligence, industry

Note: Pipes and tubes included under both flat carbon/non-alloy steel segment and flat alloy and stainless-steel segments; they include hollow section pipes and welded pipes. Further, seamless pipes under long segment also include hollow section

Steel is an alloy primarily composed of iron and carbon, with small amounts of other elements. It is one of the most versatile and widely used materials globally due to its strength, durability and recyclability. The steel industry plays a critical role in economic development, supporting the infrastructure, construction, automotive and manufacturing sectors. It can be classified into crude steel, semi-finished steel and finished steel. Crude steel is the raw material produced in furnaces, serving as the foundation for further processing. Semi-finished steel includes intermediate products such as billets, blooms and slabs, which are inputs for rolling mills. Finished steel is the final product, categorised into carbon/non-alloy steel and alloy and stainless steel. Finished steel is further divided into long products (e.g., bars, rods, structural

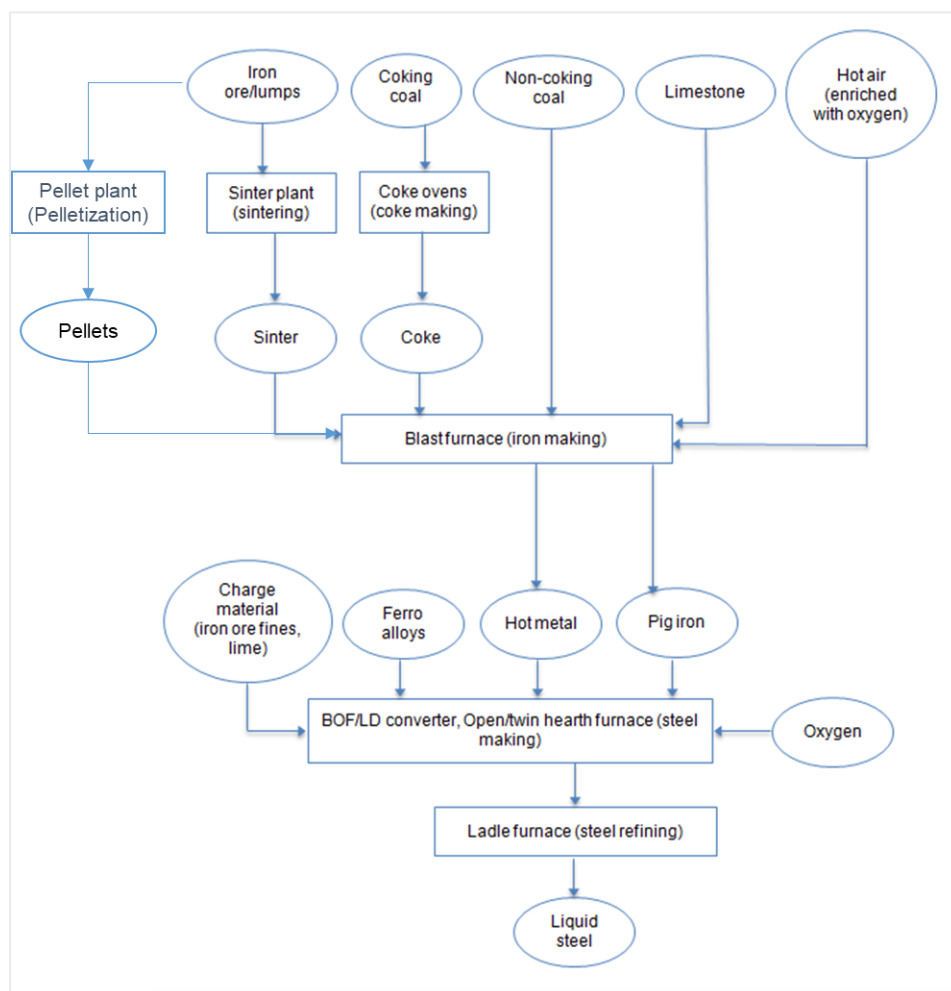
materials, railway components) and flat products (e.g., hot-rolled (HR) coils/sheets, cold-rolled (CR) coils/sheets, galvanised sheets). Alloy and stainless steel products offer enhanced properties for specialised applications. Flat products are widely used in automotives and appliances, while long products dominate construction and infrastructure projects.

Manufacturing process for steel products

There are three popular processes to produce crude steel from raw materials – basic oxygen furnace (BOF), electric arc furnace (EAF), and induction furnace (IF). Steel production routes differ significantly in terms of capital requirements, raw material flexibility and operating scale. The BF-BOF route is typically deployed in large integrated steel plants and offers economies of scale, but requires substantially higher capital investment, estimated at approximately ₹8,400–10,000 crore per MnTPA of capacity, while relying primarily on iron ore and coking coal as key inputs. In comparison, EAF-based steelmaking is relatively less capital-intensive, requiring around ₹3,500–5,000 crore per MnTPA, and offers greater flexibility through the use of steel scrap and DRI as feedstock. Induction Furnace (IF) units generally operate at a smaller scale with lower capital requirements and are widely used in secondary steel production, although they are typically more suitable for long products and offer limited flexibility in producing specialized steel grades. The growing focus on decarbonization, faster project execution and increasing scrap availability is expected to support greater adoption of EAF-based steelmaking over the long term.

In BF/BOF, iron ore and coking coal are fed into a blast furnace (BF) to produce hot metal. The BOF converts the hot metal into crude steel.

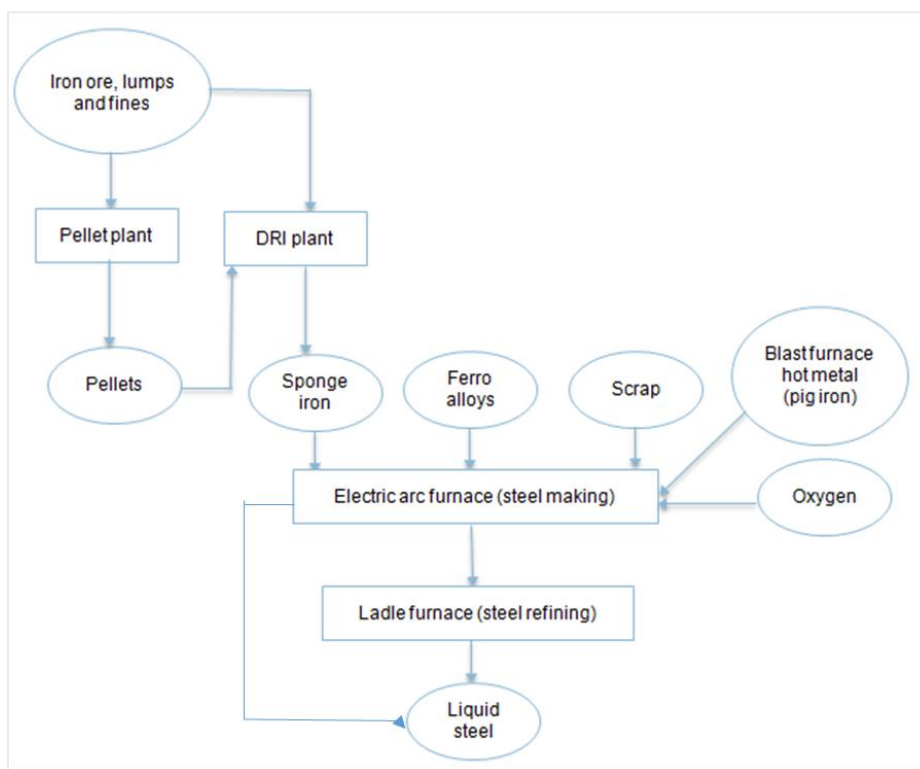
BF/BOF process



Source: Crisil Intelligence

Steel scrap, pig iron or sponge iron is used as raw material in an EAF and IF. The raw material is melted using heat generated with the aid of an electric arc produced by graphite electrodes.

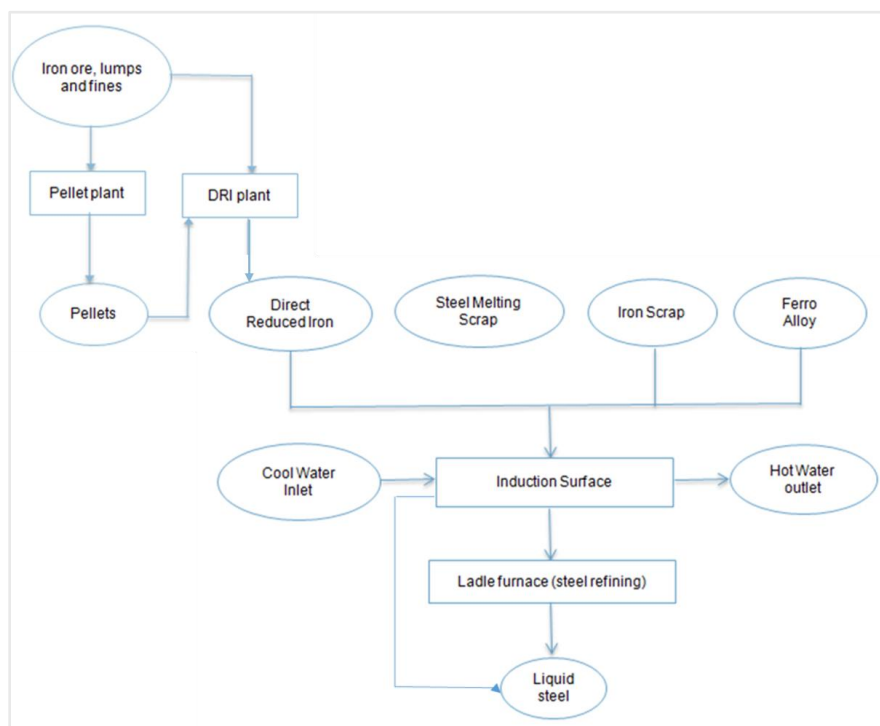
EAF process



Source: Crisil Intelligence

Further in the IF process, heat is generated through electromagnetic induction in an electrically conductive medium (usually a metal).

IF process



Source: Crisil Intelligence

India's position in global steel market

Country/Region	Steel Demand in 2025 (MnTPA)	Share of Global Demand (%)
China	796	46.30%
India	159.8	9.30%
United States	90.9	5.30%
Middle East	61.8	3.60%
Russia	37.6	2.20%
Germany	29.2	1.70%
Vietnam	28.8	1.70%
Brazil	26.8	1.60%
Japan	48	2.80%
South Korea	43.6	2.50%
Others	395.7	23.00%
World	1,718.20	100.00%

Source: Crisil Intelligence, World Steel Association

MnTPA: million tonnes per annum

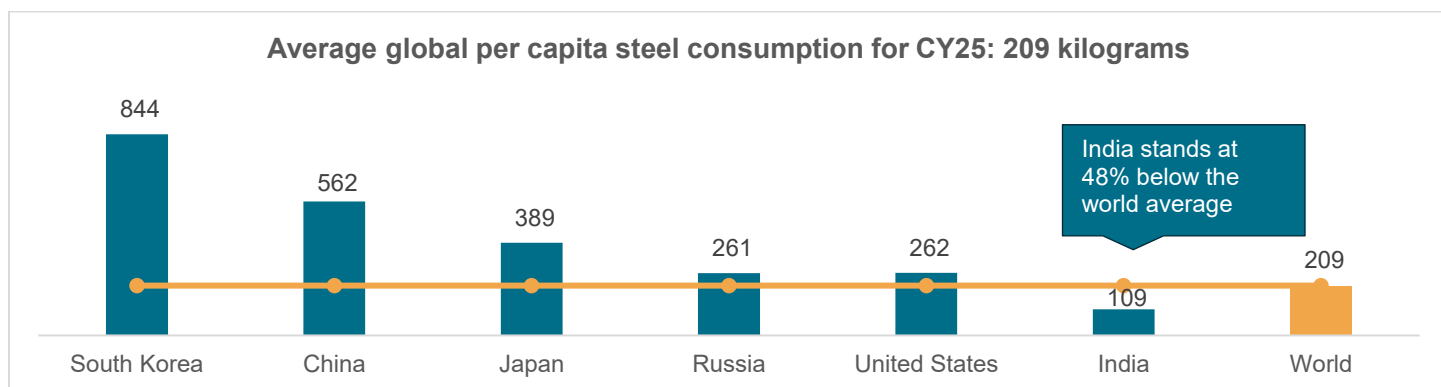
Note: Demand values for all the above mentioned countries are for calendar year 2025.

India has strengthened its position as the world's second-largest steel-consuming nation, with finished steel demand estimated at 159.8 MnTPA in 2025, accounting for approximately 9.3% of global steel demand of 1,718.2 MnTPA. Although China continues to dominate global steel consumption with demand of 796.0 MnTPA, equivalent to nearly 46% of global demand, India's share has been steadily rising on the back of robust economic growth, accelerated infrastructure development and increasing industrial activity.

Among major steel-consuming countries, India remains the fastest-growing large market. The country's steel demand significantly exceeds that of developed economies such as the United States (90.9 MnTPA), Japan (48.0 MnTPA) and Germany (29.2 MnTPA). Rising investments in transport infrastructure, housing, renewable energy, commercial real estate and manufacturing are supporting growing steel intensity across the Indian economy.

India's growing importance within the global steel industry is further reflected in its increasing contribution to global steel demand growth. While several mature economies are witnessing relatively flat demand trends and China is experiencing structural moderation in steel consumption, India continues to benefit from favourable demographics, urbanization and government-led capital expenditure. Consequently, India is expected to remain one of the key drivers of global steel demand over the medium term and further strengthen its position in the international steel market.

Per capita steel consumption in key countries (in kilograms)



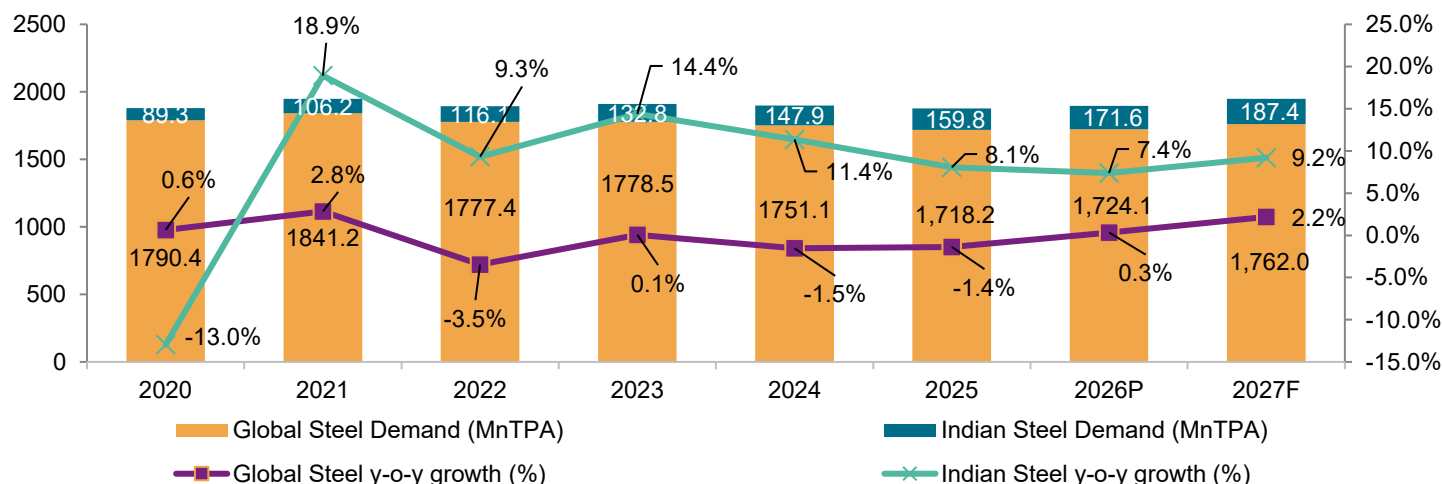
Source: World Steel Association, World Bank

India's per capita steel consumption remains significantly below the global average and major steel-consuming economies, indicating substantial potential for future demand growth. In CY25, India's per capita steel consumption stood at approximately 109 kg, compared with the global average of 209 kg, while countries such as South Korea, China, Japan, the United States and Russia reported significantly higher consumption levels ranging from 261 kg to 844 kg per capita. This gap highlights the considerable headroom for growth in India's steel consumption as urbanization, infrastructure development and industrialization continue to accelerate.

The relatively low per capita consumption in India reflects the country's developing stage of infrastructure creation, urbanization and industrialization. However, it also indicates significant headroom for future growth as rising incomes, rapid urban development, expanding transportation networks, increasing housing demand and continued investments in manufacturing and infrastructure drive steel usage across the economy. Government initiatives such as PM Gati Shakti, the National Infrastructure Pipeline, Bharatmala, Sagarmala and various housing programmes are expected to further support steel-intensive investments over the medium to long term.

As India's economy continues to expand and per capita income levels improve, steel consumption is expected to increase in line with growing demand from construction, infrastructure, automobiles, engineering and capital goods sectors. Given the substantial gap between India's current per capita steel consumption and that of both the global average and other major economies, the country is well positioned to remain one of the fastest-growing steel markets globally, providing significant long-term opportunities for domestic steel producers.

Growth in Indian steel demand vis-à-vis global steel demand



Source: Crisil Intelligence, World Steel Association

Note: Years correspond to calendar years. Global Steel Demand numbers include Indian Steel

MnTPA: million tonnes per annum; P: Projected; F: Forecast

India has consistently outperformed the global steel market in terms of demand growth, driven by rapid urbanization, infrastructure development, rising manufacturing activity and supportive government policies. Indian steel demand increased from 89.3 MnTPA in 2020 to 147.9 MnTPA in 2024, registering significantly higher growth rates than the global market during most years of the period. In contrast, global steel demand remained relatively stable at around 1.75-1.85 billion tonnes, reflecting slower growth in mature economies and periodic weakness in key markets such as China and Europe. The divergence highlights India's emergence as one of the fastest-growing steel-consuming markets globally.

Looking ahead, Indian steel demand is projected to increase from approximately 159.8 MnTPA in 2025 to 187.4 MnTPA by 2027, supported by continued investments in infrastructure, housing, transportation, renewable energy and manufacturing. Demand growth is expected to remain robust at 7-9% annually, significantly exceeding the forecast growth rate for global steel demand, which is expected to remain largely stable with low single-digit growth. Consequently, India is expected to remain a key growth driver for the global steel industry over the medium term.

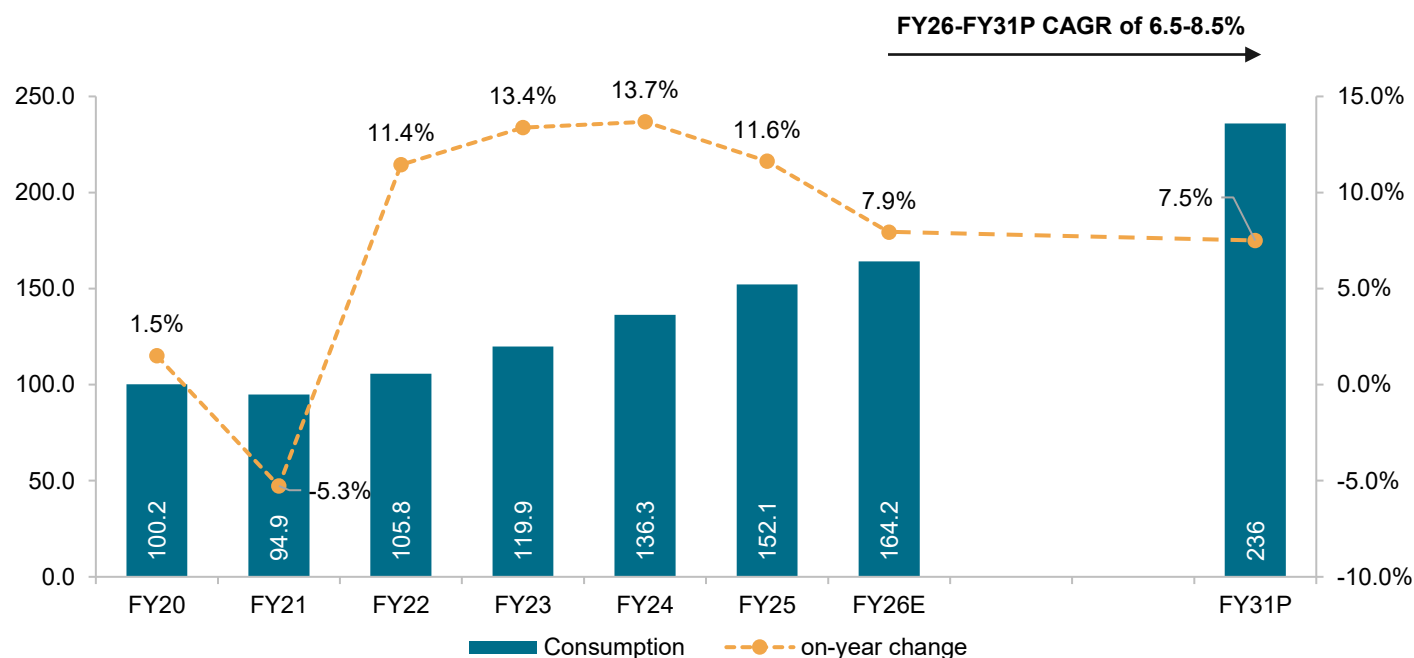
The sustained expansion in domestic steel consumption presents a favorable demand environment for integrated steel manufacturers such as B.S. Sponge. Rising steel intensity across infrastructure and industrial projects, coupled with increasing government expenditure and private sector investments, is expected to support long-term demand for sponge iron, billets, TMT bars, HR coils, pipes and other steel products manufactured by the Company.

Consumption trend of finished steel

The domestic steel demand has logged a significant 11.6% CAGR between fiscals 2022 and 2026. In fiscal 2021, the industry logged a 5.3% on-year decline in demand owing to the pandemic. Demand rebounded in fiscal 2022, growing 11.4% on-year, with a revival of industrial activities, release of pent-up demand and growth inducement in key end-use sectors.

Steel demand rose 7.9% to 164.2 MnTPA in fiscal 2026 from 152.1 MnTPA in fiscal 2025, owing to the aggregate effect of growth in the end-use sectors of steel—such as automobile, infrastructure and construction—and the market volatility faced during the period owing to geopolitical uncertainty. Demand is expected to accelerate to 225-250 MnTPA by fiscal 2031 at a CAGR of 6.5-8.5%.

Domestic steel consumption (in MnTPA)

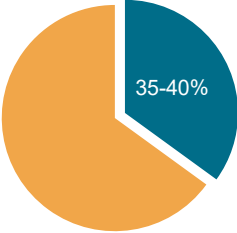
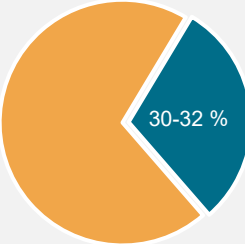
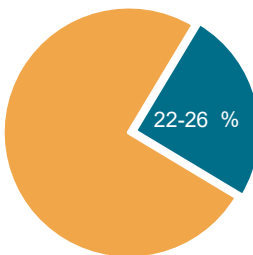
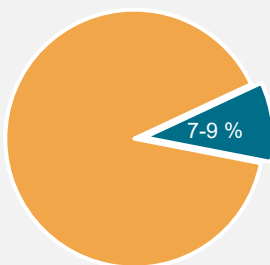


P: Projected

Source: Crisil Intelligence, industry, Joint Plant Committee (JPC)

Building and construction (B&C), infrastructure and engineering, and packaging sectors make up ~90% of the aggregate demand for finished steel; B&C has the largest share. Infrastructure projects, housing and construction sectors are expected to spearhead growth in steel demand between fiscals 2027 and 2031. Projects such as the Pradhan Mantri Awas Yojana (PMAY) and the National Infrastructure Pipeline (NIP) will sustain the growth momentum.

Steel consumption break-up by use

Segment	Share of consumption as of FY26E	Growth in FY22-FY25	Growth in FY26E-FY31P	Application	Demand drivers
Building and construction		11.5%	6–8%	- Reinforced concrete structures - Roofing and cladding - Prefabricated buildings - Doors, windows, staircases	- Affordable housing - Pick-up in rural housing (healthy rural sentiments) - Commercialisation of Tier 3 and Tier 4 cities
Infrastructure		14.5%	8–10%	- Bridges (girders, trusses) - Rail/metro infrastructure - Roads and highways (guardrails, crash barriers) - Airports, ports	- Investment in developing 2,843 km of dedicated freight corridors; ~4,300 km more proposed - Investment of Rs 24.93 thousand crore for urban infrastructure like mass rapid transit system (MRTS)
Engineering and packaging		12%	6–8%	- Industrial machinery - Power equipment (boilers, turbines) - Transmission towers - Earthmoving equipment - Food and beverage cans - Aerosol containers - Paint cans, bottle caps and closures	- Push for sustainability will lead to higher demand for steel - Government initiatives like Atmanirbhar Bharat and PLI schemes increased domestic manufacturing
Automotive		10.8%	6-7%	- Car body panels - Chassis and suspension - Engine and transmission parts - Wheels and bumpers	- Automotive production expected to drive demand growth with demand from cars/utility vehicles growing 1-3% - Tractor demand forecast to rise at a CAGR of 5-7% for fiscal 2026-2031 due to favourable weather and government initiatives - Two-wheeler industry anticipated to grow 7-9% in fiscal 2027 owing to rural market recovery, premiumisation, and GST rationalization

Note: This is not an exhaustive list. Other segments include industries such as capital goods and consumer durables, among others

Source: Crisil Intelligence, industry, JPC

E: Estimated; P: Projected

Infrastructure to drive steel demand

The infrastructure sector is poised to be a significant driver of domestic steel demand; it currently accounts for ~30% of the demand. Over the next five years, this sector is expected to log a CAGR of 8-10%.

Key drivers of infrastructure growth

Some initiatives that are expected to fuel the growth of the infrastructure sector:

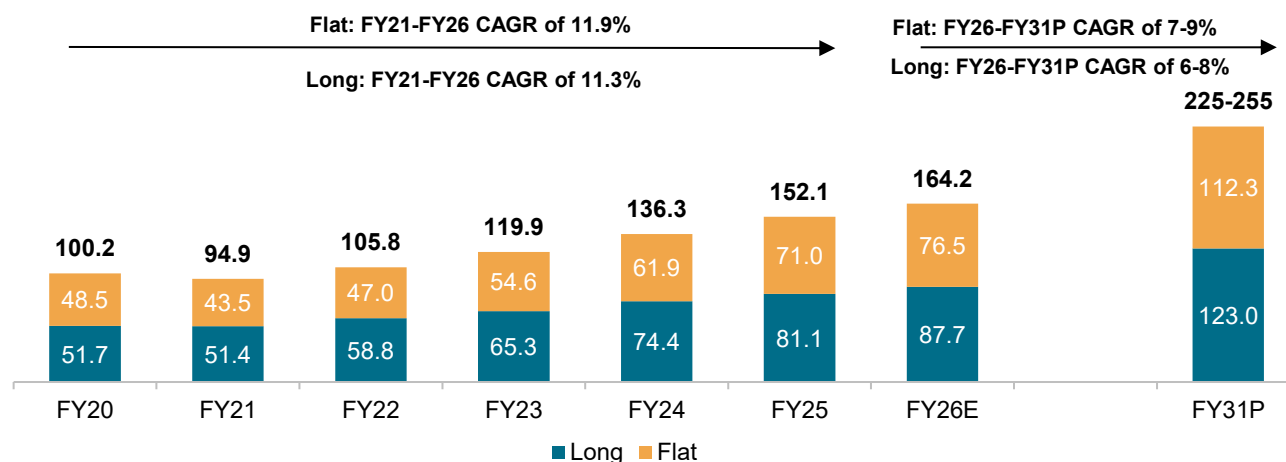
- **Substantial budgetary allocation:** Infrastructure capex budgeted for fiscal 2027 is 17.7% higher than in the previous year, driven by investments in logistics, power and affordable housing. Of the total infrastructure capex, 53% has been allocated for roads, railways, waterways and aviation
- **Bharatmala Pariyojana:** This is a flagship highway development programme aimed at improving road connectivity, freight movement efficiency and logistics competitiveness across the country. Phase I of the programme envisages the development of 34,800 km of highways at an estimated cost of ₹5.35 lakh crore, including economic corridors, inter-corridors, feeder routes, border roads, coastal roads and expressways. As of May 2026, projects covering 26,425 km had been awarded, of which 22,709 km had been completed, reflecting significant progress in enhancing India's transportation infrastructure.
- **Smart Cities project:** Launched in 2015 to improve urban infrastructure and quality of life across 100 cities, the Smart Cities Mission has made significant progress in strengthening urban development. As of May 2025, 7,555 projects (94% of the total 8,067 sanctioned projects) worth approximately ₹1.51 lakh crore had been completed, while the overall investment under the Mission stood at ₹1.64 lakh crore. The programme covers key sectors such as smart mobility, water and sanitation, energy, governance and urban infrastructure, and is expected to continue supporting demand for steel through investments in roads, housing, public utilities, transport systems and other urban infrastructure projects

Steel consumption by category – By product type

Long products: Finished long steel products are typically produced by hot rolling/forging of bloom/billets/ingots into useable shape or sizes. These are normally supplied in straight length or cut length, except wire rods, which are supplied in wound coils. The types of long products include bars and rods (thermo-mechanically treated bars, wire rods and round bars), structural steel (angles, channels, beams, fabricated sections and girders) and railway materials.

Flat products: Flat products are produced from slabs/thin slabs in rolling mills using flat rolls and comprise HR and CR coils and coated products. HR flat products are produced by re-rolling slabs/thin slabs at high temperatures (above 1,000°C) in plate mills or in hot strip mills. CR coils/strips are produced by cold rolling HR coils/strips in cold rolling mills (normally at room temperature). CR coils/strips/sheets are characterised by lower thickness, better/bright finish and specific mechanical/metallurgical properties.

Consumption of long and flat products (MnTPA)



E: Estimated, FY26 value is provisional
Source: Crisil Intelligence, industry, JPC
MntPA: million tonnes per annum

Demand for long steel logged a 11.3% CAGR between fiscals 2021 and 2026, led by growth in infrastructure and in the building and construction sector. Demand for flat steel rose at 11.9% CAGR for the same period. The share of long steel in overall demand for finished steel decreased to ~54% in fiscal 2026 from its high of ~56% in fiscal 2022.

With the resolution of supply chain issues in the automobile segment and an increase in demand in the construction and infrastructure segments, flat steel demand is expected to clock a CAGR of 7-9% between fiscals 2026 and 2031. This would outpace the demand growth of long steel, which is set to log a CAGR of 6-8% in the period owing to positive sentiments in the private housing construction sector and the government's robust push for infrastructure development.

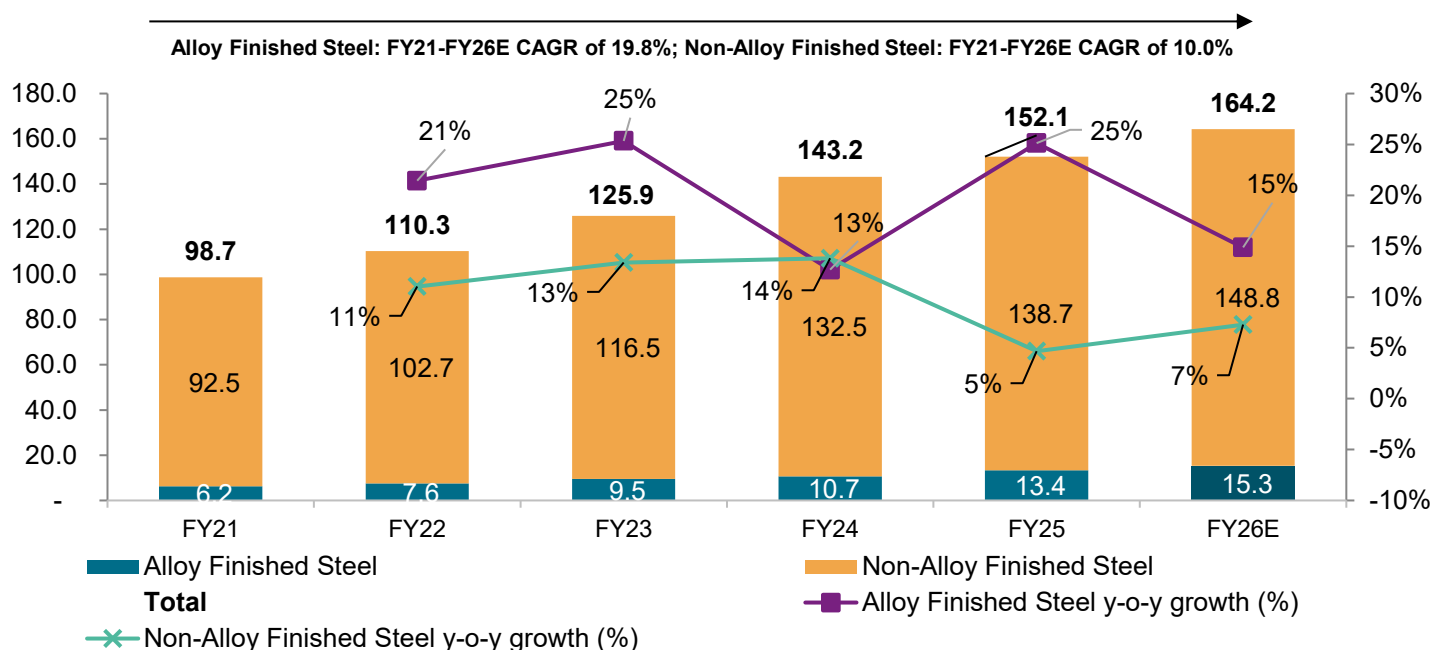
Steel consumption by category – By composition

Alloy steel: Steel that is produced with one or more elements in specified proportions to impart specific physical, mechanical, metallurgical and electrical properties is called alloy steel. Stainless steel is a type of alloy steel.

Alloy/stainless steel is manufactured in different grades, with varying proportions of carbon and other elements. Common elements used to make alloys are manganese, silicon, nickel, lead, copper, chromium, tungsten, molybdenum, niobium and vanadium. Alloy or stainless steel is used in forgings, tools and dies, bearings and fasteners, which are subsequently used by end-use sectors such as automobiles, power, oil and gas, industrial machines, railways/mass rapid transport systems and defence to manufacture products, such as crankshafts, connecting rods, cam shafts, bearings, fasteners, railway carriage wheels, bomb shells, cutting tools, surgical instruments and utensils.

Non-alloy steel: Non-alloy or carbon steel comprises iron and carbon. It has a 91-95% share in India's finished steel production in the past five years). The main components of this steel are carbon, manganese and silicon in proportions of up to 1.70%, 0.90% and 0.30%, respectively. A change in the composition of carbon affects the properties of carbon steel. Steel, by definition, does not contain any alloying element. Non-alloy steel is used in construction, infrastructure, automobiles, consumer durables and other sectors. Popular applications include buildings, bridges, rails, pipelines, body panels for cars, refrigerators and washing machines.

Non-alloy vs alloy steel consumption (MnTPA)



E: Estimated, FY26 values are provisional

Source: Crisil Intelligence, industry, JPC

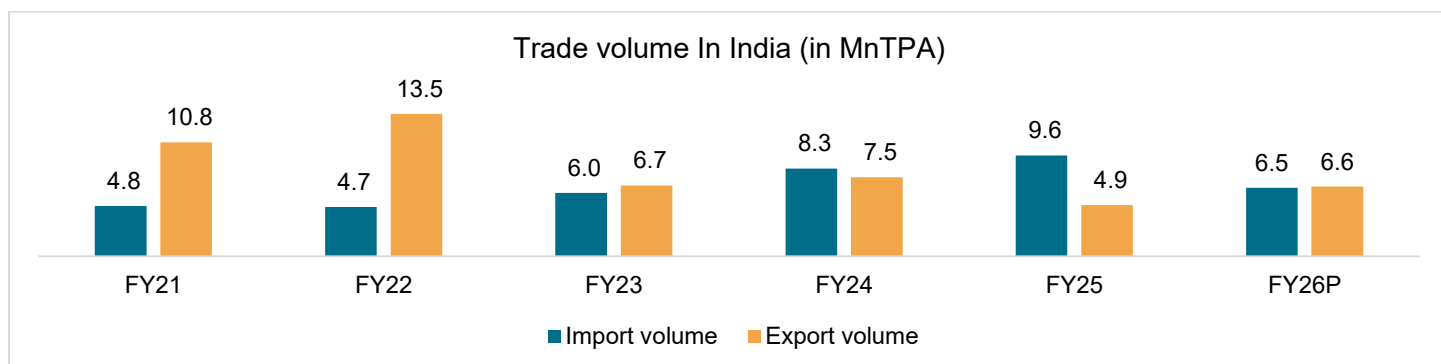
MnTPA: million tonnes per annum

Consumption of finished steel in India has increased steadily over the review period, supported by growth across infrastructure, construction, manufacturing and engineering sectors. While non-alloy finished steel continues to account for majority of the steel consumption, increasing demand for value-added applications has supported faster growth in alloy steel consumption. Non-alloy finished steel consumption increased from 92.5 MnTPA in FY21 to an estimated 148.8 MnTPA in FY26, registering a CAGR of 10.0%, while alloy finished steel consumption grew from 6.2 MnTPA to 15.3 MnTPA during the same period, reflecting a significantly higher CAGR of 19.8%. The increasing share of alloy steel in overall consumption highlights the growing demand for higher-strength and specialized steel grades across automotive,

engineering, defence, railways and industrial applications, while non-alloy steel continues to be driven primarily by construction and infrastructure-related demand.

Finished steel trade

Import/export volume of finished steel to/from India (FY21 – FY26P)



Source: Crisil Intelligence, industry, JPC

P: Provisional; MnTPA: million tonnes per annum

India's finished steel trade witnessed considerable fluctuations during FY21–FY26P, reflecting changes in domestic demand conditions, global steel prices, trade flows and capacity utilization levels across major steel-producing nations. Finished steel exports increased from 10.8 MnTPA in FY21 to a peak of 13.5 MnTPA in FY22, supported by strong international steel prices and recovery in global demand. Thereafter, exports declined to 6.7 MnTPA in FY23 and further to 4.9 MnTPA in FY25 as domestic demand strengthened and global trade conditions became less favourable. Exports are estimated to recover to 6.6 MnTPA in FY26P.

On the import front, finished steel imports declined marginally from 4.8 MnTPA in FY21 to 4.7 MnTPA in FY22, before increasing steadily to reach 9.6 MnTPA in FY25. The rise in imports was supported by strong domestic demand from infrastructure, construction, manufacturing, engineering and automotive sectors, coupled with increasing requirements for value-added and specialized steel grades. As imports increased and exports moderated, India transitioned from being a net exporter to a net importer of finished steel in FY25, when imports of 9.6 MnTPA exceeded exports of 4.9 MnTPA. However, exports are estimated to recover to 6.6 MnTPA in FY26P, marginally exceeding imports of 6.5 MnTPA, resulting in India reverting to a near-balanced trade position with a slight net export surplus. The growing influx of competitively priced imports, particularly from Asian markets, prompted policy responses including safeguard measures and anti-dumping investigations aimed at protecting domestic steel producers from unfair trade practices.

Geographical distribution of steel production and consumption

India region-wise crude steel production (FY25)

Region	Crude steel production (MnTPA)	Share (%)
Eastern	62.5	41.1%
Western	49.8	32.7%
Southern	27.6	18.1%
Northern	12.4	8.1%
India	152.2	100.0%

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

India region-wise finished steel despatches (FY25)

Region	finished steel despatches (MnTPA)	Share (%)
Western	46.2	30.5%
Northern	41.9	27.7%
Eastern	32.0	21.1%
Southern	31.3	20.7%
India	151.3	100.0%

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

India state-wise finished steel despatches (FY25)

State	Demand (MnTPA)	Share (%)
Maharashtra	21.4	17.7%
Gujarat	14.0	11.6%
Uttar Pradesh	11.9	9.9%
Tamil Nadu	10.4	8.6%
West Bengal	9.8	8.1%
Odisha	9.6	8.0%
Punjab	9.2	7.7%
Telangana	6.8	5.6%
Andhra Pradesh	6.0	5.0%
Karnataka	5.9	4.9%
Bihar	5.7	4.8%
Madhya Pradesh	4.9	4.0%
Rajasthan	4.8	4.0%

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

Steel product assessment

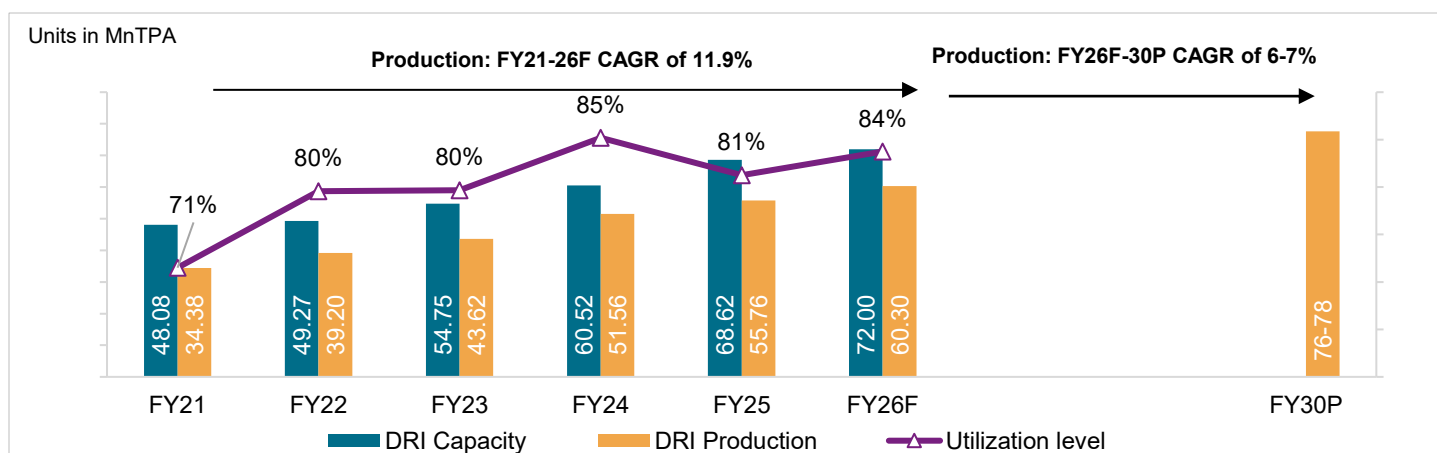
Demand review and outlook: Sponge iron

Sponge iron, also termed direct-reduced iron (DRI), is produced by reducing (removing oxygen) iron ore to increase free iron content. This also makes the ore porous. Sponge iron is popularly used as a feed in electric/induction furnaces and as a substitute for steel scrap because high-quality scrap is costly and scarcely available.

The Indian sponge iron industry witnessed significant growth, driven by robust demand for long steel and a slower ramp-up by major players, resulting in increased blending of sponge iron. Consequently, production of sponge iron expanded at a compound annual growth rate (CAGR) of 11.9% from FY21 to FY26F.

In FY26F, sponge iron production recorded a moderate year-on-year growth of 8.1%, primarily fueled by the rising demand for long steel. The production volume for FY26F stands at 60.30 MnTPA. This growth is largely attributed to an 8-9% increase in secondary long steel production via the Electric Arc Furnace (EAF) and Induction Furnace (IF) routes, primarily driven by mid-sized and small industry players.

Sponge iron capacity and production review



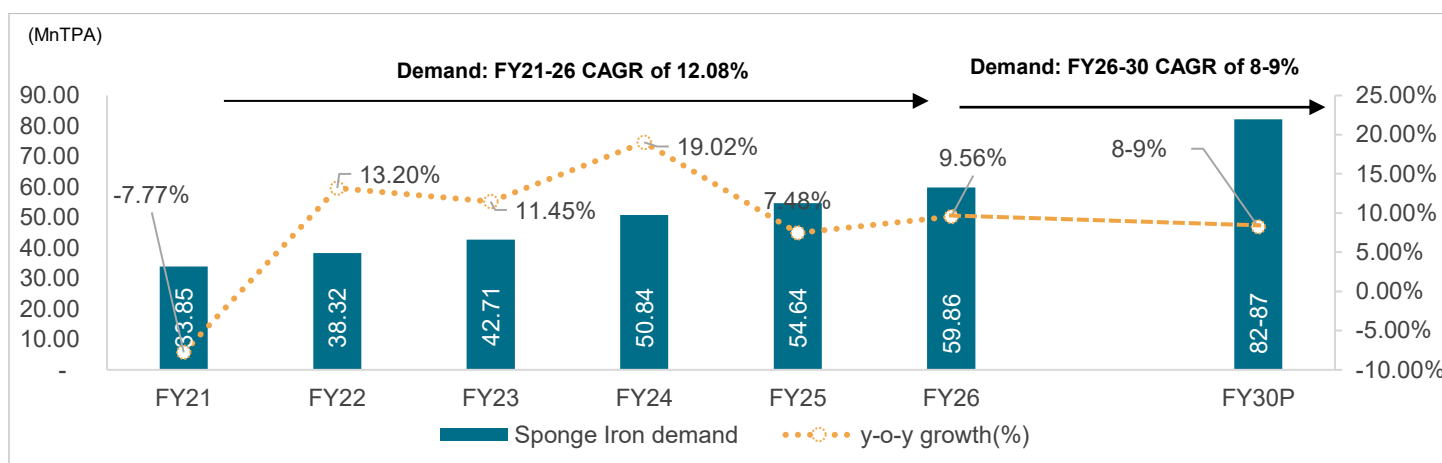
P: Projected; F Forecast; MnTPA: million tonnes per annum

Source: JPC, Crisil Intelligence

Sponge iron industry is fragmented in India with an operational capacity of 72.00 million tonnes as of FY26F. These units had a gross production of around 60.30 MnTPA as of FY26F thereby yielding a utilization level of around 84%. The capacity increased from 48.08 MnTPA in FY21 to 72.00 MnTPA in FY26F.

Going forward, the sponge iron industry is expected to maintain its growth momentum, supported by expansion in secondary steel production, increasing long steel demand and continued investments in infrastructure and construction activities. Sponge iron production is projected to increase to approximately 76-78 MnTPA by FY30P from 60.3 MnTPA in FY26F, implying a CAGR of around 6-7% during FY26F-FY30P. The anticipated growth is expected to be driven by capacity additions in the DRI segment, increasing utilization of EAF and IF routes for steelmaking and sustained demand from downstream steel-consuming sectors.

Sponge iron demand review and outlook



P: Projected

Source: JPC, Crisil Intelligence

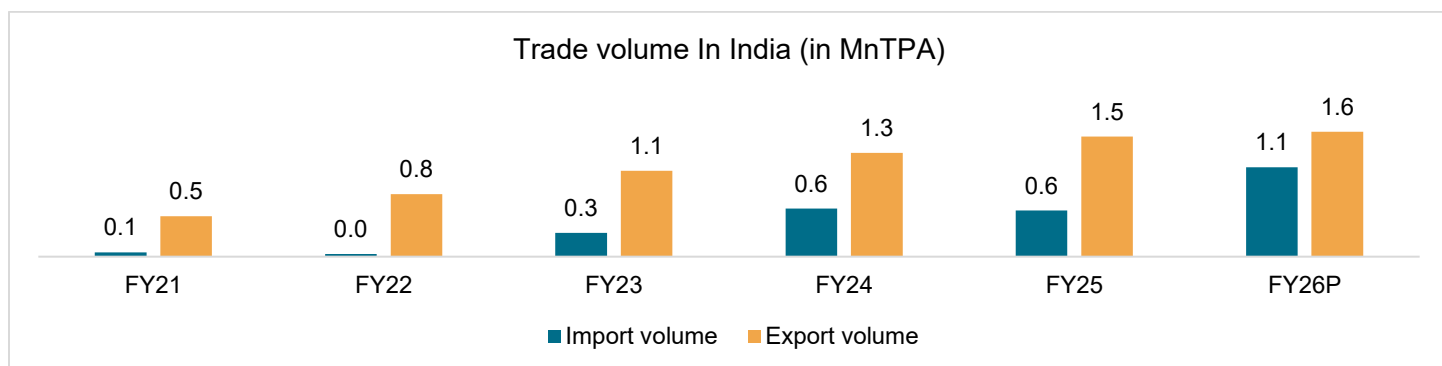
MnTPA: million tonnes per annum

Sponge iron is a vital raw material, alongside pig iron and scrap, utilized in the production of steel through induction furnaces and electric arc furnaces. The majority of steel produced via these furnaces is subsequently converted into long products. The sponge iron sector is predominantly driven by domestic demand, with international trade playing a relatively minor role, accounting for a mere 2-4% of total production through exports and imports. As a result, the sector's performance is closely tied to the domestic steel industry's demand for long products.

The following factors are expected to continue to influence sponge iron production:

- Evolution of Long Steel Production Routes:** While large integrated steel producers using the BF/BOF route have gradually increased their presence in long steel production, sponge iron continues to remain a preferred feedstock for India's secondary steel sector, particularly EAF and IF-based producers. Rising demand for long steel products from infrastructure, construction and manufacturing sectors is expected to support overall steel production, thereby sustaining demand for sponge iron.
- Scrap Availability and Relative Economics:** Steel scrap serves as a key substitute for sponge iron in steelmaking; however, India's domestic scrap generation remains relatively limited compared to its steel production requirements. The fragmented scrap collection ecosystem and dependence on imported scrap expose domestic steelmakers to global supply and price volatility. In this context, sponge iron provides a reliable and cost-competitive alternative feedstock for EAF and IF-based steel producers. The relative cost competitiveness between scrap and sponge iron, along with developments in global scrap trade, domestic scrap availability and steel production trends, will remain important factors influencing sponge iron demand over the medium term.

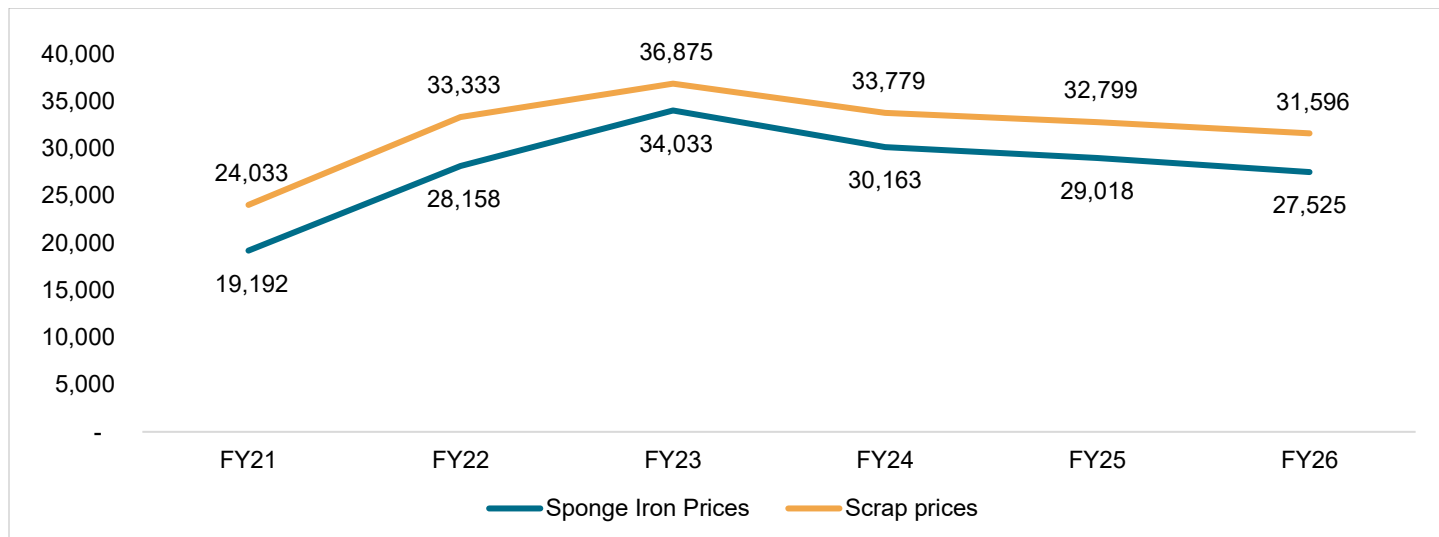
Trade of sponge iron



P: Provisional

Source: JPC, Crisil Intelligence

Sponge iron and scrap prices review (Rs/tonne)



Note: Scrap prices are excluding GST

Source: Crisil Intelligence

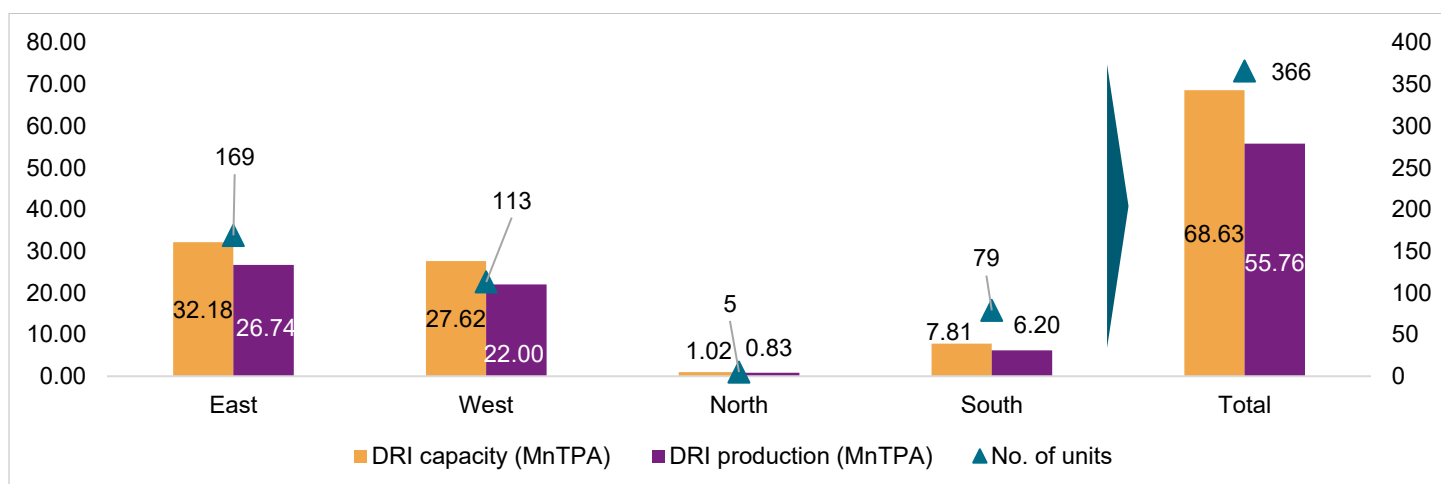
Conventionally, sponge iron prices move in tandem with scrap prices, after correcting for quality differences (the metallic yield in scrap is >90% as compared to ~85% in sponge iron).

Sponge iron and steel scrap prices exhibited significant volatility during FY21–FY26, reflecting fluctuations in raw material costs, steel demand dynamics, global commodity prices and broader macroeconomic conditions. As shown in the chart, sponge iron price was Rs 19,192 per tonne in FY21. Thereafter, prices increased sharply to Rs 28,158 per tonne in FY22 and further to a peak of Rs 34,033 per tonne in FY23, supported by strong steel demand, elevated raw material prices and supply-side disruptions across global commodity markets.

A similar trend was observed in steel scrap prices, which increased from Rs 24,033 per tonne in FY21 to Rs 33,333 per tonne in FY22 and further to Rs 36,875 per tonne in FY23. Scrap prices consistently remained higher than sponge iron prices throughout the period, reflecting the growing demand for scrap from electric arc furnace and induction furnace-based steel producers as well as fluctuations in global scrap availability. The relatively narrow pricing differential between sponge iron and scrap during certain years influenced raw material procurement decisions across secondary steel manufacturers and steel melting units.

Following the peak witnessed in FY23, both sponge iron and scrap prices moderated amid easing commodity prices, improved availability of raw materials and normalization of supply chains. Sponge iron prices declined to Rs 30,163 per tonne in FY24 and further to Rs 27,525 per tonne in FY26, while scrap prices softened to Rs 31,596 per tonne in FY26. Despite the moderation, prices remained significantly above pre-pandemic levels, indicating a structurally higher steel cost environment. Going forward, pricing trends for sponge iron and scrap are expected to remain influenced by steel demand growth, availability of iron ore and steel scrap, global trade dynamics, energy costs and investments across steel-intensive sectors such as construction, infrastructure and manufacturing.

Spread of DRI units and production done across regions in FY25



Source: JPC, Crisil Intelligence
MnTPA: million tonnes per annum

The majority of medium and small iron and steel producers are not integrated, and hence, they import scrap at high prices. These producers used scrap to manufacture long products as an input in the electric arc furnace (EAF) or induction furnace (IF). Sponge iron can substitute scrap while manufacturing crude steel through the EAF/IF route. As a result, the scarcity in scrap supplies and a rise in its prices led to higher domestic demand for sponge iron.

State-wise sponge iron production FY25

Region	State	No. of Working Units	Working Capacity (MnTPA)	Total Production (MnTPA)
East	Odisha	93	15.7	13.6
	West Bengal	49	9.9	9.4
	Jharkhand	27	6.5	3.7
East Total		169	32.2	26.7
West	Chhattisgarh	84	14.4	12.4
	Gujarat	11	8.5	6.3
	Maharashtra	14	4.3	3.0
	Goa	3	0.2	0.2
	Madhya Pradesh	1	0.2	0.1
West Total		113	27.6	22.0
South	Karnataka	44	5.1	4.1
	Andhra Pradesh	15	1.4	1.0
	Telangana	13	0.7	0.7
	Tamil Nadu	7	0.6	0.4
South Total		79	7.8	6.2
North	Uttar Pradesh	5	1.0	0.8
North Total		5	1.0	0.8
GRAND TOTAL		366	68.6	55.8

Source: JPC, Crisil Intelligence
MnTPA: million tonnes per annum

India's sponge iron production remains concentrated in the mineral-rich eastern and central regions of the country, reflecting proximity to key raw materials such as iron ore and coal. In FY25, the country had an installed sponge iron production capacity of 68.6 MnTPA across 366 operating units, resulting in total production of 55.8 MnTPA. The eastern region emerged as the largest sponge iron producing region, accounting for 26.7 MnTPA of production, followed by the western region with 22.0 MnTPA and the southern region with 6.2 MnTPA. The geographic concentration of production

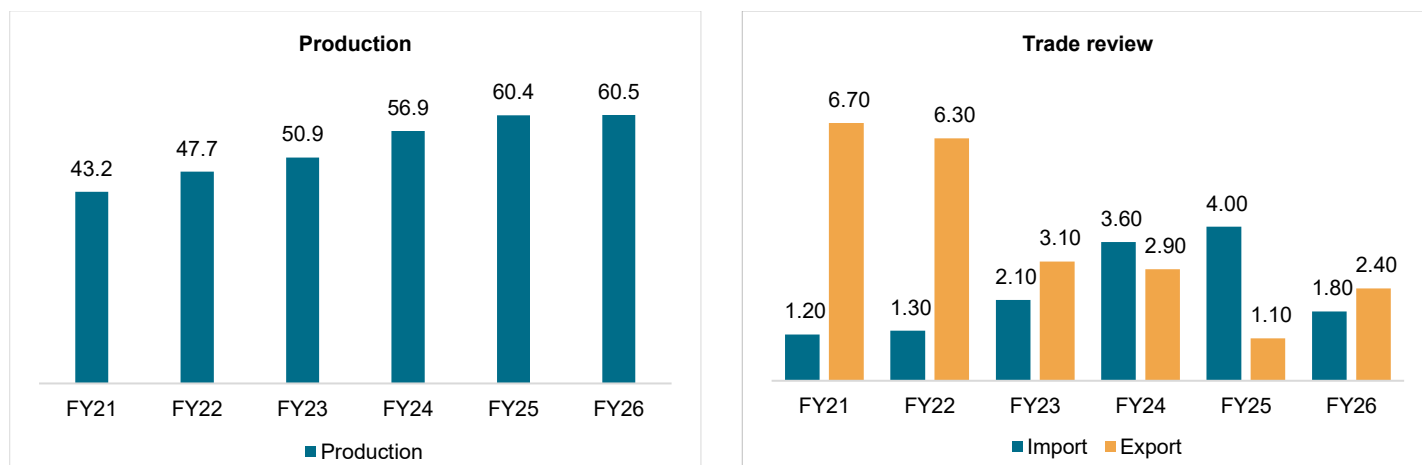
highlights the importance of resource availability and logistics infrastructure in determining the location of sponge iron manufacturing facilities.

At the state level, Odisha was the largest producer of sponge iron in FY25, with production of 13.6 MnTPA from 93 operating units and a capacity of 15.7 MnTPA. Chhattisgarh ranked second with production of 12.4 MnTPA from 84 units, supported by substantial installed capacity of 14.4 MnTPA. West Bengal also emerged as a significant production hub, contributing 9.4 MnTPA, while Gujarat produced 6.3 MnTPA and Karnataka accounted for 4.1 MnTPA. Together, Odisha, Chhattisgarh and West Bengal contributed nearly two-thirds of India's sponge iron production, underscoring their strategic importance within the domestic steel value chain.

The concentration of sponge iron capacity in states such as Odisha, Chhattisgarh and Jharkhand is supported by the availability of coal and iron ore reserves, established industrial clusters and well-developed transportation infrastructure. These regions also house a large number of integrated steel producers, secondary steel manufacturers and downstream processing units, creating strong demand for sponge iron as a key feedstock for steel production. Going forward, continued growth in steel demand, coupled with ongoing investments in steelmaking capacity and infrastructure development, is expected to support sponge iron production across these key manufacturing hubs while reinforcing their position as the backbone of India's secondary steel industry.

Demand review and outlook: HR Coil/Strips

Production and trade review of HR Coil/Strips (in MnTPA)



Source: JPC, Crisil Intelligence
 MnTPA: million tonnes per annum

Production of HR coils/strips witnessed steady growth during FY21–FY26, supported by increasing demand from construction, engineering, automotive components, pipe manufacturing and industrial sectors. Production increased from 43.2 MnTPA in FY21 to 60.5 MnTPA in FY26, registering a CAGR of approximately 7.0% during the period. After declining to 43.2 MnTPA in FY21 due to pandemic-related disruptions, production recovered steadily and reached 60.4 MnTPA in FY25 before remaining broadly stable at 60.5 MnTPA in FY26. The growth reflects sustained expansion in downstream steel processing industries, manufacturing activity and infrastructure development across the country.

India's trade dynamics for HR coils/strips underwent a notable shift over the review period. The country remained a net exporter between FY21 and FY23, with exports significantly exceeding imports. Exports peaked at 6.7 MnTPA in FY21 before moderating to 3.1 MnTPA in FY23 as domestic consumption strengthened. However, rising imports and declining exports resulted in India becoming a net importer of HR coils/strips during FY24 and FY25. Imports increased from 1.2 MnTPA in FY21 to 4.0 MnTPA in FY25, while exports declined to 1.1 MnTPA during the same year.

Trade conditions improved in FY26, with exports increasing to 2.4 MnTPA and imports moderating to 1.8 MnTPA, resulting in India regaining its net exporter status in the HR coils/strips segment. The recovery in exports reflects improved competitiveness of domestic steel producers and stronger demand from international markets. Going forward, demand for HR coils/strips is expected to remain supported by growth in manufacturing, infrastructure, automotive and engineering sectors, while capacity additions by domestic producers are likely to strengthen supply availability and support sustained growth in both domestic consumption and exports.

Country-wise trade of HR Coil/Strips in FY26

Import (FY26)

Country	Volume (MnTPA)
Korea	0.7
Japan	0.6
China	0.4
Russia	0.1
Others	0.0
Total	1.8

Source: JPC, Crisil Intelligence
 MnTPA: million tonnes per annum

Export (FY26)

Country	Volume (MnTPA)
Vietnam	0.8
Italy	0.6
Nepal	0.2
UAE	0.2
Belgium	0.2
France	0.1
Spain	0.1
Others	0.2
Total	2.4

Source: JPC, Crisil Intelligence
 MnTPA: million tonnes per annum

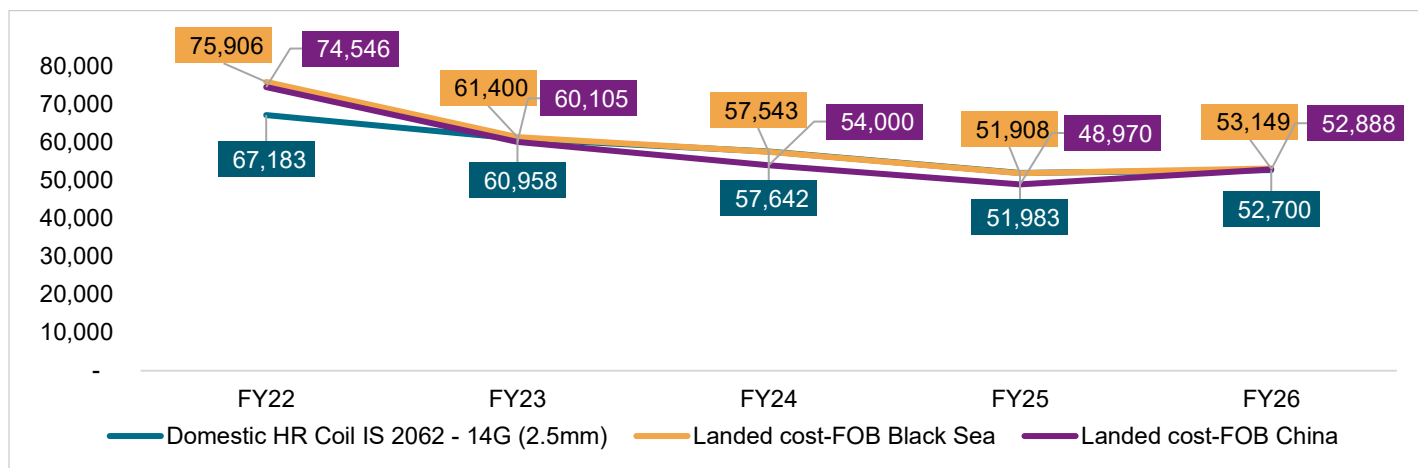
India's import and export trade of HR coils/strips reflects its integration with both regional and global steel markets. In FY26, total imports of HR coils/strips stood at 1.8 MnTPA, with East Asian countries accounting for the majority of import volumes. South Korea emerged as the largest source of imports, contributing 0.7 MnTPA, followed by Japan at 0.6 MnTPA and China at 0.4 MnTPA. The dominance of these countries in India's import basket can be attributed to their large flat steel production capacities, established export-oriented steel industries and ability to supply a wide range of steel grades at competitive prices.

On the export front, India exported approximately 2.4 MnTPA of HR coils/strips in FY26, exceeding import volumes and maintaining its presence in international flat steel markets. Vietnam was the largest export destination, accounting for 0.8 MnTPA of exports, followed by Italy with 0.6 MnTPA. Other key export destinations included Nepal, the UAE, Belgium, France and Spain. The geographical diversity of export markets highlights the competitiveness of Indian flat steel products across both developing and developed economies.

The trade pattern indicates that while India imports certain HR coil and strip grades to supplement domestic availability and meet specific industrial requirements, it also remains an important exporter of flat steel products to international markets. Going forward, trade volumes are expected to remain influenced by domestic demand growth, global steel prices, trade policies and regional supply-demand dynamics. Rising demand from infrastructure, manufacturing,

automotive and engineering sectors is expected to support domestic consumption, while India's expanding steel production capacity is likely to sustain its participation in international HR coil and strip trade.

Price trend of HR Coil (Rs/tonne)



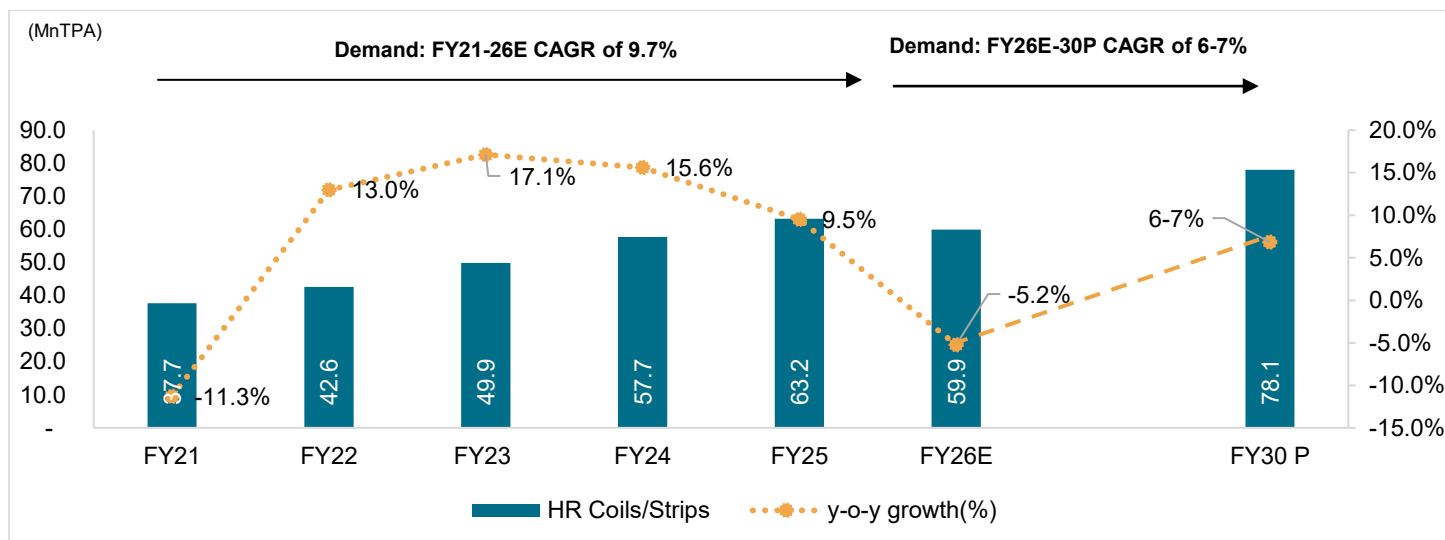
Source: Crisil Intelligence

HR coil prices witnessed considerable fluctuations during FY22–FY26, reflecting changes in steel demand, raw material prices, global commodity markets and international trade dynamics. Domestic HR coil prices declined from Rs 67,183 per tonne in FY22 to Rs 51,983 per tonne in FY25 before recovering marginally to Rs 52,700 per tonne in FY26. The decline was largely driven by the normalization of steel markets following the sharp post-pandemic price surge, easing raw material costs and moderation in global steel demand.

A comparison between domestic HR coil prices and landed import costs indicates that imported HR coils were consistently priced at a premium to domestic material during most of the review period. Landed cost from the Black Sea region declined from Rs 75,906 per tonne in FY22 to Rs 51,908 per tonne in FY25 before increasing slightly to Rs 53,149 per tonne in FY26. Similarly, landed cost from China moderated from Rs 74,546 per tonne in FY22 to Rs 48,970 per tonne in FY25 before recovering to Rs 52,888 per tonne in FY26. The narrowing gap between domestic and imported prices in recent years reflects increasing global competition and a gradual normalization of freight and commodity costs.

The relatively competitive pricing of domestically produced HR coils has supported the position of Indian steel producers in both domestic and export markets. At the same time, fluctuations in import parity prices continue to influence purchasing decisions of steel consumers and downstream manufacturers. Going forward, HR coil prices are expected to remain influenced by global steel supply-demand conditions, raw material costs, trade policies, freight rates and domestic industrial activity. Growth in infrastructure, manufacturing, engineering and automotive sectors is expected to provide continued support to domestic HR coil demand, while international price movements will remain an important determinant of market competitiveness.

HR Coil/Strips Demand review and outlook



P: Projected; E: Estimated on the provisional data of JPC

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

Demand for HR coils/strips has witnessed strong growth over the review period, increasing from 37.7 MnTPA in FY21 to an estimated 59.9 MnTPA in FY26, registering a CAGR of approximately 9.7% during the period. Demand rebounded sharply in FY22 and continued to grow through FY25, driven by recovery in industrial activity, increased infrastructure investments and expansion in manufacturing output. Growth remained robust during FY22–FY25, with annual growth rates ranging between 13.0% and 17.1%, reflecting strong demand from key steel-consuming sectors.

HR coils and strips serve as an important intermediate product within the steel value chain and are widely used in the production of pipes and tubes, cold rolled products, automotive components, engineering goods, capital equipment and fabricated steel structures. The sustained increase in demand over the review period reflects the growing importance of manufacturing and industrial activity within the Indian economy. Strengthening domestic production, increasing infrastructure investments and government initiatives aimed at boosting manufacturing have continued to support consumption of flat steel products.

Demand growth moderated in FY25 and FY26, with growth rates of 9.5% and a marginal decline of 5.2%, respectively, reflecting a normalization in growth following the strong post-pandemic recovery phase. Nevertheless, demand remained at historically elevated levels, supported by continued activity in downstream industries such as automotive, engineering, construction and pipe manufacturing. The broad-based demand profile across multiple industrial sectors has helped maintain steady consumption of HR coils and strips despite fluctuations in broader economic conditions.

Going forward, demand for HR coils and strips is projected to increase to approximately 78.1 MnTPA by FY30, implying a CAGR of around 6–7% during FY26–FY30P. Future growth is expected to be supported by continued expansion in manufacturing, infrastructure development, transportation equipment production and investments in industrial and engineering sectors. Increasing steel intensity across infrastructure projects, coupled with India's growing role as a global manufacturing hub, is expected to provide sustained support to HR coil and strip demand over the medium term.

HR Coil/Strips demand across end-use industry

End-Use Industry (FY26)	% Share of Demand	Demand Volume FY26E (MnTPA)	CAGR (FY26E-30P)
Construction (Residential + Commercial)	14-16%	8.4-9.6	6-7%

Infrastructure	12-14%	7.2-8.4	7-8%
Industrial	14-16%	8.4-9.6	7-8%
Automotive	16-18%	9.6-10.8	6-7%
Engineering/ Capital Goods	8-10%	4.8-6.0	2-3%
Appliance/Consumer Durables	7-9%	4.2-5.4	7-8%
Pipe and Tube Manufacturing	23-25%	13.2-14.4	7-8%

P: Projected; E: Estimated on the provisional data of JPC

Source: Crisil Intelligence

MnTPA: million tonnes per annum

Demand for HR coils and strips is diversified across multiple end-use industries, reflecting their importance as an intermediate product in the steel value chain. In FY26E, pipe and tube manufacturing is expected to remain the largest consumer, accounting for 23–25% of total demand (13.8–15.0 MnTPA), driven by applications in construction, water infrastructure, oil & gas and industrial projects. The automotive sector represents the second-largest demand segment, accounting for 16–18% (9.6–10.8 MnTPA), followed by construction and industrial applications, each contributing 14–16% (8.4–9.6 MnTPA). Demand from these sectors is supported by rising vehicle production, manufacturing activity and continued investments in residential and commercial construction.

Infrastructure is expected to account for 12–14% of HR coil demand in FY26E (7.2–8.4 MnTPA), while engineering/capital goods and appliance/consumer durables are estimated to contribute 8–10% and 7–9%, respectively. Growth in infrastructure spending, manufacturing investments and urban development projects is expected to support demand across these segments. Among the major end-use sectors, pipe and tube manufacturing and infrastructure are projected to record the fastest growth during FY26E–FY30P, with demand expected to expand at a CAGR of approximately 8%, while construction, industrial, automotive and appliance sectors are expected to grow at around 7% CAGR. The broad-based demand profile across multiple industries is expected to support sustained growth in HR coil consumption over the medium term.

State-wise HR flat products production FY25

Region	State	No. of Working Units	Working Capacity (MnTPA)	PM Plates / HR Coils Production (MnTPA)	HSM Plates / HR Sheets Production (MnTPA)
Western	Chhattisgarh	5	5.82	3.92	0.03
	Gujarat	2	8.75	7.41	2.20
	Maharashtra	2	9.50	8.21	0.02
Eastern	Jharkhand	2	11.20	11.00	0.46
	Odisha	8	22.27	19.88	0.30
	West Bengal	1	0.03	0.00	0.02
Northern	Haryana	1	0.92	0.64	0.02
	Himachal Pradesh	1	0.04	0.02	0.00
	Punjab	1	0.33	0.10	0.00
	Uttar Pradesh	1	0.30	0.01	0.00
Southern	Karnataka	2	13.20	9.14	0.71
	Tamil Nadu	1	0.50	0.16	0.00
	Total	27	72.85	60.47	3.74

HR: Hot Rolled; PM: Plate Mill; HSM: Hot Strip Mill

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

India's HR flat products production is concentrated in a few major steel-producing states, primarily located in the eastern, western and southern regions of the country. In FY25, the country operated 27 HR flat product manufacturing units with an aggregate working capacity of 72.85 MnTPA. Total production stood at 60.47 MnTPA for PM Plates/HR Coils and 3.74 MnTPA for HSM Plates/HR Sheets. The concentration of production in select states reflects the presence of large integrated steel plants, proximity to key raw materials, established industrial ecosystems and well-developed logistics infrastructure.

The eastern region emerged as the largest production hub for HR flat products, with Odisha accounting for 19.88 MnTPA of PM Plates/HR Coils production and Jharkhand contributing 11.00 MnTPA. Together, these two states accounted for more than half of India's PM Plates/HR Coils production in FY25. The dominance of the eastern region can be attributed to the presence of major integrated steel producers, abundant iron ore reserves and strong connectivity to domestic and export markets. The western region also remained a significant contributor, led by Maharashtra and Gujarat, which produced 8.21 MnTPA and 7.41 MnTPA of PM Plates/HR Coils, respectively.

Among the southern states, Karnataka remained an important production center with 9.14 MnTPA of PM Plates/HR Coils output and the highest HSM Plates/HR Sheets production of 0.71 MnTPA. The state's strong industrial base and presence of large steel manufacturing facilities have contributed to its position within the domestic flat steel industry. Overall, the regional distribution of HR flat product production illustrates the concentration of steelmaking capacity in resource-rich and industrially developed states. Going forward, increasing investments in steel manufacturing, infrastructure development and downstream processing facilities are expected to support further growth in flat steel production across these key manufacturing clusters.

State-wise HR flat products despatches FY25 (in MnTPA)

Region	State	Plates	HR Sheets	HR Coils/Skelp	CR Sheets/Coils	GP/GC Sheets	Elect. Steel Sheets	Tin Plates
Western	Chhattisgarh	0.37	0.23	0.65	0.01	0.02	0.00	0.00
	DNH and Daman & Diu	0.01	0.02	0.06	0.10	0.06	0.00	0.00
	Goa	0.01	0.02	0.10	0.03	0.05	0.02	0.00
	Gujarat	0.84	0.84	4.15	1.64	1.31	0.02	0.00
	Maharashtra	1.06	1.51	6.31	2.80	1.31	0.42	0.19
	Madhya Pradesh	0.24	0.12	1.20	0.19	0.79	0.01	0.00
	Region Total	2.53	2.74	12.46	4.77	3.55	0.47	0.19
Eastern	Andaman & Nicobar	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Arunachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Assam	0.04	0.04	0.20	0.05	0.16	0.00	0.00
	Bihar	0.01	0.02	0.06	0.03	0.11	0.00	0.00
	Jharkhand	0.17	0.07	0.43	1.00	0.22	0.00	0.00
	Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Meghalaya	0.00	0.00	0.00	0.00	0.04	0.00	0.00
	Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Nagaland	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Odisha	0.15	0.12	2.00	0.50	0.51	0.00	0.00
	Sikkim	0.00	0.00	0.01	0.00	0.00	0.00	0.00
	Tripura	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	West Bengal	0.46	0.12	1.57	0.39	0.38	0.00	0.00
	Region Total	0.84	0.36	4.26	1.96	1.42	0.00	0.00
Northern	Chandigarh	0.02	0.00	0.23	0.43	0.37	0.00	0.00
	Delhi	0.09	0.01	1.49	0.22	0.05	0.01	0.00

	Haryana	0.30	0.13	2.54	1.57	0.37	0.03	0.00
	Himachal Pradesh	0.00	0.01	0.60	0.26	0.10	0.02	0.00
	J&K	0.01	0.03	0.06	0.02	0.04	0.00	0.00
	Ladakh	0.00	0.00	0.00	0.00	0.02	0.00	0.09
	Punjab	0.09	0.09	2.09	0.31	0.27	0.00	0.00
	Rajasthan	0.09	0.06	0.55	0.31	0.22	0.00	0.00
	Uttar Pradesh	0.39	0.13	3.36	0.70	1.09	0.00	0.00
	Uttarakhand	0.04	0.03	0.34	0.16	0.09	0.00	0.00
	Region Total	1.03	0.49	11.26	3.98	2.61	0.07	0.09
Southern	Andhra Pradesh	0.11	0.13	1.07	0.36	0.17	0.00	0.00
	Karnataka	0.16	0.18	1.08	0.79	0.51	0.04	0.00
	Kerala	0.01	0.01	0.07	0.07	0.02	0.00	0.00
	Lakshadweep	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Puducherry	0.00	0.00	0.02	0.00	0.02	0.00	0.00
	Telangana	0.30	0.08	1.04	0.38	0.29	0.01	0.00
	Tamil Nadu	0.43	0.51	2.00	1.48	0.83	0.03	0.14
	Region Total	1.01	0.91	5.28	3.08	1.83	0.07	0.14
GRAND TOTAL		5.40	4.51	33.25	13.78	9.41	0.61	0.43

HR: Hot Rolled; CR: Cold Rolled; GP: Galvanized Plain; GC: Galvanized Corrugated; Elect.: Electrical

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

The dispatch pattern of HR flat products across India reflects the concentration of steel consumption in industrialized and infrastructure-intensive states. During FY25, HR coils/skelp constituted the largest category of flat steel dispatches, with total dispatches of 33.25 MnTPA, followed by CR sheets/coils at 13.78 MnTPA and GP/GC sheets at 9.41 MnTPA. The widespread use of these products across automotive, engineering, construction, pipe manufacturing and consumer durable sectors has contributed to strong demand across multiple regions of the country.

Among the regions, the western region accounted for the highest dispatches of flat steel products during FY25. Maharashtra emerged as the single largest consumer state across several flat steel categories, with dispatches of 6.31 MnTPA of HR coils/skelp and 2.80 MnTPA of CR sheets/coils. Gujarat also recorded significant consumption of flat products, supported by its strong industrial base, engineering sector, automotive manufacturing presence and extensive infrastructure development. Together, the western states accounted for 12.46 MnTPA of HR coils/skelp dispatches, underscoring the region's position as a major steel-consuming hub.

The northern and southern regions also recorded substantial consumption of flat steel products. The northern region accounted for 11.26 MnTPA of HR coils/skelp dispatches, supported primarily by demand from Haryana, Punjab, Uttar Pradesh and Rajasthan. The southern region contributed 5.28 MnTPA of HR coils/skelp dispatches, with Tamil Nadu, Andhra Pradesh and Karnataka emerging as key consuming states. These regions benefit from a diverse industrial base comprising automobiles, engineering, construction, consumer durables and pipe manufacturing industries, all of which are significant consumers of flat steel products.

The state-wise distribution of dispatches highlights the close relationship between industrial activity, infrastructure development and flat steel consumption. States with strong manufacturing ecosystems, automobile clusters, engineering industries and large-scale infrastructure investments continue to account for a significant share of flat steel demand. Going forward, increasing investments in manufacturing, transportation infrastructure, renewable energy, urban development and industrial corridors are expected to support further growth in flat steel consumption across both existing and emerging industrial centres in India.

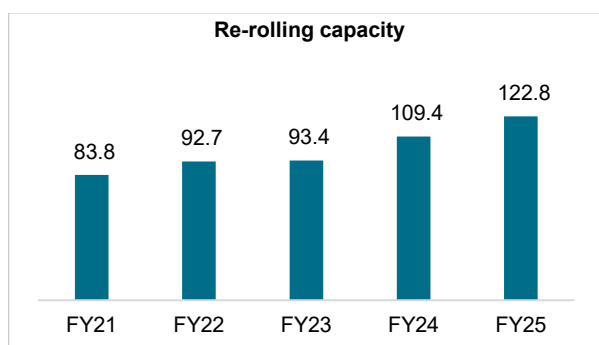
Demand review and outlook: TMT

The Indian TMT bars market can broadly be classified into primary TMT bars and secondary TMT bars. Primary TMT bars are manufactured by integrated steel producers using ore-based steelmaking routes and account for approximately 35-38% of domestic TMT consumption. These products are typically marketed under established brands and are preferred for infrastructure projects, urban construction and premium housing applications. In contrast, secondary or re-rolled TMT bars account for the remaining 62-65% of the market, with a larger presence across Tier-II, Tier-III and rural markets due to competitive pricing and localized distribution networks.

The market is also segmented by grade, with Fe500D emerging as the most widely preferred grade for residential and commercial construction due to its superior ductility and suitability for seismic applications. Higher-grade products such as Fe550D are increasingly used in high-rise and heavy-load structures, while lower grades such as Fe415 continue to be used in select applications.

Within the organized segment, branded TMT manufacturers compete not only on steel quality but also on product certification, distribution reach, technical support and brand trust. Leading primary steel brands such as Tata Tiscon, JSW Neosteel and other established players typically command a price premium of approximately ₹3-8 per kg over regional and unbranded products, reflecting customer preference for certified quality, consistency and reliability.

Re-rolling capacity review (in MnTPA) and spread across India in Fiscal 2025

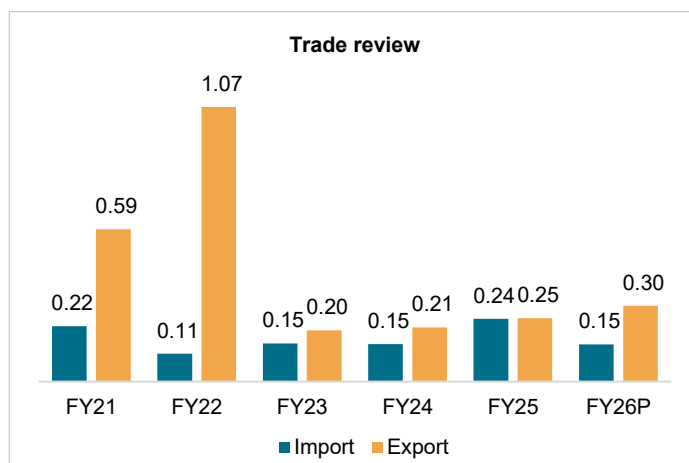
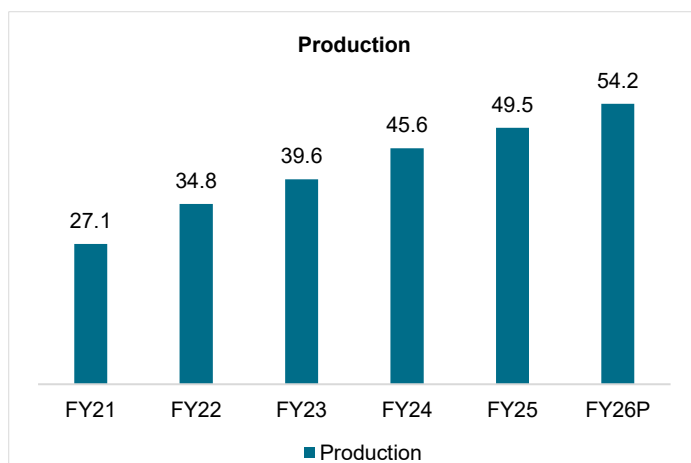


Region	No. of Units	Total capacity
East	156	31.42
West	430	43.34
North	430	23.99
South	232	24.08
Total	1248	122.84

Source: JPC, Crisil Intelligence
 MnTPA: million tonnes per annum

Out of the total re-rolling production done in India, TMT constitutes nearly 50-55% of it.

Production and trade review of TMT bars (in MnTPA)



P: Provisional

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

Production of TMT bars has witnessed strong growth over the review period, supported by sustained demand from the construction and infrastructure sectors. Production increased from 27.1 MnTPA in FY21 to 49.5 MnTPA in FY25 and is further estimated to reach 54.2 MnTPA in FY26. A temporary decline to 27.1 MnTPA in FY21 due to pandemic-related disruptions, production recovered sharply and recorded consistent growth thereafter. The increase was driven by rising investments in residential housing, urban infrastructure, transportation networks and industrial construction projects, which continue to support the demand for reinforcement steel products.

TMT bars remain one of the most widely consumed steel products in India owing to their extensive application in reinforced concrete structures, residential buildings, commercial projects, bridges, highways and other infrastructure assets. The strong growth in production during FY22–FY26 reflects increasing steel intensity across infrastructure projects and continued government focus on capital expenditure through initiatives such as PM Gati Shakti, Bharatmala Pariyojana, PM Awas Yojana and various urban development programs.

India's trade volumes for TMT bars remained relatively small compared with domestic production, underscoring the sector's strong dependence on domestic consumption. Export volumes increased from 0.59 MnTPA in FY21 to a peak of 1.07 MnTPA in FY22 before moderating to 0.25 MnTPA in FY25. Exports are estimated to recover to 0.30 MnTPA in FY26. Imports remained low throughout the period, fluctuating between 0.11 MnTPA and 0.24 MnTPA, indicating the adequacy of domestic manufacturing capacity in meeting local demand requirements.

Overall, the TMT bars segment continues to be largely insulated from international trade dynamics and remains primarily driven by domestic construction and infrastructure activity. Going forward, increasing urbanization, residential housing demand and continued investments in infrastructure development are expected to support sustained growth in TMT bar production and consumption over the medium term.

Country-wise trade of TMT in FY26

Import (FY26)

Country	Volume (MnTPA)
Thailand	0.05
Korea	0.04
China	0.03
Japan	0.01
Others	0.03
Total	0.16

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

Export (FY26)

Country	Volume (MnTPA)
Nepal	0.13
USA	0.05
Belgium	0.03
Italy	0.02
Bangladesh	0.02
Others	0.22
Total	0.47

Source: JPC, Crisil Intelligence

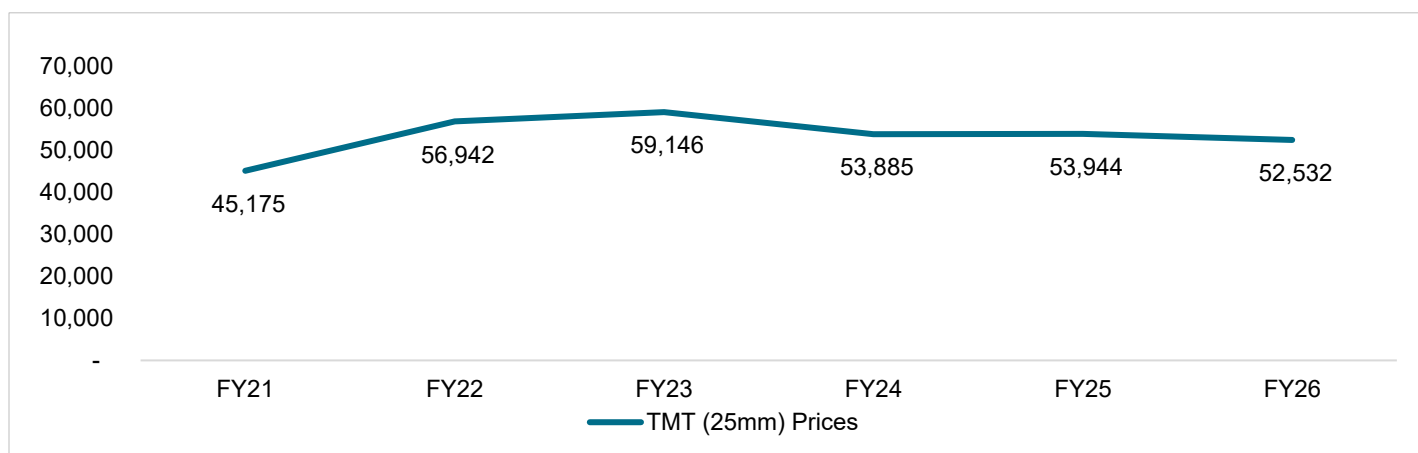
MnTPA: million tonnes per annum

India's international trade in TMT bars remained relatively limited in FY26, reflecting the product's predominantly domestic demand-driven nature. Total imports stood at 0.16 MnTPA, with Thailand emerging as the largest source of imports at 0.05 MnTPA, followed by South Korea at 0.04 MnTPA and China at 0.03 MnTPA. The low volume of imports indicates the availability of sufficient domestic production capacity to meet local demand, while imports are generally driven by regional supply-demand dynamics, pricing considerations and specialized customer requirements.

On the export side, India exported approximately 0.47 MnTPA of TMT bars in FY26, resulting in a trade surplus for the product segment. Nepal was the largest export destination, accounting for 0.13 MnTPA of exports, followed by the United States at 0.05 MnTPA. Other important export destinations included Belgium, Italy and Bangladesh. The strong presence of neighboring countries and select international markets in India's export basket reflects the competitiveness of Indian TMT bar manufacturers and the country's established trade relationships within South Asia and other overseas markets.

The overall trade pattern highlights that TMT bars are primarily consumed within the domestic market, with exports serving as an additional avenue for producers to diversify their customer base and optimize capacity utilization. Going forward, India's growing infrastructure investments, urbanization trends and residential construction activity are expected to keep domestic demand as the primary driver of the TMT bar industry. International trade volumes are likely to remain influenced by regional demand conditions, pricing competitiveness, freight costs and trade policies across key export and import destinations.

Price trend of TMT bars (Rs/tonne)

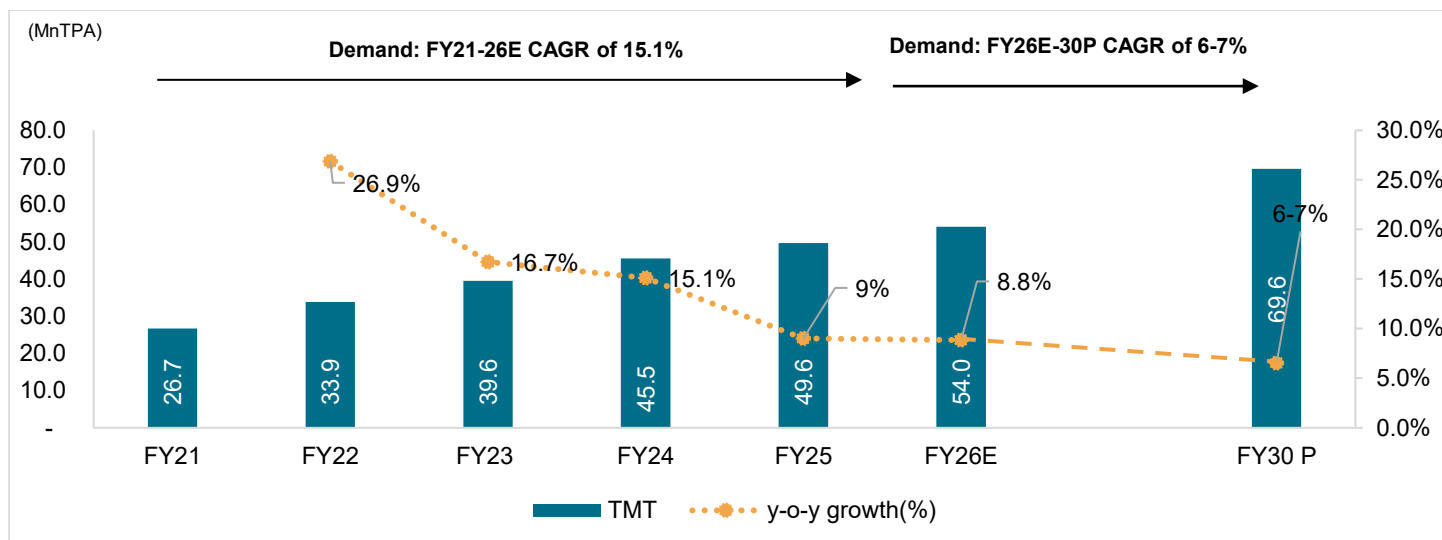


Source: Crisil Intelligence

TMT bar prices witnessed volatility during FY21–FY26, influenced by fluctuations in raw material costs, steel demand conditions, infrastructure activity and global commodity market trends. The upward trajectory accelerated after FY21, with prices rising sharply to Rs 56,942 per tonne in FY22 and reaching a peak of Rs 59,146 per tonne in FY23. The sharp increase during this period was supported by strong post-pandemic recovery in construction and infrastructure activity, elevated coking coal and iron ore prices, and supply chain disruptions across global commodity markets.

Following the peak in FY23, TMT bar prices moderated as raw material prices eased and steel markets gradually normalized. Prices declined to Rs 53,885 per tonne in FY24 and remained broadly stable at Rs 53,944 per tonne in FY25 before moderating further to Rs 52,532 per tonne in FY26. Despite the decline from peak levels, prices remained substantially above pre-pandemic levels, reflecting sustained domestic demand from housing, commercial construction and infrastructure sectors. Going forward, TMT bar prices are expected to remain influenced by raw material costs, infrastructure expenditure, construction activity, capacity utilization levels and overall steel demand-supply dynamics in the domestic market.

TMT Demand review and outlook



P: Projected; E: Estimated on the provisional data of JPC

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

Demand for TMT bars has demonstrated strong growth over the review period, increasing from 26.7 MnTPA in FY21 to an estimated 54.0 MnTPA in FY26E, representing a CAGR of approximately 15.1% during FY21–FY26E. The segment witnessed a temporary contraction of 12.9% in FY21 due to the disruption caused by the COVID-19 pandemic and the slowdown in construction activities. However, demand rebounded sharply thereafter, registering a growth of 26.9% in FY22 as infrastructure projects resumed, real estate activity recovered and government capital expenditure gained momentum.

The growth trajectory remained robust during FY23–FY26, with demand increasing by 16.7% in FY23, 15.1% in FY24, 9.0% in FY25 and an estimated 8.8% in FY26. Rising investments in roads, railways, metro projects, industrial corridors, urban infrastructure and residential housing have continued to support consumption of reinforcement steel products. Government initiatives such as PM Gati Shakti, Bharatmala Pariyojana, Smart Cities Mission and PM Awas Yojana have further strengthened demand for TMT bars across both public and private construction projects.

Residential and commercial construction, along with infrastructure development, remain the primary drivers of TMT demand owing to the widespread application of TMT bars in reinforced concrete structures, foundations, columns, beams and other load-bearing applications. Increasing urbanization, rising disposable incomes and sustained housing demand have further contributed to market expansion. In addition, industrial and commercial real estate development has supported the growth of steel-intensive construction activities across the country.

Going forward, demand for TMT bars is projected to reach approximately 69.6 MnTPA by FY30, implying a CAGR of around 6–7% during FY26–FY30. While growth is expected to moderate compared with the strong post-pandemic recovery phase, the long-term outlook remains favourable. Continued investments in infrastructure creation, affordable housing, transportation networks and industrial development are expected to support steady growth in TMT consumption, reinforcing its position as one of the largest steel product segments in India.

TMT demand across end-use industry

End-Use Industry (FY26)	% Share of Demand	Demand Volume FY26E (MnTPA)	CAGR (FY26E-30P)
Construction (Residential + Commercial)	45%	22.3	7%

Infrastructure	45%	22.3	8%
Industrial	5%	2.5	7%
Engineering/ Capital Goods	5%	2.5	2%

P: Projected

Source: Crisil Intelligence

MnTPA: million tonnes per annum

The construction and infrastructure sectors collectively dominate TMT bar consumption in India, accounting for approximately 90% of total demand in FY26. Residential and commercial construction alone contributed around 22.3 MnTPA of demand, representing 45% of total TMT consumption. The widespread use of TMT bars in reinforced concrete structures, housing projects, commercial buildings and real estate developments makes the construction sector the largest consumer of reinforcement steel products. Continued urbanization, growth in residential housing and increasing investments in commercial real estate are expected to support demand growth of approximately 7% CAGR during FY26–FY30.

Infrastructure accounted for an additional 45% share of TMT demand, equivalent to 22.3 MnTPA in FY26, underscoring the critical role of government-led capital expenditure in driving steel consumption. Demand from roads, highways, railways, metro projects, bridges, irrigation facilities and industrial infrastructure is expected to grow at a CAGR of approximately 8% between FY26 and FY30, making it the fastest-growing end-use segment. While industrial and engineering/capital goods sectors accounted for a relatively smaller share of TMT demand at 5% each, these segments remain important contributors owing to increasing investments in manufacturing facilities, industrial buildings and engineering projects. Overall, the strong dependence of TMT demand on construction and infrastructure activities highlights the close linkage between India's economic development, asset creation programmes and long-term growth in reinforcement steel consumption.

State-wise re-rolling production FY25

Region	State	No. of Working Units	Working Capacity (MnTPA)	Non-Flat Production (MnTPA)	Flat Production (MnTPA)
Western	Chhattisgarh	150	20.8	12.6	1.4
	Dadra and Nagar Haveli & Daman and Diu	4	0.2	0.2	0.0
	Goa	9	0.6	0.4	0.0
	Gujarat	120	6.6	4.0	0.2
	Madhya Pradesh	46	2.1	1.4	0.0
	Maharashtra	101	13.0	8.1	0.4
	Regional Total	430	43.3	26.6	2.0
Eastern	Arunachal Pradesh	2	0.1	0.0	0.0
	Assam	14	0.4	0.2	0.0
	Bihar	14	1.7	1.1	0.0
	Jharkhand	19	8.2	8.3	0.0
	Meghalaya	4	0.2	0.1	0.0
	Odisha	28	4.8	3.9	0.0
	Tripura	2	0.0	0.0	0.0
	West Bengal	73	16.0	11.3	0.3
	Regional Total	156	31.4	24.9	0.3
Northern	Delhi	2	0.0	0.0	0.0
	Haryana	9	0.2	0.1	0.0
	Himachal Pradesh	24	2.2	1.4	0.2
	Jammu and Kashmir	16	0.8	0.3	0.0
	Punjab	239	10.8	4.5	2.0
	Rajasthan	59	3.5	2.0	0.2
	Uttar Pradesh	69	5.2	3.2	0.0
	Uttarakhand	12	1.2	0.6	0.0

	Regional Total	430	24.0	12.2	2.5
Southern	Andhra Pradesh	34	8.2	5.5	0.0
	Karnataka	22	5.8	4.5	0.0
	Kerala	27	0.8	0.5	0.0
	Puducherry	10	0.4	0.4	0.0
	Tamil Nadu	91	5.2	3.6	0.1
	Telangana	48	3.7	2.6	0.2
	Regional Total	232	24.1	17.3	0.3
Grand Total		1,248	122.8	81.0	5.2

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

India's re-rolling industry plays a crucial role in the steel value chain by converting semi-finished steel products such as billets and blooms into finished long and flat steel products, including TMT bars, structurals, wire rods and strips. In FY25, total re-rolling production stood at 63.8 MnTPA, reflecting the extensive presence of secondary steel producers across the country. The industry remains geographically diversified, although production is concentrated in a few key steel-producing states that benefit from proximity to raw materials, established industrial ecosystems and strong end-user demand.

The northern region emerged as the largest re-rolling production hub in FY25, accounting for 18.2 MnTPA of output, followed closely by the eastern region at 17.3 MnTPA and the southern region at 15.1 MnTPA. The western region contributed 13.1 MnTPA of production. These four regions collectively account for the entirety of India's re-rolling output, highlighting the widespread presence of downstream steel processing capacity across the country. The regional distribution largely mirrors the concentration of construction activity, infrastructure investments and manufacturing clusters that drive demand for finished steel products.

At the state level, Chhattisgarh was the largest producer of re-rolled steel products, accounting for 12.6 MnTPA of non-flat steel production and an additional 1.4 MnTPA of flat steel production. Maharashtra contributed 5.9 MnTPA, while Bihar and West Bengal produced 5.4 MnTPA and 5.3 MnTPA, respectively. Uttar Pradesh, Punjab and Tamil Nadu also emerged as significant production centres, supported by strong demand from construction, infrastructure and industrial sectors. The high concentration of production in these states reflects the availability of billet supply from integrated steel producers and the presence of large networks of secondary rolling mills.

The re-rolling sector remains a critical link between primary steel manufacturing and end-use industries. Increasing investments in housing, transportation infrastructure, industrial facilities and urban development continue to support demand for re-rolled steel products across India. Going forward, rising domestic steel consumption, capacity additions by steel producers and ongoing infrastructure expansion are expected to support the growth of the re-rolling industry, particularly in states with established steel manufacturing ecosystems and strong downstream demand.

State-wise bars & rods despatches FY25

Region	State	Bars & Rods (MnTPA)
Western	Chhattisgarh	1.8
	DNH and Daman & Diu	0.7
	Goa	0.4
	Gujarat	2.4
	Maharashtra	5.9
	Madhya Pradesh	1.8
	Region Total	13.1
Eastern	Arunachal Pradesh	0.0
	Assam	0.4
	Bihar	5.4
	Jharkhand	2.6
	Manipur	0.0

	Meghalaya	0.5
	Mizoram	0.1
	Nagaland	0.0
	Odisha	2.4
	Sikkim	0.0
	Tripura	0.5
	West Bengal	5.3
	Region Total	17.3
Northern	Chandigarh	0.1
	Delhi	1.4
	Haryana	1.1
	Himachal Pradesh	0.4
	J&K	1.1
	Ladakh	0.0
	Punjab	4.6
	Rajasthan	3.0
	Uttar Pradesh	5.0
	Uttarakhand	1.5
	Region Total	18.2
Southern	Andhra Pradesh	3.6
	Karnataka	3.0
	Kerala	1.4
	Puducherry	0.4
	Telangana	2.6
	Tamil Nadu	4.2
	Region Total	15.1
GRAND TOTAL		63.8

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

Bars and rods constitute one of the largest categories within the long steel segment, driven primarily by their extensive usage in construction, infrastructure and industrial applications. In FY25, total dispatches of bars and rods across India stood at 63.8 MnTPA, reflecting the strong demand for reinforcement steel products amid continued growth in construction activity and infrastructure development. The widespread geographical distribution of dispatches highlights the importance of bars and rods across both developed industrial states and emerging infrastructure markets.

The northern region emerged as the largest consumer of bars and rods in FY25, accounting for 18.2 MnTPA of dispatches, followed by the eastern region at 17.3 MnTPA, the southern region at 15.1 MnTPA and the western region at 13.1 MnTPA. The strong consumption levels in the northern and eastern regions can be attributed to large-scale infrastructure projects, urban development initiatives, residential construction activity and increasing industrial investments. The broad-based regional demand profile demonstrates the critical role of long steel products in supporting economic development across the country.

At the state level, Maharashtra recorded the highest bars and rods dispatches at 5.9 MnTPA, followed closely by Bihar at 5.4 MnTPA, West Bengal at 5.3 MnTPA and Uttar Pradesh at 5.0 MnTPA. Punjab and Tamil Nadu also emerged as significant demand centres, accounting for 4.6 MnTPA and 4.2 MnTPA, respectively. These states benefit from sustained investments in transportation infrastructure, housing projects, commercial construction and industrial facilities, all of which are major consumers of bars and rods.

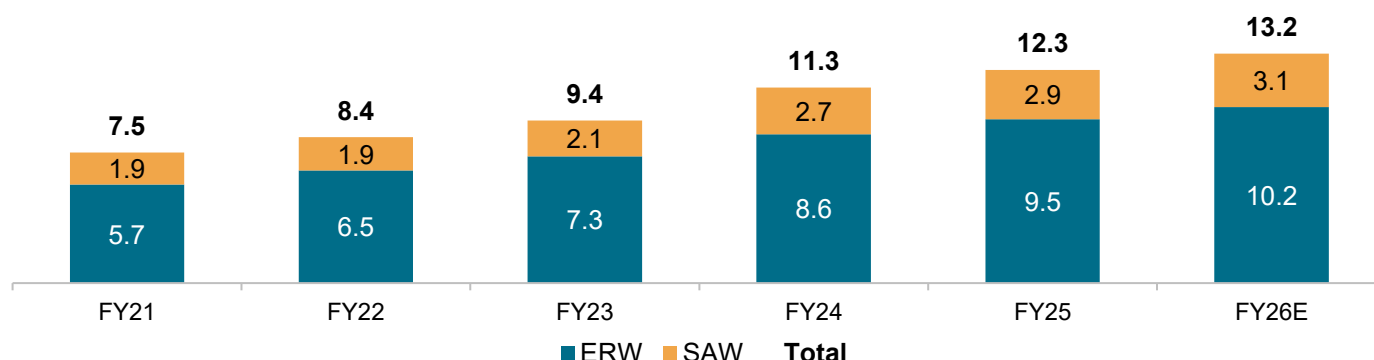
The state-wise distribution of dispatches highlights the close linkage between steel consumption and infrastructure-led economic activity. As government expenditure on roads, railways, urban infrastructure and housing continues to increase, demand for bars and rods is expected to remain strong across major consuming states. Moreover, rising urbanization, industrialization and private sector investments in real estate and manufacturing are expected to further support long-term

growth in bars and rods consumption, reinforcing their position as one of the most important product categories within India's steel industry.

Demand review and outlook: Welded Pipes

Production review of welded pipes (in MnTPA)

Production volume of welded pipes (FY21-26E) - split by type of pipe [in MnTPA]



ERW: Electric Resistance Welded; SAW: Submerged Arc Welded; E: Estimated

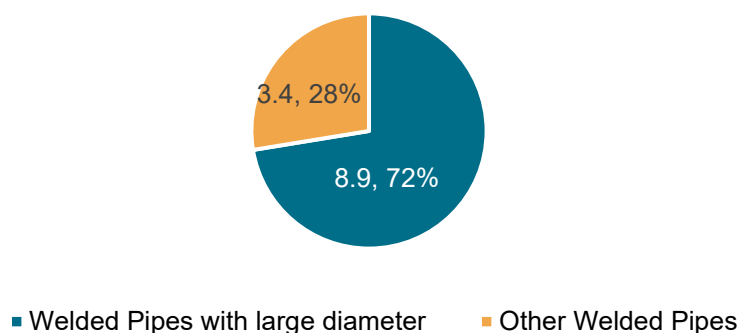
Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

The welded pipes industry has witnessed consistent growth during FY21–FY26E, supported by increasing investments in infrastructure, water distribution networks, irrigation projects, construction activities and industrial applications. Total welded pipe production increased from 7.5 MnTPA in FY21 to 13.2 MnTPA in FY26E, registering a CAGR of approximately 11.9% during the period. Growth was largely driven by higher demand for Electric Resistance Welded (ERW) pipes, which accounted for the majority of production. ERW pipe production increased from 5.7 MnTPA in FY21 to 9.5 MnTPA in FY25, while Submerged Arc Welded (SAW) pipe production grew from 1.9 MnTPA to 2.9 MnTPA over the same period.

The strong growth in welded pipe production reflects expanding demand from a diverse range of end-use sectors. ERW pipes are extensively used in construction, water supply, structural applications, irrigation systems and industrial fabrication, while SAW pipes are primarily utilized in large-diameter pipeline projects, oil and gas transportation networks and major infrastructure developments. The increasing focus on urban infrastructure development, expansion of water distribution systems, rural irrigation projects and industrial investments has supported demand across both product categories. In addition, rising investments in energy transportation infrastructure and city gas distribution networks have contributed to sustained growth in welded pipe consumption.

Production volume of welded pipes FY25 - split by size of pipe [in MnTPA]



Source: JPC, Crisil Intelligence
MnTPA: million tonnes per annum

Welded pipes are broadly segmented into large-diameter pipes and other welded pipes, with large-diameter pipes primarily used in oil and gas transmission, water transportation, slurry pipelines and other large-scale infrastructure applications requiring high-volume fluid movement. In FY2025, large-diameter welded pipes accounted for approximately 72% of total welded pipe production (8.9 MnTPA), significantly higher than the 28% share (3.4 MnTPA) contributed by other welded pipe categories. The dominance of large-diameter pipes reflects strong demand from infrastructure, water supply and energy transmission projects, supported by ongoing investments in pipeline networks and industrial development. Going forward, continued expansion of water distribution systems, oil and gas infrastructure and industrial projects is expected to support sustained demand for large-diameter welded pipes, while demand for smaller welded pipes is likely to be driven by construction, engineering and general industrial applications.

State-wise large diameter pipes production FY25 (in MnTPA)

Region	State	No. of Working Units	Working Capacity (MnTPA)	Total Production (MnTPA)
Western	Chhattisgarh	24	2.6	1.3
	Dadra & Nagar Haveli and Daman & Diu	2	0.0	0.0
	Gujarat	29	5.4	2.3
	Madhya Pradesh	6	0.7	0.4
	Maharashtra	19	2.9	1.2
	Regional Total	80	11.7	5.3
Eastern	Odisha	7	0.8	0.5
	Jharkhand	1	0.3	0.3
	West Bengal	3	0.0	0.1

	Regional Total	11	1.2	0.9
Northern	Chandigarh	1	0.1	0.1
	Haryana	14	0.1	0.1
	Himachal Pradesh	5	0.1	0.1
	Punjab	46	2.2	0.9
	Rajasthan	7	0.2	0.1
	Uttar Pradesh	15	1.5	0.9
	Regional Total	88	4.2	2.1
Southern	Andhra Pradesh	1	0.0	0.0
	Karnataka	3	0.2	0.1
	Tamil Nadu	4	0.3	0.3
	Telangana	4	0.3	0.2
	Regional Total	12	0.8	0.6
Grand Total		191	17.8	8.9

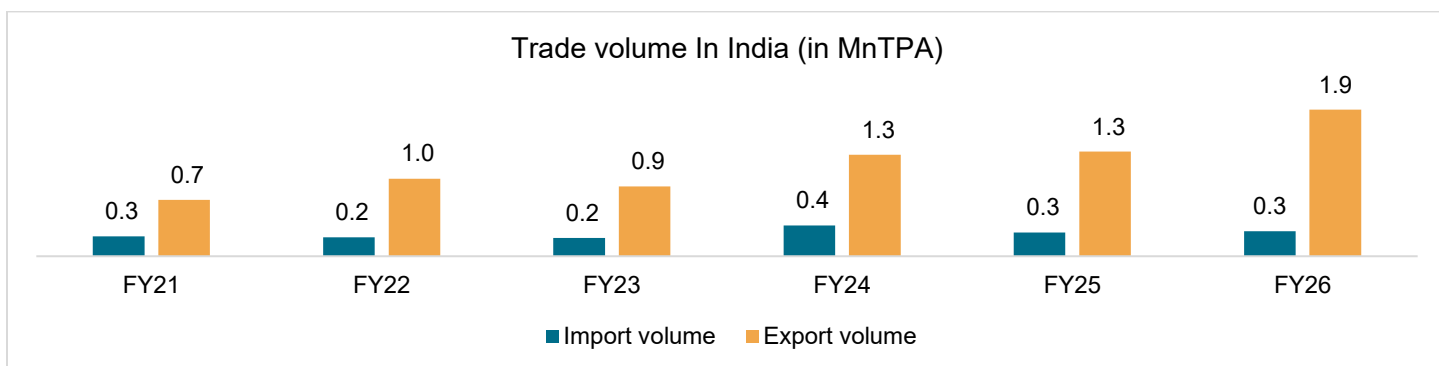
MnTPA: million tonnes per annum

Source: JPC, Crisil Intelligence

Production of large-diameter welded pipes in India is concentrated in the western and northern regions, which together accounted for approximately 83% of total domestic production in FY2025. The western region emerged as the largest production hub, with a total production volume of 5.3 MnTPA, supported by a working capacity of 11.7 MnTPA across 80 operating units. Within the region, Gujarat was the leading producer with 2.3 MnTPA of output, followed by Chhattisgarh and Maharashtra, each contributing more than 1.0 MnTPA. The concentration of production in these states reflects the presence of established steel manufacturing ecosystems, strong industrial infrastructure and proximity to key end-use sectors.

The northern region was the second-largest producer, accounting for 2.1 MnTPA of production in FY2025, led by Punjab and Uttar Pradesh, while the eastern and southern regions contributed 0.9 MnTPA and 0.6 MnTPA, respectively. Overall, India had an installed working capacity of approximately 17.8 MnTPA for large-diameter welded pipes against actual production of 8.9 MnTPA, indicating significant available capacity for future demand growth. The production footprint highlights the strategic importance of western and northern India in serving demand from infrastructure, water transportation, industrial and energy pipeline projects, which are expected to remain key growth drivers for the large-diameter welded pipes industry over the medium term.

Trade review of welded pipes (in MnTPA)

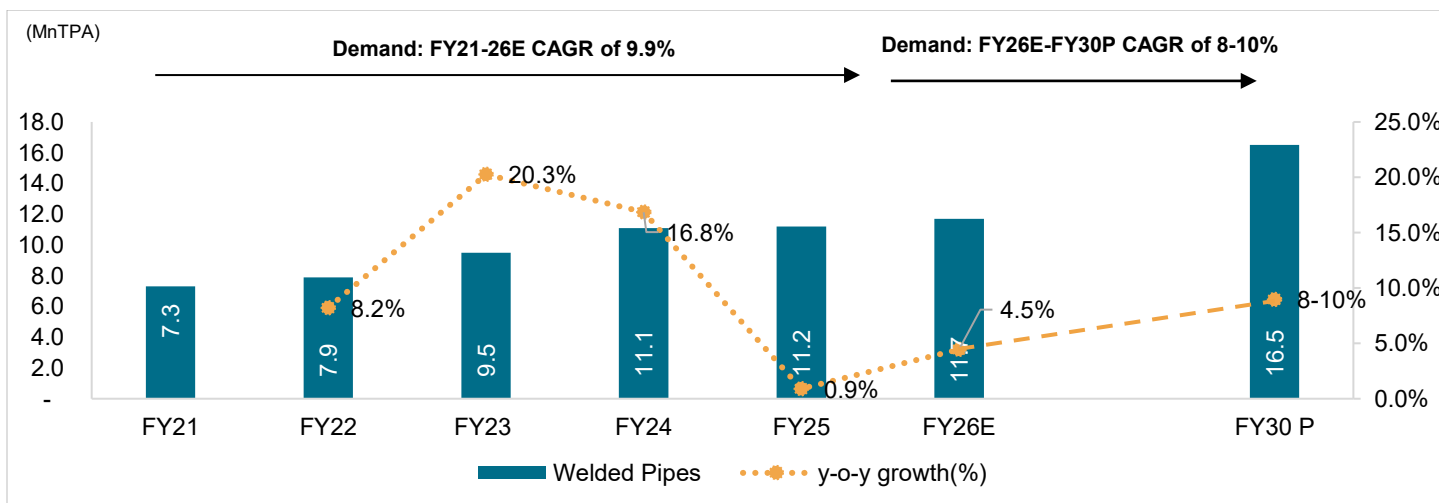


Source: Crisil Intelligence

India's welded pipe trade remained favourable during the review period, with exports consistently exceeding imports. Export volumes increased from 0.7 MnTPA in FY21 to 1.9 MnTPA in FY26, demonstrating the growing competitiveness of Indian pipe manufacturers in international markets. Imports remained comparatively low, fluctuating between 0.2 MnTPA and 0.4 MnTPA during the period. The relatively limited dependence on imports reflects the presence of adequate domestic manufacturing capacity and the ability of Indian producers to cater to a broad range of customer requirements across standard and specialized pipe segments.

Going forward, the outlook for the welded pipes industry remains positive, supported by continued government expenditure on infrastructure, rising investments in water and sanitation projects, urban development initiatives, oil and gas infrastructure expansion and increasing industrial activity. Demand from sectors such as construction, irrigation, transportation, energy and industrial manufacturing is expected to provide sustained growth opportunities for welded pipe manufacturers. Consequently, the industry is expected to maintain healthy production growth while continuing to strengthen its presence in export markets over the medium term.

Welded pipes demand review and outlook



P: Projected; E: Estimated on the provisional data of JPC

Source: Crisil Intelligence

MnTPA: million tonnes per annum

Demand for welded pipes has exhibited strong growth over the review period, increasing from 7.3 MnTPA in FY21 to 11.7 MnTPA in FY26E, representing a CAGR of approximately 9.9%. Growth was supported by rising investments in construction, urban infrastructure, water supply networks, irrigation projects, industrial facilities and energy transportation infrastructure. The segment witnessed particularly strong growth in FY23 and FY24, registering year-on-year growth of

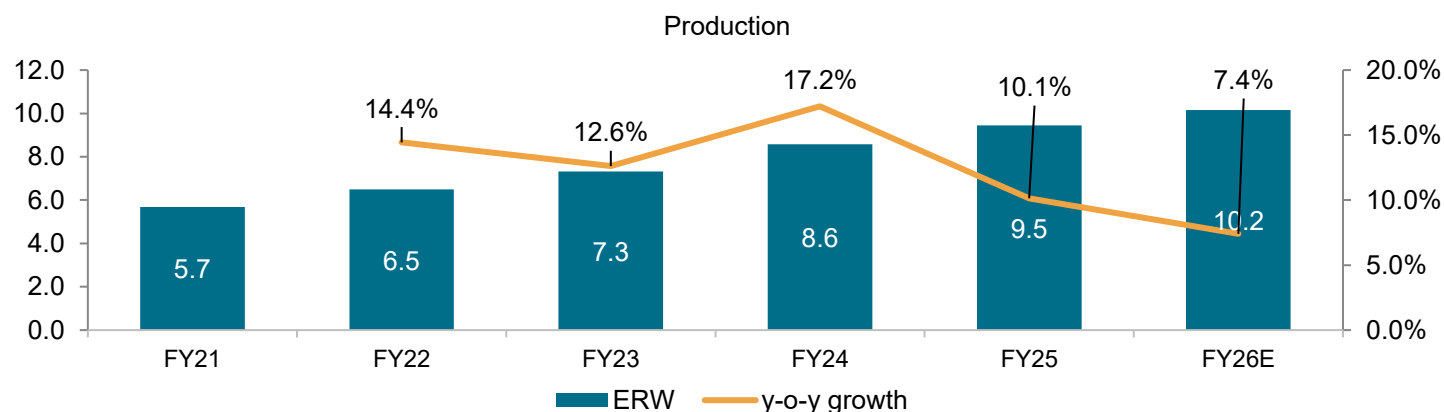
20.3% and 16.8%, respectively, driven by the recovery in infrastructure activity, increased government capital expenditure and expansion of utility projects.

Welded pipes are extensively used across structural applications, water transmission, irrigation systems, city gas distribution networks, oil & gas pipelines and industrial infrastructure. Their versatility and cost-effectiveness have supported broad-based demand across both public and private sector projects. The increasing focus on urbanization, water supply and sanitation programs, industrial expansion and energy infrastructure development has continued to create demand opportunities for welded pipe manufacturers.

Demand growth moderated significantly to 0.9% in FY25 before improving to an estimated 4.5% in FY26, reflecting a more normalized growth trajectory following the strong post-pandemic expansion phase. Despite the moderation, overall demand remained at historically high levels, supported by ongoing investments in infrastructure and utility sectors. Rising construction activity and continued investments in transportation, industrial and municipal infrastructure are expected to sustain medium-term demand growth.

Going forward, welded pipe demand is projected to reach approximately 16.5 MnTPA by FY30, implying a CAGR of around 8–10% during FY26–FY30. Growth is expected to be supported by increasing investments in water transmission projects, irrigation infrastructure, city gas distribution networks, renewable energy installations and industrial development. The continued focus on asset creation, improving utility infrastructure and expanding industrial activity is expected to provide sustained growth opportunities for the welded pipes industry over the forecast period.

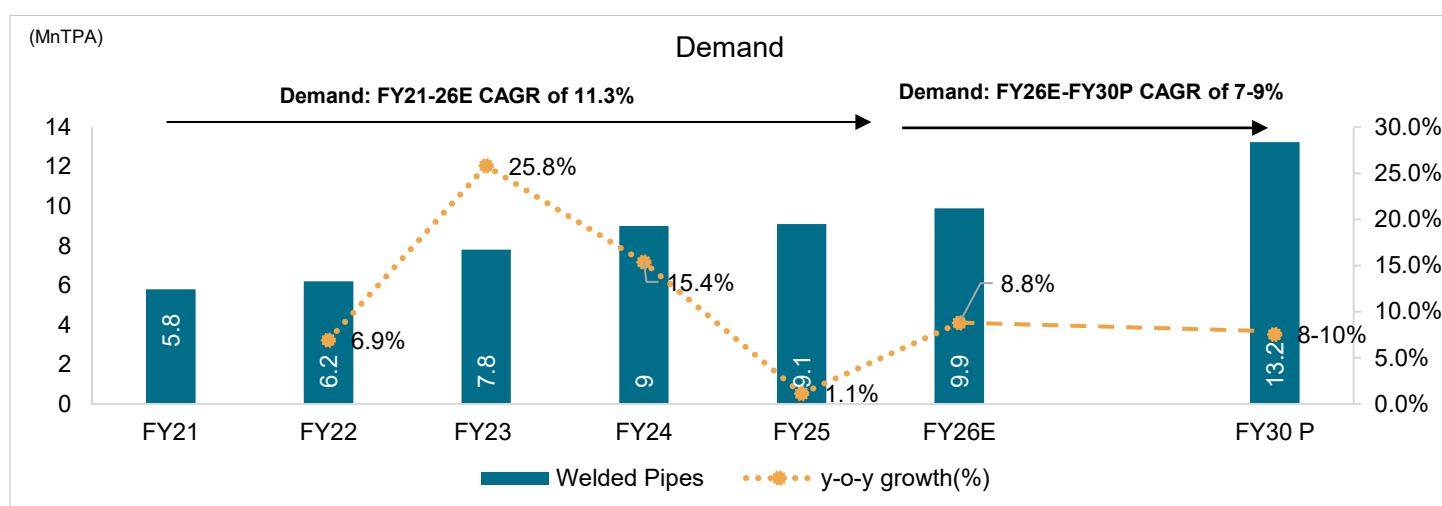
Production and demand review of ERW pipes (in MnTPA)



ERW: Electric Resistance Welded; E: Estimated

Source: Crisil Intelligence

MnTPA: million tonnes per annum



P: Projected; E: Estimated on the provisional data of JPC

Source: Crisil Intelligence

MnTPA: million tonnes per annum

Welded pipes demand across end-use industry

End-Use Industry (FY26)	% Share of Demand	Demand Volume FY26E (MnTPA)	CAGR (FY26E-30P)
Oil and gas	15%	1.7	3%
WSS	11%	1.2	5%
Irrigation	14%	1.6	9%
Power	12%	1.3	4%
Structurals	36%	4.0	9%
Others	11%	1.2	14%

P: Projected

Source: Crisil Intelligence

MnTPA: million tonnes per annum

Demand for welded pipes is diversified across multiple end-use sectors, reflecting their versatility and wide applicability across infrastructure, industrial and utility projects. In FY26, structural applications emerged as the largest end-use segment, accounting for approximately 36% of total welded pipe demand, equivalent to around 4.0 MnTPA. Welded pipes are extensively used in industrial buildings, warehouses, commercial structures, transmission towers and various fabrication applications owing to their strength, durability and cost efficiency. Demand from the structural segment is projected to grow at a CAGR of approximately 9% during FY26–FY30, supported by increasing investments in infrastructure development, industrial construction and urban expansion.

The oil & gas sector accounted for around 15% of total welded pipe demand in FY26, while irrigation, water supply and sanitation (WSS), and power sectors collectively contributed approximately 37% of demand. Welded pipes play a critical role in pipeline infrastructure, water transmission networks, irrigation systems and power generation projects. Government initiatives aimed at improving water accessibility, expanding irrigation coverage and strengthening utility infrastructure are expected to continue supporting demand across these sectors. Notably, irrigation and structural applications are projected to witness some of the strongest growth over the forecast period, with demand expected to expand at a CAGR of approximately 9%.

The broad distribution of demand across several sectors provides resilience to the welded pipes industry by reducing dependence on any single end-use segment. Growing investments in infrastructure, water management, energy

transportation and industrial development are expected to support sustained growth in welded pipe consumption over the medium term. Furthermore, rising urbanization, industrialization and government-led capital expenditure programmes are likely to create long-term demand opportunities across both traditional and emerging application areas for welded pipes.

State-wise despatches of pipes FY25 (MnTPA)

Region	State	Pipes
Western	Chhattisgarh	0.0
	DNH and Daman & Diu	0.0
	Goa	0.0
	Gujarat	1.9
	Maharashtra	0.6
	Madhya Pradesh	0.0
	Region Total	2.6
Eastern	Assam	0.0
	Bihar	0.0
	Jharkhand	0.0
	Meghalaya	0.0
	Odisha	3.6
	West Bengal	0.0
	Region Total	3.7
Northern	Delhi	0.0
	Haryana	0.0
	J&K	0.0
	Punjab	0.1
	Rajasthan	0.0
	Uttar Pradesh	0.0
	Region Total	0.1
Southern	Andhra Pradesh	0.0
	Karnataka	0.0
	Telangana	1.3
	Tamil Nadu	0.0
	Region Total	1.4
GRAND TOTAL		7.7

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

The state-wise distribution of pipe dispatches in FY25 highlights the concentration of demand in regions with significant infrastructure development, water management projects, industrial activity and utility investments. Total pipe dispatches stood at approximately 7.7 MnTPA during the year, reflecting the widespread application of pipes across water supply, irrigation, oil & gas, industrial and structural sectors. Demand was particularly concentrated in a few states undertaking large-scale infrastructure and utility projects, resulting in an uneven distribution of consumption across regions.

The eastern region emerged as the largest consumer of pipes, accounting for 3.7 MnTPA of dispatches in FY25, nearly half of the total national demand. Odisha alone contributed 3.6 MnTPA, making it the largest pipe-consuming state in the country. The strong demand in the state can be attributed to ongoing investments in industrial infrastructure, water supply projects, mining-related developments and various public infrastructure initiatives. The western region ranked second with dispatches of 2.6 MnTPA, supported primarily by Gujarat, which accounted for 1.9 MnTPA of consumption. Gujarat's large industrial base, extensive manufacturing activities and infrastructure investments have continued to support demand for pipe products.

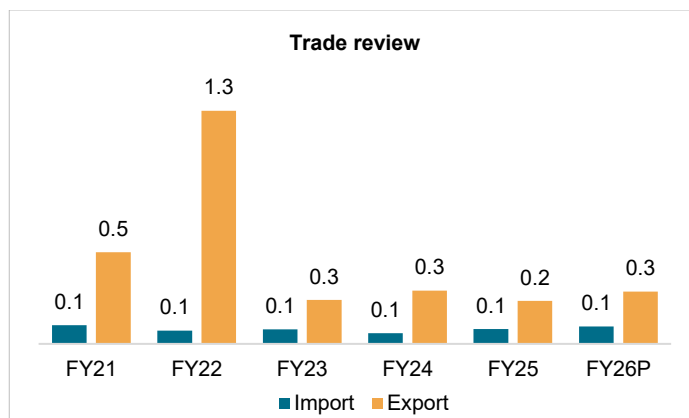
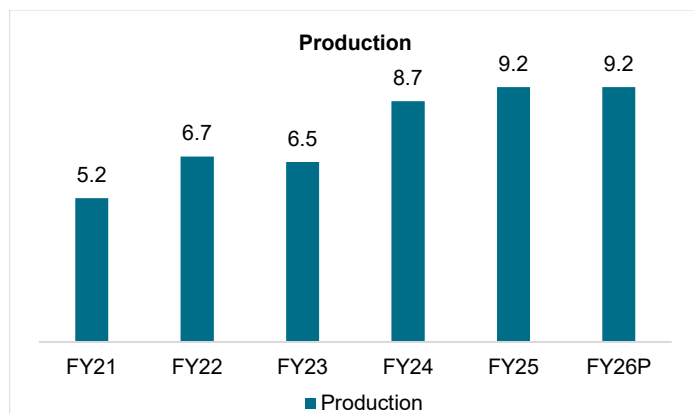
The southern region accounted for approximately 1.4 MnTPA of pipe dispatches, led by Telangana with consumption of 1.3 MnTPA. Demand in the region was supported by investments in irrigation networks, water transmission projects and

urban infrastructure development. In contrast, the northern region accounted for a relatively smaller share of dispatches at 0.1 MnTPA during FY25. Overall, the dispatch pattern reflects the close linkage between pipe consumption and infrastructure-led investments, particularly in sectors such as water management, industrial development and utility infrastructure.

The concentration of demand in a few key states highlights the importance of government expenditure, industrial investments and public utility projects in driving pipe consumption. Going forward, initiatives related to irrigation expansion, water supply infrastructure, urban development, industrial corridors and energy transportation networks are expected to support demand growth across both existing and emerging consumption centres. As investments in infrastructure continue to increase, pipe demand is expected to witness broader geographical diversification while maintaining strong growth momentum in major industrial states.

Demand review and outlook: Wire Rods

Production and trade review of wire rods (in MnTPA)



P: Provisional

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

The Indian wire rod market comprises a mix of low-carbon, high-carbon and alloy steel grades catering to diverse end-use applications. Low-carbon wire rods account for a significant share of demand and are primarily used in construction, wire drawing and general engineering applications. High-carbon and special-grade wire rods, including cold-heading quality (CHQ), tyre bead, spring steel and alloy wire rods, cater to automotive, fastener, welding consumables and engineering sectors, and typically command higher realizations due to their stringent quality specifications and value-added nature.

Production of wire rods has witnessed a steady upward trend over the review period, supported by growing demand from construction, engineering, automotive and industrial manufacturing sectors. Production increased from 5.2 MnTPA in FY21 to 9.2 MnTPA in FY26P and is estimated to remain at a similar level in FY26. After a temporary decline in FY21, production recovered strongly in FY22 and continued to expand thereafter, driven by increasing infrastructure activity, growth in manufacturing output and rising consumption of downstream wire-based products.

Wire rods occupy an important position within the steel value chain and serve as a key raw material for the production of wires, fasteners, springs, welding electrodes, wire mesh and various engineering components. The broad application base across multiple industries has supported consistent growth in demand and production. The sharp increase in production observed during FY24 and FY25 reflects stronger investments in infrastructure and manufacturing activities, which contributed to higher consumption of wire rod-based products.

India remained a net exporter of wire rods throughout the review period, with exports consistently exceeding imports. Export volumes increased significantly from 0.1 MnTPA in FY21 to a peak of 1.3 MnTPA in FY22, supported by favourable international demand and competitive export opportunities. Thereafter, exports moderated and stabilized at around 0.2–0.3 MnTPA during FY23–FY26. Imports remained relatively insignificant throughout the period at approximately 0.1 MnTPA annually, highlighting the adequacy of domestic production capacity to meet local requirements.

Overall, the wire rods segment continues to benefit from broad-based demand across construction, automotive, engineering and industrial sectors. The combination of growing domestic consumption and a favorable trade balance positions the segment for steady growth over the medium term, supported by ongoing investments in infrastructure development and manufacturing expansion. Country-wise trade of bars & rods in FY26

Import (FY26)

Country	Volume (MnTPA)
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Thailand	0.05
Korea	0.04
China	0.03
Japan	0.01
Others	0.03
Total	0.16

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

Export (FY26)

Country	Volume (MnTPA)
Nepal	0.13
USA	0.05
Belgium	0.03
Italy	0.02
Bangladesh	0.02
Others	0.22
Total	0.47

Source: JPC, Crisil Intelligence

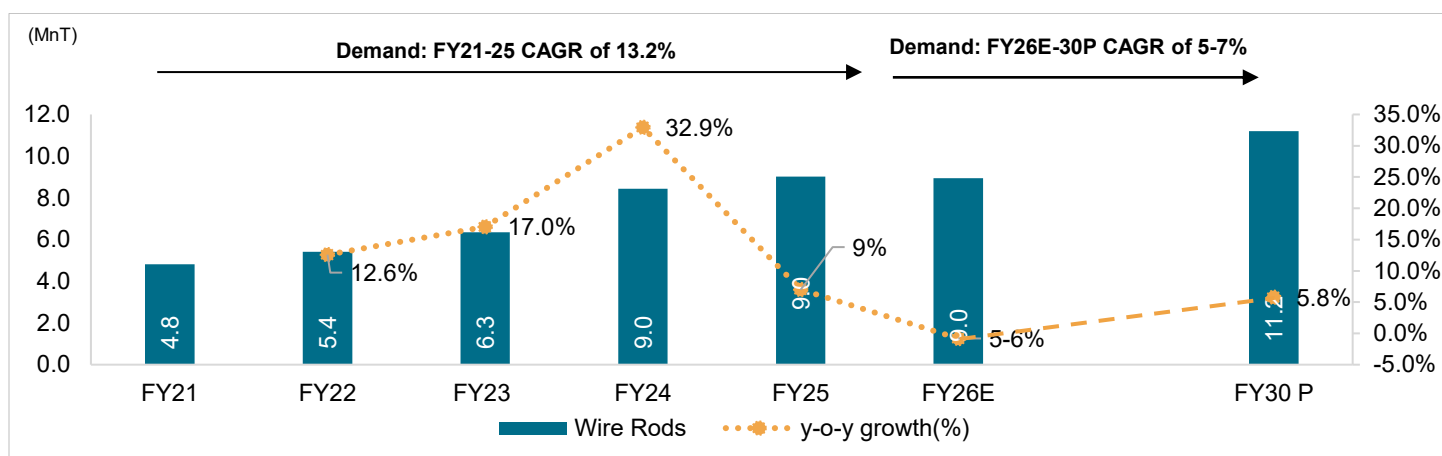
MnTPA: million tonnes per annum

India's wire rod trade remained relatively balanced in FY26, with exports continuing to exceed imports, highlighting the competitiveness of domestic manufacturers in international markets. Total wire rod imports stood at 0.16 MnTPA during the year. Thailand emerged as the largest source of imports, accounting for 0.05 MnTPA, followed by South Korea at 0.04 MnTPA and China at 0.03 MnTPA. Imports from Japan and other countries constituted a relatively small share of total import volumes. The low level of imports indicates the availability of adequate domestic production capacity to meet local demand, while imported material is primarily utilized to address specific grade requirements, regional supply-demand imbalances and pricing opportunities.

On the export front, India exported approximately 0.47 MnTPA of wire rods in FY26, resulting in a positive trade balance for the segment. Nepal emerged as the largest export destination, accounting for 0.13 MnTPA of exports, followed by the United States at 0.05 MnTPA. Other important export markets included Belgium, Italy and Bangladesh. The geographical diversity of export destinations reflects the acceptance of Indian wire rods across both neighboring countries and developed international markets, supported by competitive pricing, product quality and established trade relationships.

The overall trade pattern highlights India's position as a net exporter of wire rods, underpinned by a strong domestic manufacturing base and sufficient production capacity. While imports continue to supplement domestic availability in select categories, exports provide an important avenue for market diversification and capacity utilization. Going forward, trade flows are expected to remain influenced by global steel demand, pricing competitiveness, freight costs and international trade policies. Rising demand from construction, engineering, automotive and industrial sectors, both domestically and internationally, is expected to support continued participation of Indian wire rod manufacturers in global markets.

Wire rods Demand review and outlook



P: Projected; E: Estimated on the provisional data of JPC

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

Demand for wire rods has demonstrated strong growth over the review period, increasing from 4.8 MnTPA in FY21 to 9.0 MnTPA in FY26E, representing a CAGR of approximately 13.2% during FY21–FY26E. The segment experienced a temporary contraction of 11.0% in FY21 due to the disruption caused by the COVID-19 pandemic. However, demand recovered steadily thereafter, supported by the revival of industrial activity, infrastructure investments and growth in downstream manufacturing sectors. Demand expanded by 12.6% in FY22 and 17.0% in FY23, reflecting increased consumption across engineering, construction and automotive-related applications.

The highest growth was recorded in FY24, when demand increased by 32.9% year-on-year to reach 8.4 MnTPA. The strong growth was driven by higher manufacturing activity, increasing infrastructure development and rising demand for wire rod-based products such as wires, fasteners, springs, welding electrodes and engineering components. Demand further increased to 9.0 MnTPA in FY25, supported by sustained growth across key end-user industries.

Demand is estimated to remain at around 9.0 MnTPA in FY26, indicating a period of consolidation following the strong expansion witnessed in previous years. Nevertheless, consumption continues to remain at elevated levels, supported by ongoing investments in infrastructure, industrial manufacturing and automotive production. The diversified application profile of wire rods provides resilience against fluctuations in any individual end-use sector and supports stable long-term demand.

Going forward, wire rod demand is projected to increase to approximately 11.2 MnTPA by FY30, implying a CAGR of around 5–7% during FY26–FY30. Future growth is expected to be driven by increasing investments in infrastructure, expansion of manufacturing activity, rising automotive production and growth in engineering and industrial sectors. Continued emphasis on domestic manufacturing and infrastructure development is expected to support sustained demand for wire rods over the medium term.

Wire rods demand across end-use industry

End-Use Industry (FY26)	% Share of Demand	Demand Volume FY26E (MnTPA)	CAGR (FY26E-30P)
Construction (Residential + Commercial)	13%	1.2	7%
Infrastructure	27%	2.4	8%
Industrial	10%	0.9	7%
Automotive	20%	1.8	7%
Engineering/Capital Goods	24%	2.1	2%

Power	6%	0.5	4%
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P: Projected

Source: Crisil Intelligence

MnTPA: million tonnes per annum

Demand for wire rods is distributed across a diverse range of end-use industries, reflecting the product's importance in both industrial manufacturing and infrastructure development. In FY26, the infrastructure sector emerged as the largest consumer, accounting for approximately 27% of total demand, equivalent to around 2.4 MnTPA. Wire rods are extensively utilized in infrastructure projects for applications such as reinforcement products, fabricated steel components, transmission systems and construction-related applications. Supported by continuing investments in transportation, urban infrastructure and industrial development projects, demand from this segment is expected to grow at a CAGR of approximately 8% during FY26–FY30, making it the fastest-growing end-use sector.

The engineering and capital goods sector accounted for about 24% of total demand, followed by the automotive sector at 20%. Wire rods are widely used in the production of fasteners, springs, bearings, welding consumables and various engineering components. Increasing manufacturing activity, expansion in industrial production and rising demand from automotive and engineering industries are expected to support sustained consumption across these segments. Demand from both the automotive and engineering sectors is projected to grow at approximately 7% and 2% CAGR, respectively, during FY26–FY30.

The construction sector contributed approximately 13% of total demand, while the industrial and power sectors accounted for 10% and 6%, respectively. Demand from construction is supported by residential and commercial building activity, whereas the power sector utilizes wire rods in transmission and distribution infrastructure. Although the power segment represents a relatively smaller share of demand, continued investments in grid modernization and transmission infrastructure are expected to support steady growth.

Overall, the diversified demand profile of wire rods reduces dependence on any single end-use industry and provides resilience against cyclical fluctuations in individual sectors. Going forward, growth in infrastructure development, automotive manufacturing, engineering activity and construction is expected to support sustained expansion in wire rod consumption, with demand projected to reach approximately 11.2 MnTPA by FY30.

State-wise wire drawing production FY25

State	No. of Working Units	Working Capacity (MnTPA)	Total Production (MnTPA)
Andhra Pradesh	5	0.1	0.1
Chandigarh	4	0.0	0.0
Chhattisgarh	19	0.7	0.3
Gujarat	5	0.1	0.1
Haryana	3	0.2	0.1
Himachal Pradesh	8	0.1	0.1
Jammu and Kashmir	4	0.0	0.0
Karnataka	1	0.0	0.0
Madhya Pradesh	2	0.2	0.2
Maharashtra	4	0.7	0.4
Odisha	1	0.5	0.7
Punjab	2	0.1	0.1
Rajasthan	3	0.1	0.0
Tamil Nadu	1	0.0	0.0
Uttar Pradesh	2	0.0	0.0
West Bengal	1	0.0	0.0
Total	65	2.8	2.0

Source: JPC, Crisil Intelligence

MnTPA: million tonnes per annum

Wire drawing is an important downstream steel processing activity that converts wire rods into a variety of value-added products such as wires, fasteners, springs, wire mesh, fencing products and engineering components. In FY25, India's wire drawing industry comprised 65 operating units with an aggregate installed capacity of approximately 2.8 MnTPA and total production of 2.0 MnTPA. The industry remains highly fragmented, with production distributed across multiple states catering to regional demand from construction, automotive, engineering and industrial manufacturing sectors.

Production was concentrated in a handful of key manufacturing states. Odisha emerged as the largest producer with output of 0.7 MnTPA, followed by Maharashtra with 0.4 MnTPA and Chhattisgarh with 0.3 MnTPA. These states benefit from proximity to steel manufacturing hubs, availability of wire rod feedstock and well-established industrial ecosystems. Madhya Pradesh also recorded notable production of 0.2 MnTPA, while states such as Andhra Pradesh, Gujarat, Haryana, Himachal Pradesh and Punjab contributed smaller but meaningful volumes. The concentration of production within steel-producing regions highlights the integrated nature of the steel value chain and the logistical advantages of locating downstream processing units close to raw material sources.

The wire drawing industry serves a broad range of end-use sectors including construction, infrastructure, automotive, power transmission, industrial manufacturing and engineering applications. Demand for drawn wire products is closely linked to growth in these sectors, as they are used in products such as reinforcement wires, welding consumables, fasteners, springs and electrical conductors. The industry's nationwide manufacturing presence enables producers to effectively serve regional demand centres while minimizing logistics costs and delivery timelines.

Going forward, the outlook for wire drawing production remains favourable, supported by increasing demand for value-added steel products, expansion in infrastructure and construction activities, growing automotive production and rising engineering output. Continued investments in manufacturing and industrial development are expected to support higher wire rod consumption and downstream processing activity, thereby creating growth opportunities for wire drawing manufacturers across the country.

Key raw materials for steel production

Steel production is heavily dependent on the availability of key raw materials, primarily iron ore, coal and steel scrap, each of which plays a critical role in the steelmaking process. Iron ore serves as the principal source of iron and forms the foundation of the steel value chain. It is processed through various routes, including blast furnace-basic oxygen furnace (BF-BOF) and direct reduced iron (DRI) production, to manufacture crude steel and finished steel products. The availability, quality and pricing of iron ore significantly influence steel production costs and the competitiveness of steel manufacturers.

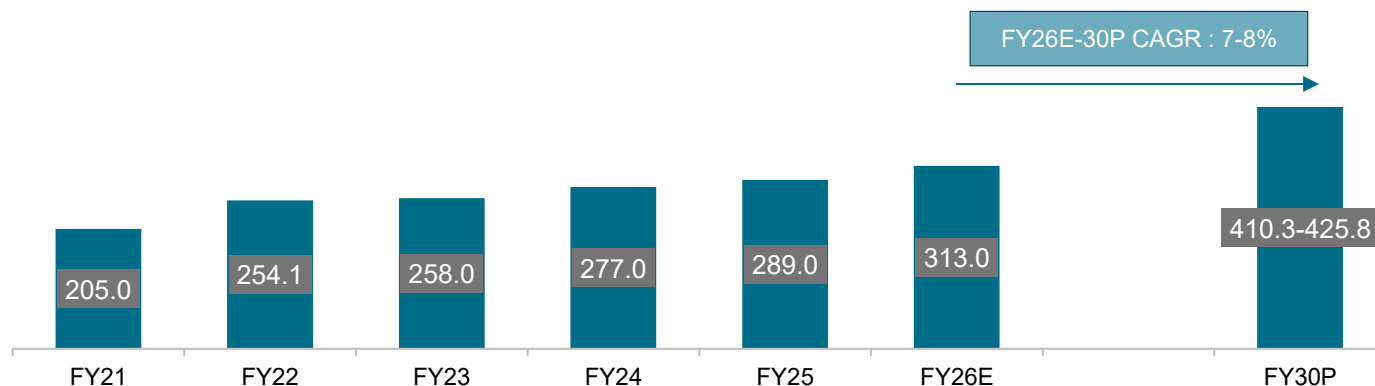
Coal, particularly coking coal, is another essential raw material used in the blast furnace route for steelmaking. Coking coal is processed into coke, which acts both as a reducing agent and as a source of energy during ironmaking. In India, non-coking coal is also widely utilized in sponge iron production through the coal-based direct reduced iron (DRI) route, making coal availability critical for both primary and secondary steel producers. Fluctuations in domestic and international coal prices can have a significant impact on steel production economics, particularly for integrated steel manufacturers and sponge iron producers.

Steel scrap represents an increasingly important raw material, particularly for electric arc furnace (EAF) and induction furnace (IF) based steelmaking operations. Scrap-based steel production supports resource efficiency and circular economy principles by enabling the recycling of steel products at the end of their useful life. Growing environmental awareness, decarbonization initiatives and increasing adoption of EAF-based production are expected to enhance the role of scrap in global steelmaking. The availability and pricing of scrap, however, remain influenced by industrial activity, recycling infrastructure and international trade flows.

Collectively, the availability, quality and pricing trends of iron ore, coal and scrap play a crucial role in determining steel production costs, industry profitability and supply dynamics. Consequently, monitoring raw material availability and price movements remains essential for understanding the performance and outlook of the steel industry.

Raw material availability in the domestic market

Domestic iron ore production (in MnTPA)



Source: Indian Bureau of Mines, Crisil Intelligence

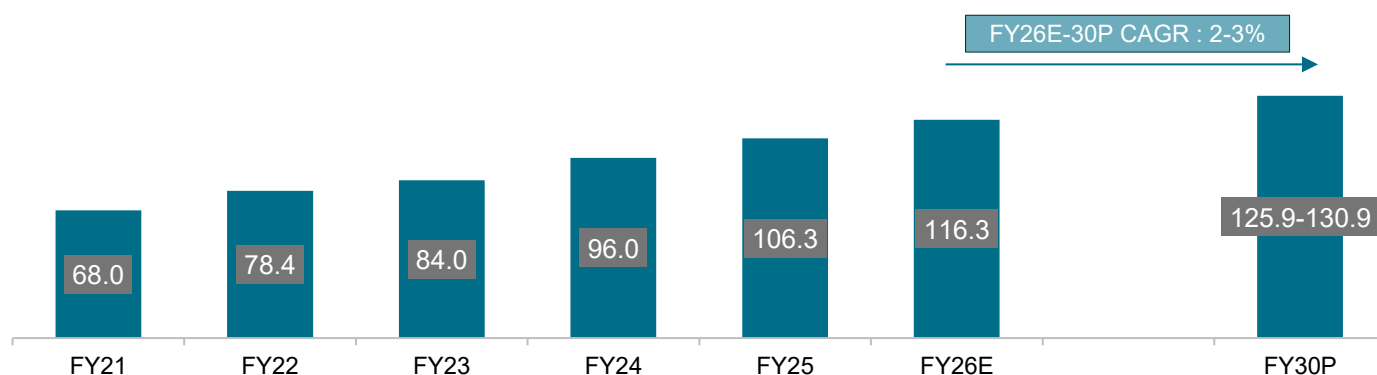
MnTPA: million tonnes per annum

India's domestic iron ore production has witnessed steady growth over recent years, reflecting the country's strong resource base and increasing demand from the steel industry. Domestic iron ore production increased from 205.0 MnTPA in FY2021 to an estimated 313.0 MnTPA in FY2026, representing a CAGR of approximately 8.8% during the period. The consistent increase in production has been driven by expanding steelmaking capacity, rising domestic steel consumption and improved mining activity across major ore-producing states such as Odisha, Chhattisgarh, Karnataka and Jharkhand.

The increase in iron ore production highlights India's ability to meet a significant portion of the steel industry's raw material requirements through domestic resources. Supported by capacity additions in steelmaking, infrastructure investments and continued policy focus on enhancing mining output, domestic iron ore production is projected to increase further to approximately 410.3-425.8 MnTPA by FY2030, representing a CAGR of 7-8% over FY2026-FY2030. This growth is expected to support the long-term raw material requirements of the steel industry while reducing dependence on imports and strengthening supply security across the steel value chain.

Iron ore remains the single most important raw material in steel production, with demand closely linked to crude steel output and downstream steel manufacturing activity. As India continues to witness growth in infrastructure development, construction, manufacturing and urbanization, domestic iron ore production is expected to remain on an upward trajectory, supporting the long-term expansion of the country's steel sector.

Domestic iron ore pellet (in MnTPA)



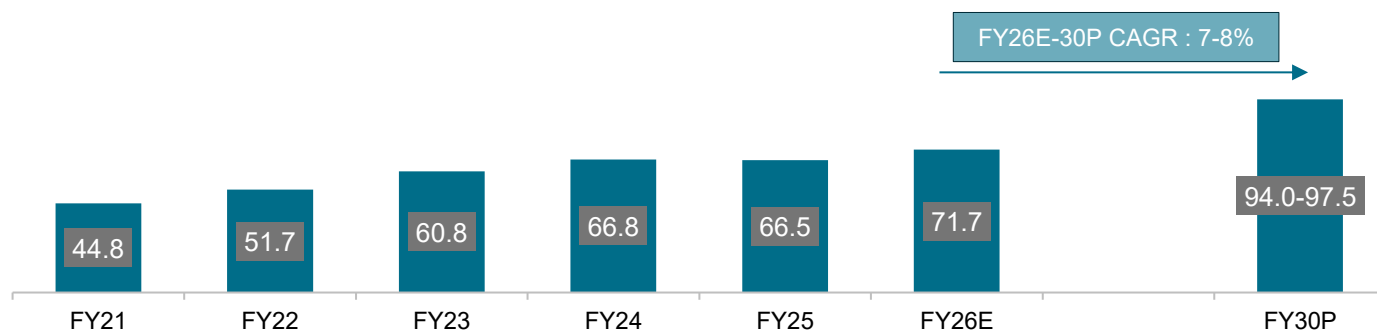
Source: Crisil Intelligence

MnTPA: million tonnes per annum

Domestic iron ore pellet production registered robust growth during FY2021-FY2026, increasing from 68.0 MnTPA in FY2021 to an estimated 116.3 MnTPA in FY2026, representing a CAGR of approximately 11.3% during the period. Growth in pellet production was supported by rising crude steel output, increasing adoption of pellets in blast furnace and sponge iron production, capacity additions by integrated steel producers and greater focus on improving raw material efficiency in steelmaking. The increasing use of pellets as a preferred feedstock, owing to their superior metallurgical properties and lower environmental footprint compared with iron ore fines, also contributed to demand growth.

Going forward, domestic iron ore pellet production is projected to increase to approximately 125.9-130.9 MnTPA by FY2030, representing a relatively moderate CAGR of 2-3% over FY2026-FY2030. The slower growth compared with the historical period reflects a higher production base and gradual capacity additions across the industry. Nevertheless, continued growth in steelmaking capacity, sustained pellet consumption across blast furnace and DRI routes, and ongoing investments in beneficiation and pelletization facilities are expected to support steady growth in domestic pellet production over the medium term.

Domestic coking coal production (in MnTPA)



Source: Ministry of Coal, Crisil Intelligence

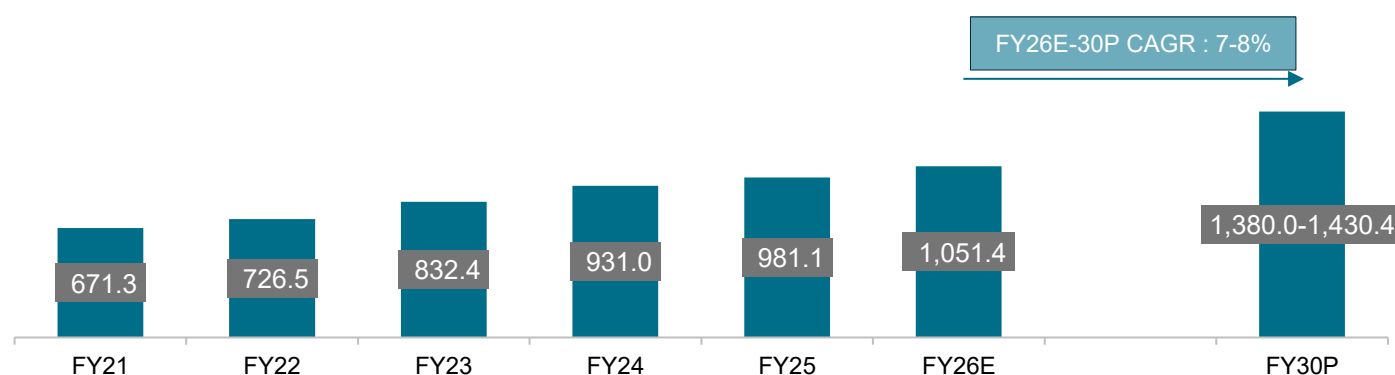
MnTPA: million tonnes per annum

Coking coal is a critical raw material for the steel industry as it is used in the production of coke, which serves as both a fuel and reducing agent in the blast furnace route of steelmaking. India's domestic coking coal production increased from 44.8 MnTPA in FY2021 to an estimated 71.7 MnTPA in FY2026, representing a CAGR of approximately 9.9% during the period. Growth in production has been supported by efforts to enhance domestic coal output, improve mining efficiencies and strengthen raw material security for the steel sector. Despite this increase, domestic availability remains insufficient to fully meet industry requirements, resulting in continued dependence on imports for a substantial portion of coking coal demand.

Going forward, domestic coking coal production is projected to increase further to approximately 94.0-97.5 MnTPA by FY2030, representing a CAGR of 7-8% over FY2026-FY2030. The expected growth is likely to be driven by continued investments in coal mining, policy measures aimed at increasing domestic resource utilization and expanding steelmaking capacity in the country. While higher domestic production is expected to improve raw material security and partially reduce import dependence, imported coking coal is likely to remain an important component of India's steelmaking raw material basket due to limitations in the quality and availability of domestic reserves.

The availability and pricing of coking coal have a direct impact on steel production costs, especially for integrated steel producers operating through the blast furnace-basic oxygen furnace (BF-BOF) route. Consequently, increasing domestic production remains an important strategic priority for the industry. Going forward, continued investments in coal mining, operational efficiency improvements and policy measures aimed at enhancing domestic resource utilization are expected to support coking coal availability. Nevertheless, international coking coal markets are likely to remain an important determinant of raw material costs for the Indian steel industry over the medium term.

Domestic non-coking coal production (in MnTPA)



Source: Ministry of Coal, Crisil Intelligence

MnTPA: million tonnes per annum

Domestic non-coking coal production increased significantly from 671.3 MnTPA in FY2021 to an estimated 1,051.4 MnTPA in FY2026, registering a CAGR of approximately 9.4% during the period. Growth was driven by higher output from Coal India Limited, captive and commercial mining operations, supported by policy measures aimed at enhancing domestic coal availability and reducing import dependence. Rising demand from the power, steel, cement and sponge iron sectors, coupled with capacity expansion, mine development activities and improvements in coal evacuation infrastructure, contributed to the sustained increase in production. Going forward, domestic non-coking coal production is projected to reach approximately 1,380.0-1,430.4 MnTPA by FY2030, representing a CAGR of 7-8% over FY2026-FY2030. Continued investments in mining infrastructure, commercial coal mining, production enhancement initiatives and growing energy demand are expected to support production growth, ensuring adequate fuel availability for key industrial and power-consuming sectors.

Coal India Limited (CIL) is the largest producer and supplier of non-coking coal in India, accounting for approximately 74-79% of the country's coal production and serving as the primary source of coal for power, steel, sponge iron, cement and other industrial sectors. CIL operates through its subsidiaries including Mahanadi Coalfields Limited (MCL), South Eastern Coalfields Limited (SECL), Northern Coalfields Limited (NCL), Central Coalfields Limited (CCL), Western Coalfields Limited (WCL), Eastern Coalfields Limited (ECL) and Bharat Coking Coal Limited (BCCL). Among these, MCL, SECL and NCL are the largest coal-producing subsidiaries and collectively contribute a significant share of domestic non-coking coal output. In addition to Coal India, production from Singareni Collieries Company Limited (SCCL), captive coal mines and commercial mining blocks has increased in recent years, supporting domestic coal availability. Nevertheless, Coal India

continues to dominate the non-coking coal market and remains the principal supplier to sponge iron manufacturers, with coal distributed primarily through Fuel Supply Agreements (FSAs) and e-auction channels.

Non-Coking Coal Supplied by Coal India Limited over the years	
Year	Volume (in MnTPA)
FY21	557.4
FY22	576.0
FY23	648.6
FY24	713.2
FY25	721.4
FY26	710.0

Source: Coal India Limited, Crisil Intelligence

Non coking coal and Coal India's FSA vs e-auction pricing

Fuel supply agreement (FSA)

A Fuel Supply Agreement (FSA) is a long-term coal supply contract executed between Coal India Limited (or its subsidiaries) and an eligible consumer, under which Coal India commits to supply a specified quantity of coal at notified prices, subject to agreed terms and conditions relating to quality, quantity, lifting schedules and performance obligations. Coal India considers FSAs a key mechanism for ensuring long-term coal availability to critical sectors and maintaining supply security.

Key features of FSA coal

Parameter	FSA Coal
Allocation mechanism	Linkage granted under Government / Coal India framework
Contract tenure	Long-term supply arrangement
Pricing	Coal supplied at notified prices
Supply visibility	High
Price volatility	Relatively low
Procurement method	Contracted quantity allocation
Key benefit	Security of fuel availability and lower procurement cost

Coal India Limited (CIL) accounts for nearly 89% of India's geological coal resources. Coal is supplied through long-term Fuel Supply Agreements (FSAs) and e-auction channels. While FSA coal is supplied at notified prices and provides supply security, e-auction coal is sold through market-based bidding and typically commands a premium over notified prices. The e-auction premiums moderated to 48% in FY25 from 72% in FY24, reflecting improved domestic coal availability and softer international coal prices. Consequently, coal consumers with higher FSA coverage benefit from lower and more stable fuel costs compared with those dependent on e-auction procurement.

Year	e-auction premium over notified price
FY22	88%
FY23	252%
FY24	72%
FY25	48%

FSA vs e-auction		
Particulars	FSA	e-auction
Price discovery	Notified price	Market-driven bidding
Supply certainty	High	Depends on auction availability
Cost visibility	High	Volatile
Premium over notified price	-	Typically positive
Procurement objective	Base fuel requirement	Additional/spot requirement

Scrap availability (in MnTPA)



Source: Crisil Intelligence

MnTPA: million tonnes per annum

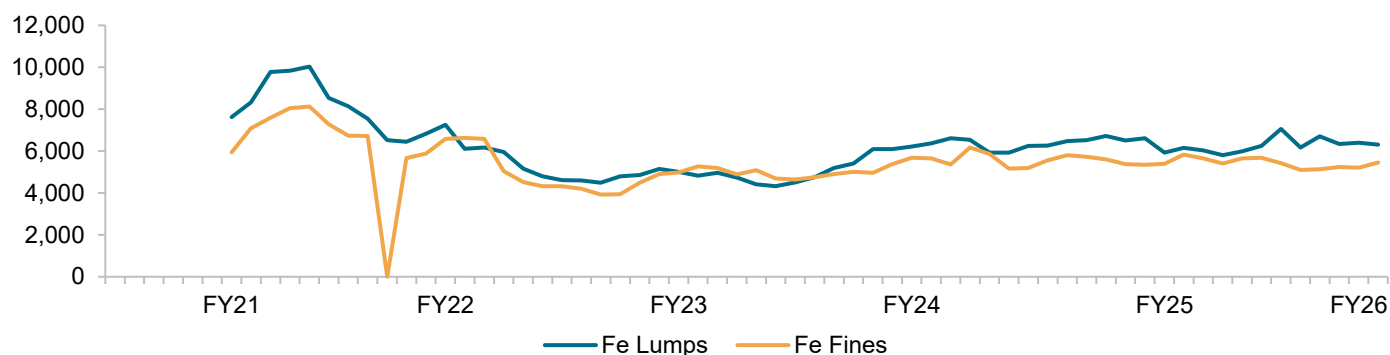
Steel scrap has emerged as an increasingly important raw material for the Indian steel industry, particularly with the growing adoption of electric arc furnace (EAF) and induction furnace (IF) based steelmaking routes. As shown in the chart, domestic scrap availability increased steadily from 19.7 MnTPA in FY21 to 33.2 MnTPA in FY26, representing a CAGR of approximately 11.0% during the period. The increase reflects growing industrial activity, higher volumes of end-of-life steel products entering the recycling stream and increasing emphasis on resource efficiency and circular economy practices within the steel sector.

The availability of scrap has improved significantly in recent years, supported by the formalization of the steel recycling ecosystem, expansion of organized scrap processing infrastructure and implementation of initiatives such as the Vehicle Scrappage Policy. Scrap-based steel production offers several advantages, including lower energy consumption, reduced dependence on virgin raw materials and lower carbon emissions compared with conventional iron ore-based steelmaking routes. As a result, scrap has become an increasingly important feedstock for secondary steel producers and EAF-based steel manufacturers.

The growing availability of domestic scrap is expected to play a critical role in supporting India's long-term steel production requirements while improving sustainability across the steel value chain. Rising urbanization, infrastructure replacement cycles, industrial expansion and increasing generation of obsolete scrap are expected to further augment scrap availability over the medium term. At the same time, the industry's focus on reducing carbon emissions and improving resource efficiency is likely to support greater utilization of scrap in steel production, reinforcing its importance as a strategic raw material for the Indian steel industry.

Raw material price trend in the domestic market (Rs/tonne)

Iron ore (Rs/tonne)



The annual average prices of iron lumps and fines peaked in fiscal 2022 during the past five-year period, owing to underperformance of the supply of iron ore from three major exporters to India, namely Australia, Brazil and South Africa, amid geopolitical uncertainties in prices in fiscal 2022.

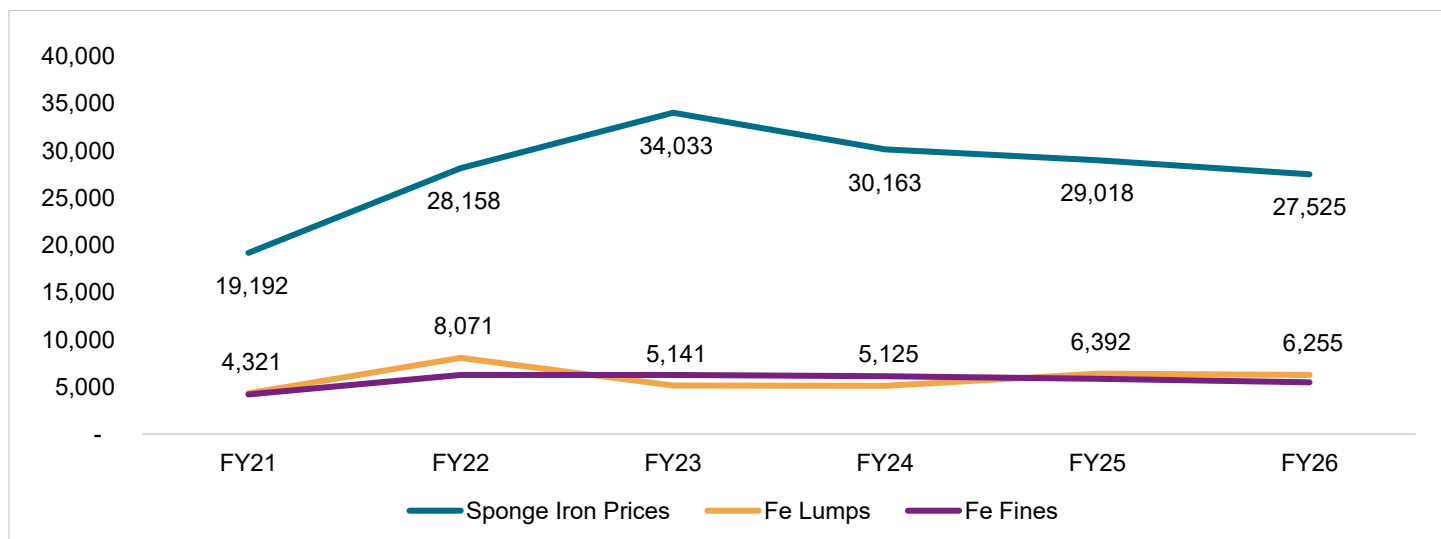
Average price in Rs per tonne	FY22	FY23	FY24	FY25	FY26
Fe Lumps	8,071.3	5,140.8	5,125.2	6,392.4	6,254.7
Fe Fines	6,260.8	6,260.2	6,110.3	5,868.9	5,492.9

Source: Crisil Intelligence, Industry

Note:

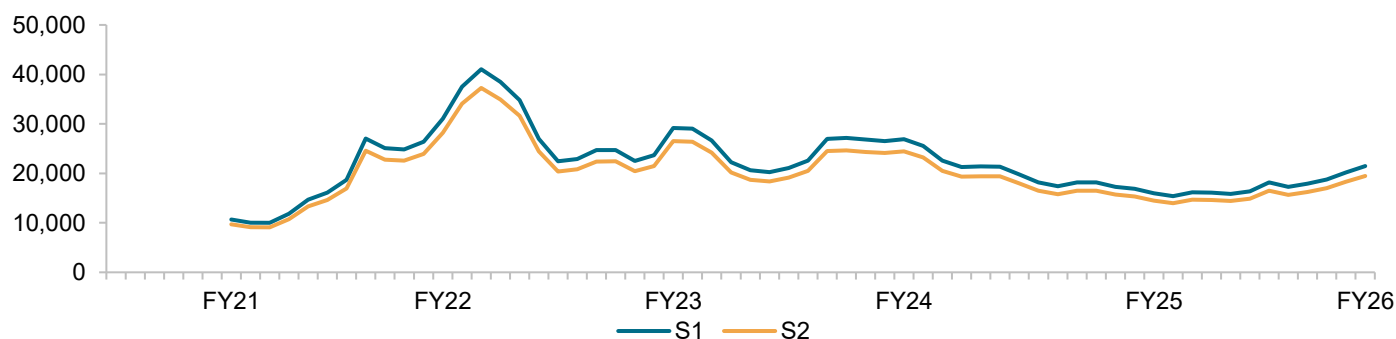
- 1) The prices are for iron ore grade with Fe content in the 62-65% range
- 2) The prices shown above are average for the corresponding fiscals

Sponge iron and iron ore prices review (Rs/tonne)



Source: Crisil Intelligence

Coking coal (Rs/tonne)



Source: Ministry of Coal, Crisil Intelligence, Industry

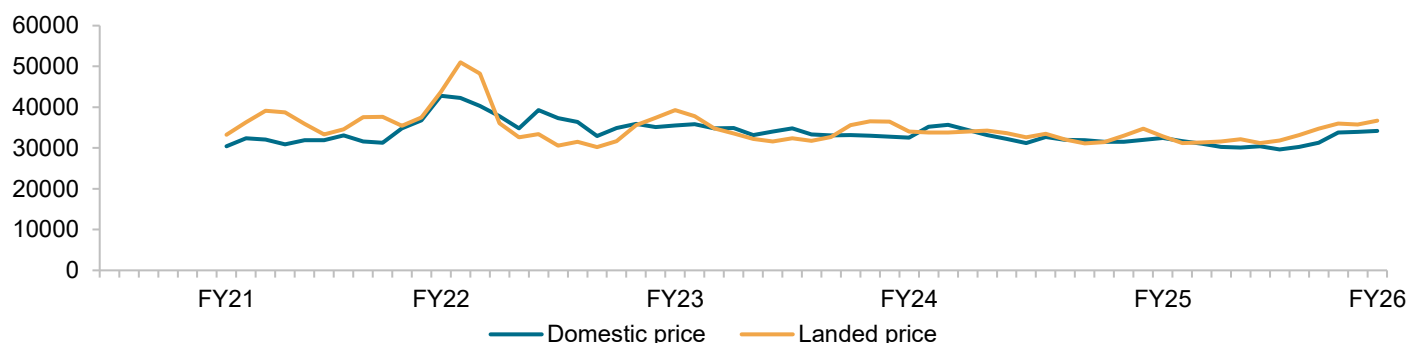
The average prices of coking coal surged strongly on-year in fiscal 2023 to Rs 29,072.8 per tonne for S1 grade and 26,396.0 for S2 grade from the price of ~Rs 18,866.7 per tonne for S1 grade and Rs 17,129.8 per tonne for S2 grade a year earlier. This strong growth in the prices of coal in fiscal 2023 happened on account of coal price premiums through domestic spot e-auction (conducted by Coal India Ltd) reaching an all-time high due to reduced coal supply in the fiscal.

Average price in INR per tonne	FY22	FY23	FY24	FY25	FY26
Coking coal					
S1	18,866.7	29,072.8	24,737.2	19,833.6	17,461.2
S2	17,129.8	26,396.0	22,459.7	18,007.8	15,853.8

Source: Crisil Intelligence, Industry

Note: The prices shown above are average for the corresponding fiscals

Steel scrap (Rs per tonne)



The average prices of steel scrap peaked in fiscal 2022 on account of an increase in demand from the steel manufacturing sector, owing to the resumption of economic and industrial activities post-pandemic.

Average price in Rs per tonne	FY22	FY23	FY24	FY25	FY26
Steel scrap (domestic)	33,333.3	36,875.0	33,779.2	32,798.8	31,596.3
Steel scrap (landed)	36,935.9	36,462.8	34,130.6	33,170.8	33,202.5

Source: Crisil Intelligence, Industry

Note:

- Prices don't include goods and service taxes (GST)
- Landed prices pertain to those of Rotterdam exports and consider an exchange rate of ~ Rs 83.90 per United States Dollar (USD), a basic customs duty of 2.5%, freight charges of USD 30 per tonne and handling charges of 2% of the import price.
- The prices shown above are average for the corresponding fiscals

Upcoming Investments in the Indian Steel Products Industry

India's steel industry is expected to witness significant investments over the medium term, supported by rising domestic steel demand, infrastructure development and government initiatives aimed at strengthening manufacturing capabilities. The National Steel Policy, 2017 targets the creation of 300 MnTPA of steelmaking capacity by 2030–31, requiring substantial investments across ironmaking, steelmaking, rolling and downstream processing facilities. To support this objective, major steel producers have announced brownfield and greenfield expansion projects across the country, particularly in states such as Odisha, Jharkhand, Chhattisgarh, Karnataka and Maharashtra.

Several major steel producers have announced capacity expansion plans to capitalize on India's growing steel demand. JSW Steel has outlined plans to increase its crude steel capacity from approximately 35 MnTPA to 50 MnTPA by FY31, supported by ongoing expansions at Vijayanagar, Dolvi and other locations. Tata Steel is expanding its Kalinganagar facility in Odisha from 3 MnTPA to 8 MnTPA, while also pursuing debottlenecking and efficiency enhancement initiatives across its domestic operations. AM/NS India has announced plans to increase capacity at its Hazira complex, while Jindal Steel & Power (JSPL) continues to expand its Angul operations. In addition, several integrated steel projects have been announced in Odisha, Chhattisgarh and Jharkhand, supported by investments in pellet plants, beneficiation facilities, captive power plants and downstream steel processing units. Collectively, these announced projects represent investments running into several lakh crores and are expected to significantly augment India's steelmaking capacity over the medium term.

The industry is also witnessing rising investments in technology modernization, captive power generation, raw material security and sustainability initiatives. Steel producers are increasingly focusing on operational efficiency improvements, waste heat recovery systems, renewable energy integration and low-carbon steelmaking technologies. These investments are expected to enhance long-term competitiveness while supporting the industry's ability to meet the country's growing steel requirements.

Sector SWOT analysis

Strengths

India is the world's second-largest steel producer and one of the fastest-growing steel-consuming markets globally. The industry benefits from a large domestic demand base supported by infrastructure development, urbanization, industrialization and rising per capita income levels. The availability of significant iron ore reserves, a large labour force and an expanding manufacturing ecosystem provides structural advantages for long-term growth.

The Indian steel industry is witnessing significant long-term demand growth driven by the continued emphasis of the Government of India on infrastructure development, urbanization, housing programs, railways and road expansion, manufacturing growth under initiatives such as "Make in India," and increasing investments in renewable energy and industrial development. The steel industry also benefits from strong government support through other initiatives such as the National Steel Policy, Production Linked Incentive (PLI) Scheme for Specialty Steel, PM Gati Shakti, Make in India and large-scale infrastructure programmes. These initiatives are expected to support capacity expansion, domestic manufacturing and steel consumption across multiple sectors.

Weakness

The steel industry remains highly capital intensive and requires substantial investments in plants, machinery, environmental compliance and working capital. Steel producers are also exposed to fluctuations in raw material prices, particularly iron ore, coal and scrap, which can impact profitability. Additionally, a significant portion of the industry consists of secondary producers that may face operational challenges related to scale, technology and energy efficiency.

The industry is also exposed to cyclicalities in steel demand and pricing, resulting in periodic volatility in earnings and margins. Dependence on transportation infrastructure and logistics networks further influences the movement of raw materials and finished products across the country.

Opportunities

India's relatively low per-capita steel consumption compared with global averages provides substantial headroom for long-term demand growth. Continued investments in infrastructure, housing, railways, roads, renewable energy and manufacturing are expected to drive higher steel consumption across the economy. Expansion of domestic manufacturing under initiatives such as Make in India and supply-chain diversification by global companies further create opportunities for steel producers and downstream steel product manufacturers.

The increasing adoption of advanced manufacturing technologies, automation and value-added steel products presents opportunities for product diversification and margin improvement. At the same time, the growing emphasis on green steel, circular economy practices and steel scrap recycling is expected to open new avenues for sustainable growth.

Threats

The Indian steel industry faces risks arising from global overcapacity, import competition and international trade barriers. Excess steel production capacity in certain countries can lead to dumping pressures and pricing challenges in domestic markets. In addition, fluctuations in raw material prices and geopolitical developments can influence production costs and supply-chain stability.

The industry also faces increasing environmental and sustainability-related regulations. Carbon reduction targets, evolving emission standards and the transition towards low-carbon steelmaking may require substantial capital investments in new technologies and processes. Failure to adapt to these changing requirements may impact competitiveness over the long term.

Entry barriers in the steel industry

The steel industry is characterized by high entry barriers due to its capital-intensive nature, complex manufacturing processes and extensive infrastructure requirements. Depending on the production route and level of integration, setting up steel manufacturing capacity can require investments ranging from approximately ₹3,500–5,000 crore per MnTPA for Electric Arc Furnace (EAF)-based facilities to ₹8,400–10,000 crore per MnTPA for integrated Blast Furnace-Basic Oxygen Furnace (BF-BOF) plants. In addition to plant and machinery, steel manufacturers must invest in land, utilities, captive power, pollution-control systems, logistics infrastructure and working capital. Long gestation periods for project approvals, environmental clearances and commissioning further increase the barriers to entry and limit the pace of new capacity additions.

Raw material security represents another important entry barrier. Access to iron ore, coal, steel scrap and transportation infrastructure plays a critical role in determining the competitiveness of steel manufacturers. Integrated steel producers with captive raw material sources, established supply chains and operational scale generally enjoy significant advantages over new entrants.

In addition, steel manufacturing requires technical expertise, process know-how, quality control systems and compliance with numerous regulatory requirements. Strong customer relationships, distribution networks and established brand recognition also contribute to the competitive advantages of existing industry participants.

Key success factors

Key competitive factors in the industry include product quality and consistency, manufacturing capacity, production technology, logistics infrastructure, workforce capabilities, operating cost efficiency, product pricing, access to funding for capacity expansion, and access to key raw materials at competitive prices.

Integrated operations across the steel value chain, efficient logistics management and captive power generation facilities can significantly improve cost competitiveness and profitability.

Operational efficiency, product quality and scale of operations also play a crucial role in determining long-term success. Producers capable of maintaining high-capacity utilization, optimizing energy consumption and consistently delivering quality products are generally better positioned to withstand market fluctuations and competitive pressures.

Strong customer relationships, diversified product portfolios and presence across multiple end-use sectors further enhance resilience by reducing dependence on any single customer or industry segment. The ability to adapt to changing market conditions, invest in modern technologies and comply with evolving sustainability requirements is also becoming increasingly important.

Key risk factors

Steel producers remain exposed to fluctuations in steel prices, raw material costs and global commodity cycles. Sudden changes in iron ore, coal or scrap prices can directly impact production economics and profit margins, particularly for non-integrated producers.

The industry is also sensitive to macroeconomic conditions and investment activity across end-use sectors such as construction, infrastructure, automotive and engineering. Any slowdown in economic growth, infrastructure spending or manufacturing activity may adversely impact steel demand.

Additional risks include environmental compliance costs, changes in government regulations, import competition, trade protection measures, supply-chain disruptions and increasing sustainability-related obligations. These factors have the potential to influence the operating environment and long-term competitiveness of steel manufacturers.

Key policies and regulations

The Indian steel industry operates within a policy framework designed to enhance domestic manufacturing, improve global competitiveness, promote infrastructure development and support sustainable growth. Government policies aimed at increasing steel consumption, boosting manufacturing activity and strengthening supply-chain resilience have played an important role in supporting the growth of both primary steel producers and downstream steel product manufacturers. Continued investments in infrastructure, urban development, transportation and industrial expansion are expected to remain key drivers of steel demand over the medium to long term.

Policy / Regulation	Description	Relevance to B.S. Sponge
Safeguard Duty on Non-Alloy and Alloy Steel Flat Products	The Government has periodically imposed safeguard and trade protection measures on select steel products to address import surges and protect domestic manufacturers from injury arising from low-priced imports.	B.S. Sponge manufactures HR coils and other downstream steel products. Trade protection measures support domestic steel realizations, improve competitiveness against imported material and help maintain industry capacity utilization levels.

Quality Control Orders (QCOs) for Sponge Iron	The Ministry of Steel has notified mandatory BIS conformity requirements for sponge iron products, restricting manufacture, sale and imports of non-compliant material.	Sponge iron is the Company's largest upstream product. QCO implementation benefits organized manufacturers such as B.S. Sponge by improving quality standards, reducing the presence of sub-standard material and increasing compliance barriers for smaller unorganized players.
Quality Control Orders (QCOs) for Steel Tubes and Pipes	Mandatory BIS certification has been prescribed for specified steel pipes and tubes sold in the domestic market.	B.S. Sponge has expanded into ERW pipes and tubes. Mandatory certification requirements support organized manufacturers with approved quality systems and improve customer confidence in certified products.
BIS Standard IS 1786 for TMT Bars	Prescribes requirements relating to chemical composition, mechanical properties, ductility and quality standards for high-strength deformed steel bars used in construction.	Compliance is essential for the Company's TMT bar operations and supports participation in infrastructure, commercial and residential construction projects, where BIS-certified material is generally preferred.
BIS Standards Applicable to ERW Pipes and Tubes (such as IS 1239, IS 3589 and other relevant specifications)	Establishes standards relating to dimensions, pressure handling capability, testing requirements, quality control and end-use applications.	Compliance enhances market acceptance of B.S. Sponge's ERW pipes and tubes across water infrastructure, industrial, construction and engineering applications.
National Steel Policy, 2017	Targets 300 MnT of steelmaking capacity and 255 MnT of finished steel production capacity in India over the long term, supported by infrastructure development and enhanced steel usage.	Supports long-term demand growth across key steel-consuming sectors, including construction, infrastructure, engineering and manufacturing, which are major end markets for the Company's products.
PM Gati Shakti, National Infrastructure Pipeline (NIP) and Government Infrastructure Programs	Multi-year investments across roads, railways, water infrastructure, logistics and urban development.	Drives demand for TMT bars, HR coils, pipes, sponge iron and other steel products manufactured by the Company. The Company's increasing focus on downstream products

		positions it to benefit from sustained infrastructure spending.
Environmental Regulations governing Steel Plants and Captive Power Facilities	Includes environmental clearances, emission norms, waste disposal standards, water utilization norms and pollution control requirements applicable to steel manufacturing and captive power generation facilities.	B.S. Sponge's integrated operations and captive power plants are subject to continuous compliance obligations. Investments in WHRB and AFBC technologies support efficient utilization of waste heat and process by-products while improving environmental performance.
Captive Power and Waste Heat Recovery Framework	Regulatory provisions permitting utilization of waste heat and industrial by-products for captive power generation.	Supports the Company's integrated energy model under which its 67 MW captive power facility met approximately 98.1% of operational power requirements in FY2025, reducing dependence on grid power and enhancing cost competitiveness.

Make in India and Production linked Incentive (PLI) schemes

The Government of India's Make in India initiative has been instrumental in promoting domestic manufacturing across various sectors, including automobiles, engineering, defence, electronics and capital goods. The increasing emphasis on domestic manufacturing has contributed to rising steel consumption across multiple end-user industries.

In addition, the Production Linked Incentive (PLI) Scheme for Specialty Steel seeks to promote domestic production of value-added steel products and reduce import dependence. The scheme is expected to encourage investments in advanced steel manufacturing technologies, capacity expansion and product diversification. Growth in speciality steel production also supports demand for upstream and intermediate steel products manufactured across the broader steel industry.

PM Gati Shakti and National Infrastructure Pipeline

Infrastructure development remains one of the largest drivers of steel demand in India. The PM Gati Shakti National Master Plan and the National Infrastructure Pipeline (NIP) are aimed at accelerating investments in transportation, logistics, industrial corridors, urban infrastructure, railways, ports and highways. These initiatives support demand for a broad range of steel products including TMT bars, structural steel, pipes, tubes, wire rods and HR coils.

The government's continued focus on capital expenditure, asset creation and multimodal connectivity is expected to create sustained demand for steel-intensive products over the coming years. Infrastructure projects generally have high steel intensity and therefore represent a significant growth opportunity for steel manufacturers and downstream processors.

Trade Policies and Import Protection Measures

The Indian steel industry is influenced by various trade measures aimed at ensuring fair competition and protecting domestic manufacturers from unfair imports. Anti-dumping duties, safeguard measures and quality control orders (QCOs) have been implemented across certain steel product categories to curb the inflow of sub-standard and underpriced imports.

Such measures help strengthen domestic industry competitiveness and support capacity utilization levels among steel producers. However, changes in international trade policies, global overcapacity and fluctuations in import volumes continue to remain important factors influencing domestic steel prices and industry profitability.

Green Steel and Sustainability Initiatives

Sustainability is becoming an increasingly important focus area for the steel industry. The Government of India has introduced various initiatives aimed at reducing carbon emissions and improving resource efficiency within steel manufacturing. The Green Steel Taxonomy introduced by the Ministry of Steel seeks to establish a framework for measuring and classifying low-carbon steel production based on emissions intensity.

The National Green Hydrogen Mission is also expected to support future decarbonization efforts within the steel sector by promoting the development of green hydrogen infrastructure and encouraging adoption of low-carbon production technologies. Over the long term, increasing emphasis on energy efficiency, scrap utilization, renewable energy integration and sustainable manufacturing practices is expected to influence investment decisions and technological adoption across the industry.

Environmental and Regulatory Compliance

Steel manufacturers are subject to various environmental regulations relating to emissions, waste management, water consumption and pollution control. Compliance with environmental standards prescribed by central and state regulatory authorities remains critical for maintaining business continuity and operational sustainability.

For integrated steel producers and downstream steel product manufacturers, adherence to environmental regulations, industrial safety norms, power regulations and quality standards remains an important aspect of business operations. As environmental regulations continue to evolve, investments in cleaner technologies, waste heat recovery systems and energy-efficient processes are expected to become increasingly important for maintaining competitiveness within the industry.

Ferro-alloys market assessment

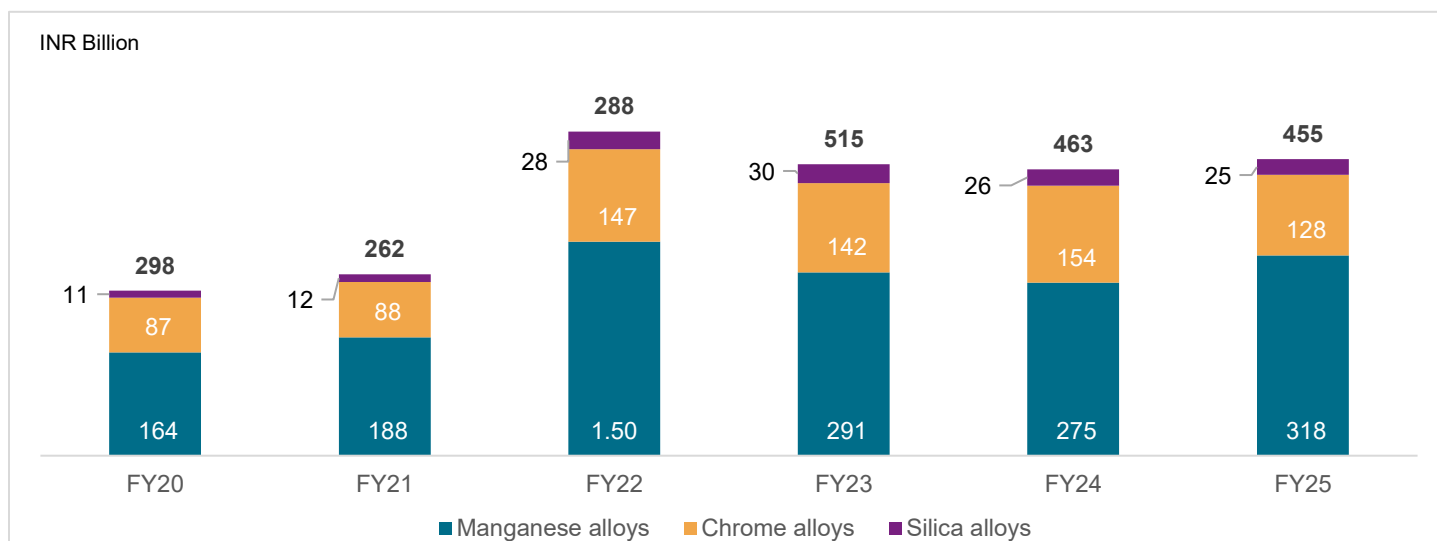
Ferroalloys are a group of alloys of iron containing one or more additional elements other than carbon. They have a high percentage of elements such as manganese, silicon, chromium, and aluminium etc. They are mainly used as master alloys in the iron and steel industry. These alloys are incorporated into the molten stage of the steelmaking process for the purpose of producing specific properties in the steel.

The manufacturing of crude steel and steel products, including castings, alloy steel, and stainless steel, both depend heavily on ferroalloys. With its many applications, stainless steel adoption is especially buoyant and is becoming widely accepted in the consumer goods, process industries, and other infra and transport categories. The Indian ferro-alloys industry includes chrome alloys, manganese alloys, silica alloys, etc.

Steel sector drives the ferro-alloy market. In fiscal 2024, prices corrected by 11% for manganese alloy and rose by 1% for chrome alloys amid lower input costs and a volatile steel market. Total ferro alloy production increased by 6% in fiscal 2024. Hence, the market size contracted by 2% to touch Rs ~455 billion.

In fiscal 2025, the alloy market size touched Rs 470 billion, a rise of 3.5% on year driven by healthy manganese alloy production and increased manganese alloy realisations on account of ore supply shortage pushing alloy prices up.

Market composition



Source: Crisil Intelligence

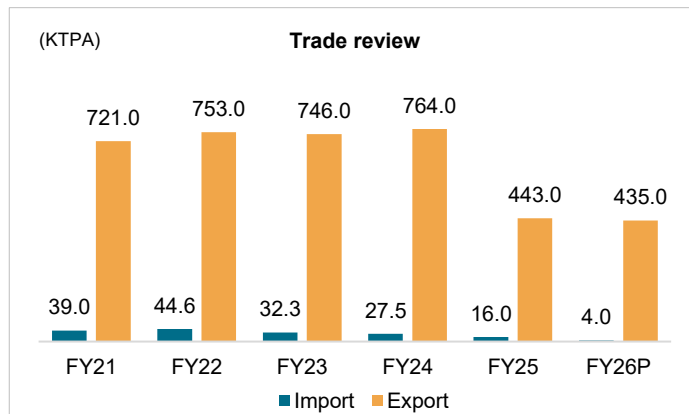
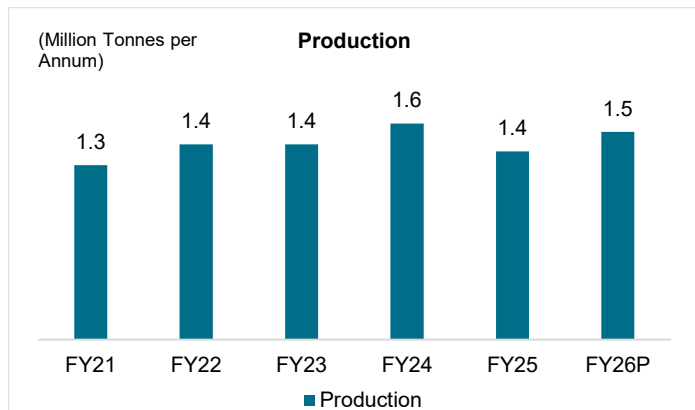
Chrome-based ferro-alloy : Ferrochrome market assessment

Over the medium term, the ferrochrome industry is expected to witness steady growth, supported by expanding stainless steel production, infrastructure investments, and rising industrial activity. Ferrochrome production increased from 1.3 MnTPA in FY21 to 1.6 MnTPA in FY24, before moderating to 1.4 MnTPA in FY25 due to softer market conditions. Production is projected to recover to 1.5 MnTPA in FY26P as downstream demand strengthens.

On the trade front, India continues to maintain its position as a net exporter of ferrochrome. Exports remained robust at 764 KTPA in FY24 before declining sharply to 443 KTPA in FY25, reflecting weaker global demand and changing trade dynamics. Exports are expected to stabilize at around 435 KTPA in FY26P, while imports are forecast to decline

significantly from 16 KTPA in FY25 to 4 KTPA in FY26P, indicating improved domestic availability and reduced dependence on imported material.

Production and trade review of ferrochrome

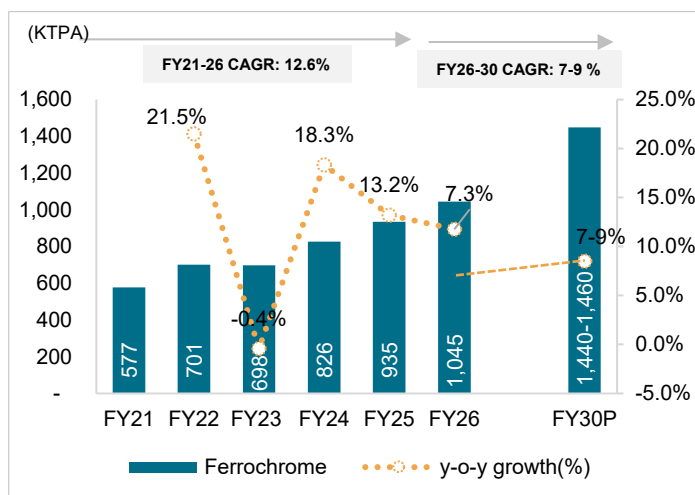


P: Provisional

Source: Crisil Intelligence

Domestic ferrochrome demand is projected to grow strongly from 935 KTPA in FY25 to 1,045 KTPA in FY26, representing a growth rate of 11.8%, and is expected to reach approximately 1.44-1.46 MnTPA by FY30, translating into a FY26-FY30 CAGR of 7-9%. Over FY21-FY26, demand is estimated to register a robust 12.6% CAGR, driven primarily by the stainless steel sector, which accounts for 70-72% of total ferrochrome consumption. Other alloy applications contribute 20-22%, while castings account for 7-9% of demand. Looking ahead, demand from stainless steel is expected to grow at 8-10% CAGR during FY25-FY30, supported by capacity additions and increasing penetration across infrastructure, construction, automotive, and industrial applications, thereby underpinning the long-term growth prospects of the ferrochrome industry.

Demand review and outlook of ferrochrome



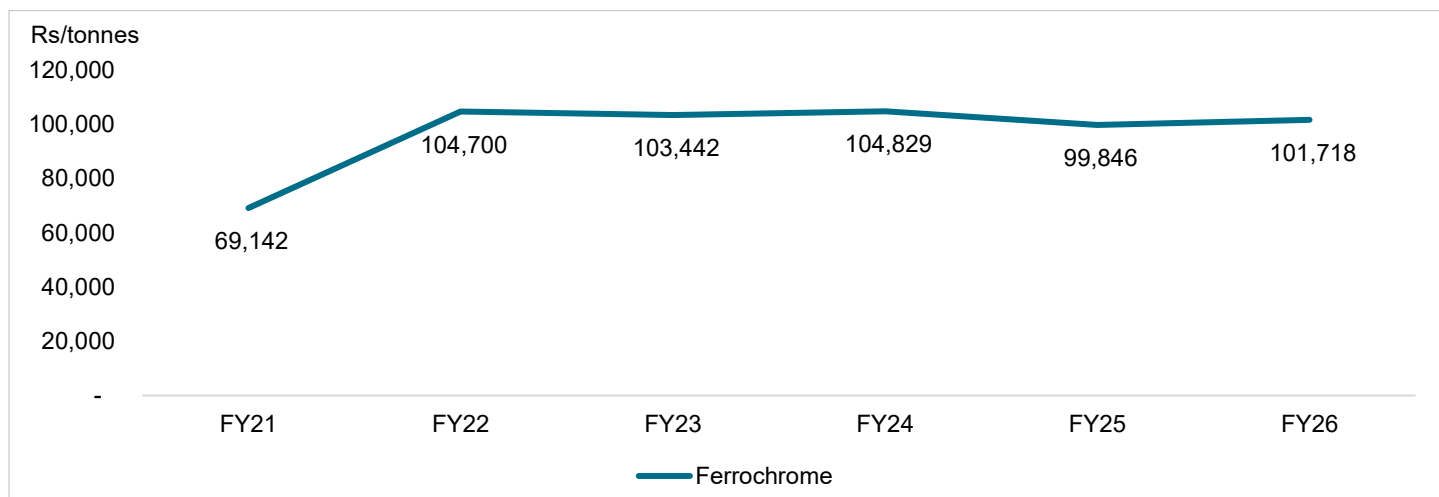
Source: Crisil Intelligence

End-use sector	% share in demand	CAGR FY2025-30P
Stainless steel	70-72%	8-10%
Other alloys	20-22%	5-7%
Castings	7-9%	4-6%

Ferro chrome prices experienced a 4.7% year-on-year decline in fiscal 2025 to Rs 99,846 per tonne, primarily due to weak global prices and increased domestic supply (amid fall in exports by 30-35%). The decrease in coking coal costs by 27% also played a significant role in the price correction. Despite the decline in coal costs, the overall cost structure of ferro chrome producers remains under pressure due to an 18% year-on-year increase in chrome ore costs, driven by demand growth and stable supply from India. This rise in chrome ore costs is hindering the competitiveness of Indian players in export markets. The decline in input costs, particularly coal costs, is being offset by the increase in chrome ore

costs and healthy demand. Specifically, coking coal costs have fallen to \$210 per tonne, a 27% decrease from \$286 per tonne in fiscal 2025, driven by improved supply from Australia and reduced demand from Asian countries.

Domestic price trend

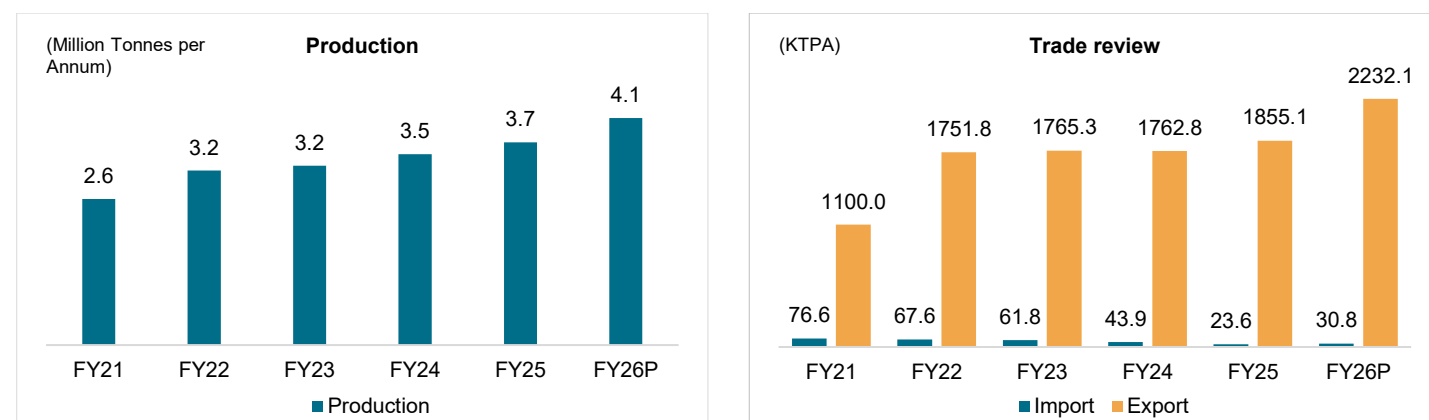


Source: Crisil Intelligence

Manganese-based alloy market assessment

The manganese-based alloy industry has demonstrated steady growth in recent years, supported by increasing steel production and infrastructure-led demand. Domestic production is estimated to increase from approximately 2.6 MnTPA in FY2021 to 4.1 MnTPA in FY2026, reflecting continued capacity additions and strengthening demand from the steel sector. The industry also maintains a strong export orientation, with exports significantly exceeding imports, highlighting India's position as a net exporter of manganese-based ferro-alloys.

Production and trade review of manganese-based alloys

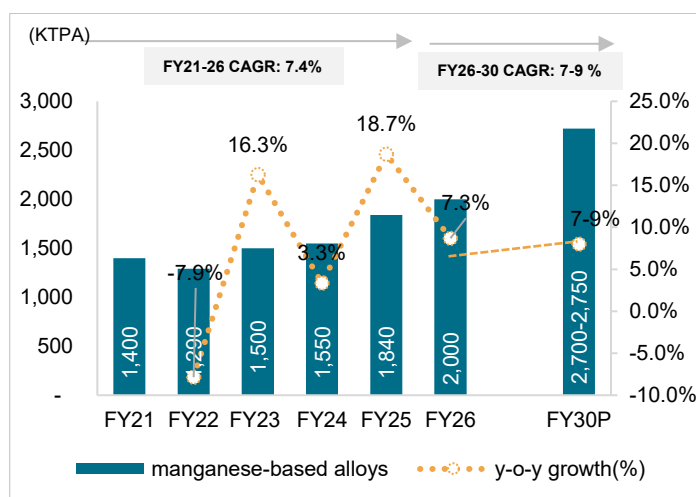


P: Provisional

Source: DGFT, Crisil Intelligence

Demand for manganese-based alloys is estimated to grow from approximately 1.84 MnTPA in FY2025 to 2.70-2.75 MnTPA by FY2030, representing a CAGR of around 7-9%. Carbon steel remains the largest end-use segment, accounting for 70-75% of total demand, followed by stainless steel and other alloy applications. Growth is expected to be driven by rising steel consumption across infrastructure, construction, manufacturing and engineering sectors, which are expected to support sustained demand for alloying materials.

Demand review and outlook of manganese-based alloys

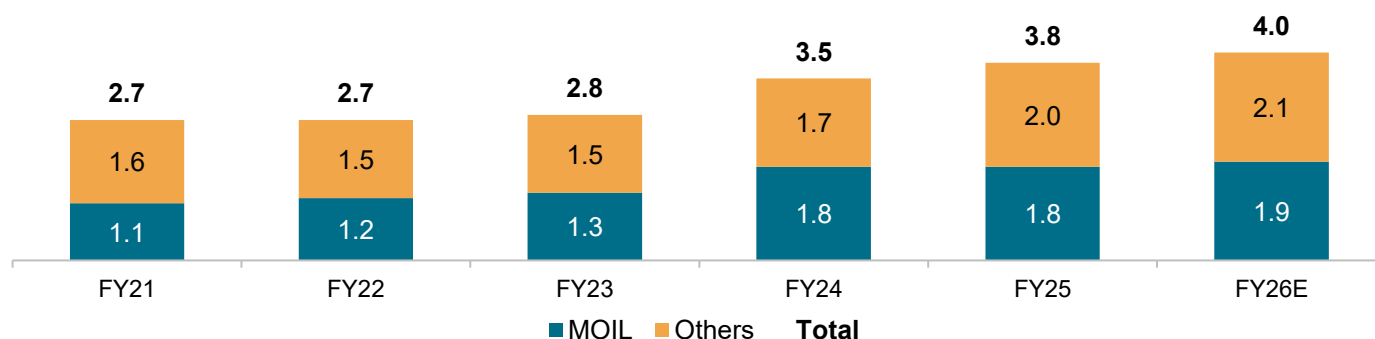


End-use sector	% share in demand	CAGR FY2025-30P
Carbon steel	70-75%	6.5-8.5%
Stainless steel	5-10%	8.3-10.3%
Others	15-20%	4-6%

Source: Crisil Intelligence

Over the medium term, the outlook for the manganese-based alloy market remains favourable, supported by continued investments in steelmaking capacity, infrastructure development and industrial growth. Demand from the stainless-steel segment is expected to grow relatively faster than the broader market, while increasing domestic steel production and export opportunities are likely to support healthy growth in both ferro-alloy consumption and production over the forecast period.

Manganese ore production (in MnTPA)



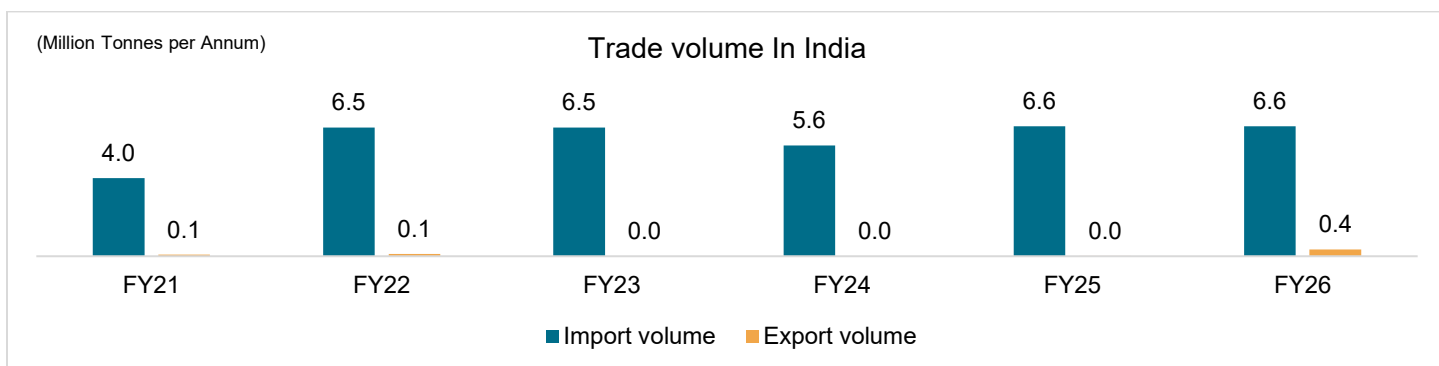
MOIL: Manganese Ore India Limited; E: Estimated

Source: IBM, Crisil Intelligence

MnTPA: million tonnes per annum

India's manganese ore production has exhibited a steady upward trajectory, increasing from approximately 2.7 MnTPA in FY2021 to an estimated 4.0 MnTPA in FY2026, supported by rising demand from the ferro-alloy and steel industries. Production growth has been driven by both MOIL and private sector miners, with MOIL accounting for nearly half of domestic output. The increase in manganese ore availability has helped support the expansion of silicomanganese and other manganese-based ferro-alloy capacities in the country.

Manganese ore trade review (in MnTPA)

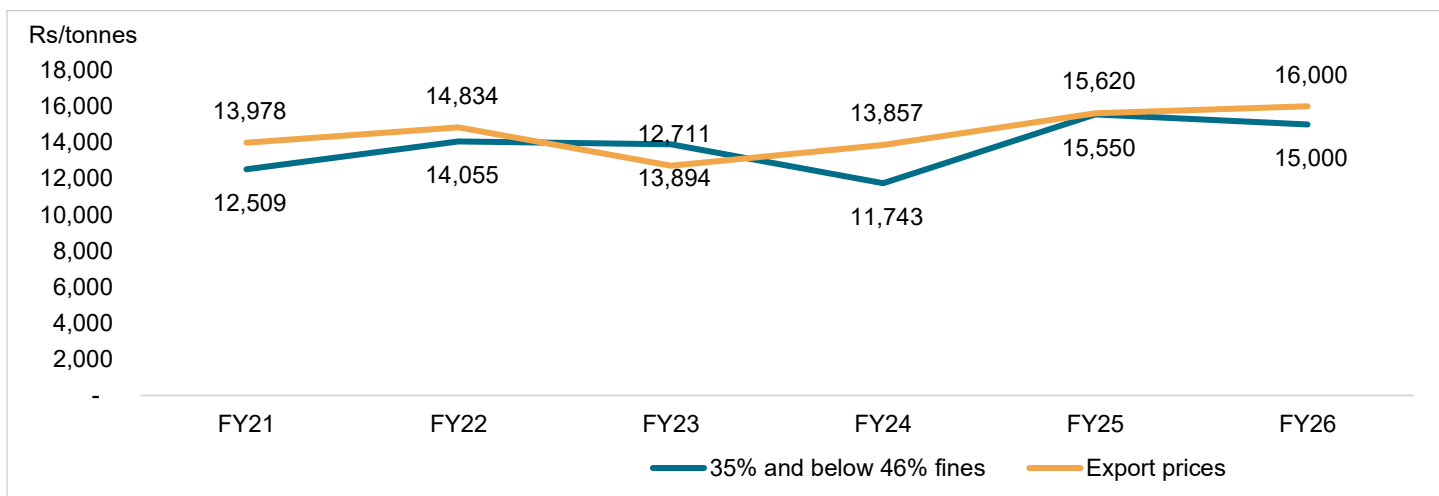


Source: IBM, Crisil Intelligence

MnTPA: million tonnes per annum

India remains a net importer of manganese ore despite growth in domestic production, reflecting the requirement for specific ore grades and the increasing demand from the ferro-alloy and steel industries. Manganese ore imports increased from approximately 4.0 MnTPA in FY2021 to 6.6 MnTPA in FY2026, indicating sustained dependence on imported ore to supplement domestic availability and meet the requirements of ferro-alloy manufacturers. In contrast, exports remained negligible throughout the period, ranging between 0.0-0.4 MnTPA, highlighting the priority accorded to domestic consumption. The rising import trend is broadly aligned with the expansion of domestic silicomanganese and other manganese-based ferro-alloy capacities, which continue to drive manganese ore demand. Going forward, increasing steel production and ferro-alloy consumption are expected to support robust manganese ore imports, while domestic production growth may partially mitigate import dependence over the medium term.

Manganese ore price trend



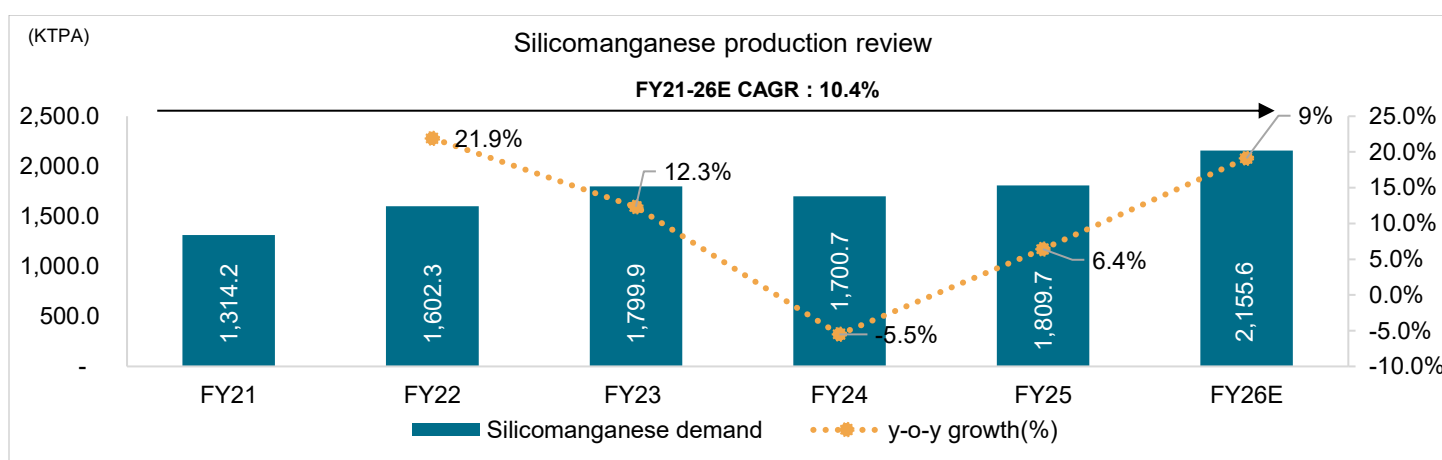
Source: Crisil Intelligence

Manganese ore prices have remained relatively stable despite fluctuations in global commodity markets. Domestic prices for 35% and below 46% manganese fines increased from approximately ₹12,500 per tonne in FY2021 to around ₹15,000 per tonne in FY2026, while export prices moved from approximately ₹14,000 per tonne to ₹16,000 per tonne during the same period. Going forward, sustained growth in steel production, increasing ferro-alloy demand and continued expansion in downstream steel capacities are expected to support healthy manganese ore demand and maintain stable pricing fundamentals over the medium term.

Silicomanganese market assessment

Silicomanganese production review

Silicomanganese is one of the most widely used ferro-alloys in steelmaking, serving as both a deoxidizing and alloying agent to improve the strength, hardness and durability of steel. Silicomanganese production in India increased from approximately 1.31 MnTPA in FY2021 to an estimated 2.16 MnTPA in FY2026, registering a robust CAGR of 10.4% during the period. Growth was driven by rising domestic steel production, increasing demand from carbon and alloy steel manufacturers, and strengthening export opportunities. Production expanded by 21.9% in FY2022 and 12.3% in FY2023, before witnessing a temporary decline of 5.5% in FY2024, primarily due to softer market conditions, following which production recovered with growth of 6.4% in FY2025 and an estimated 9.0% in FY2026. The sustained increase in silicomanganese production reflects the growing steelmaking requirements of the domestic market and is expected to remain supported by continued expansion in steel consumption, infrastructure development and manufacturing activity.

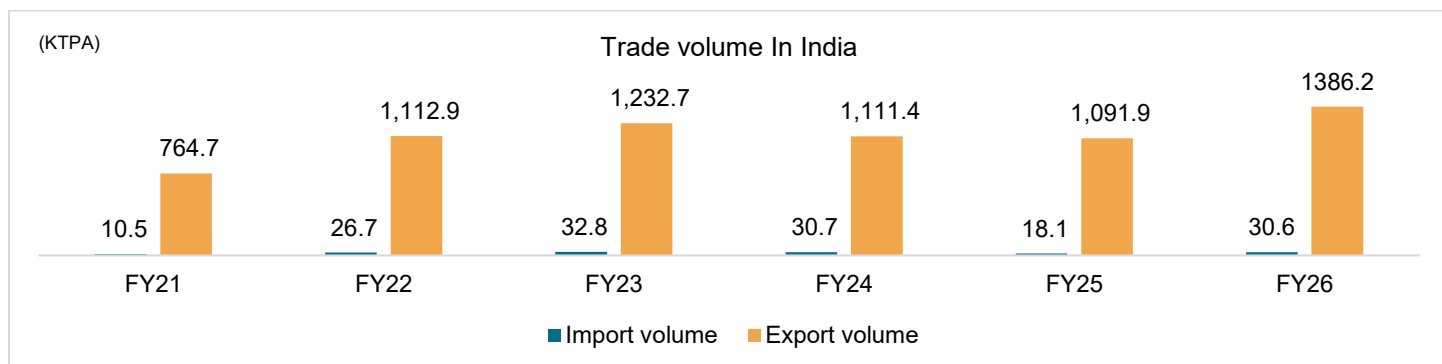


P: Projected; E: Estimated

Source: Crisil Intelligence

India continues to maintain a strong position as a net exporter of silicomanganese, with export volumes significantly exceeding imports throughout the review period. Exports increased from approximately 765 KTPA in FY2021 to 1,386 KTPA in FY2026, highlighting the competitiveness of domestic producers in global markets. Strong export demand, coupled with growing domestic steel production, is expected to support long-term growth in the silicomanganese industry.

Silicomanganese trade review

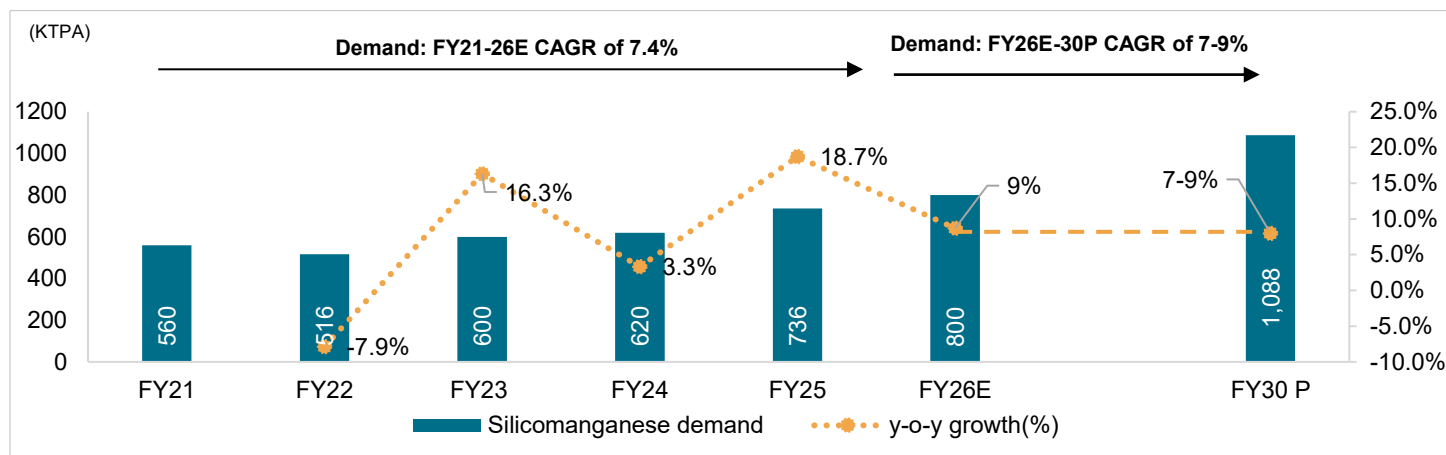


Source: DGFT, Crisil Intelligence

Domestic demand increased from approximately 560 KTPA in FY2021 to 800 KTPA in FY2026E, reflecting a CAGR of around 7.4%, driven by growth in carbon steel production and infrastructure-led steel consumption. Demand is further

projected to reach approximately 1,088 KTPA by FY2030, supported by sustained expansion in the domestic steel industry and increasing investments in manufacturing and construction activities.

Silicomanganese demand review and outlook

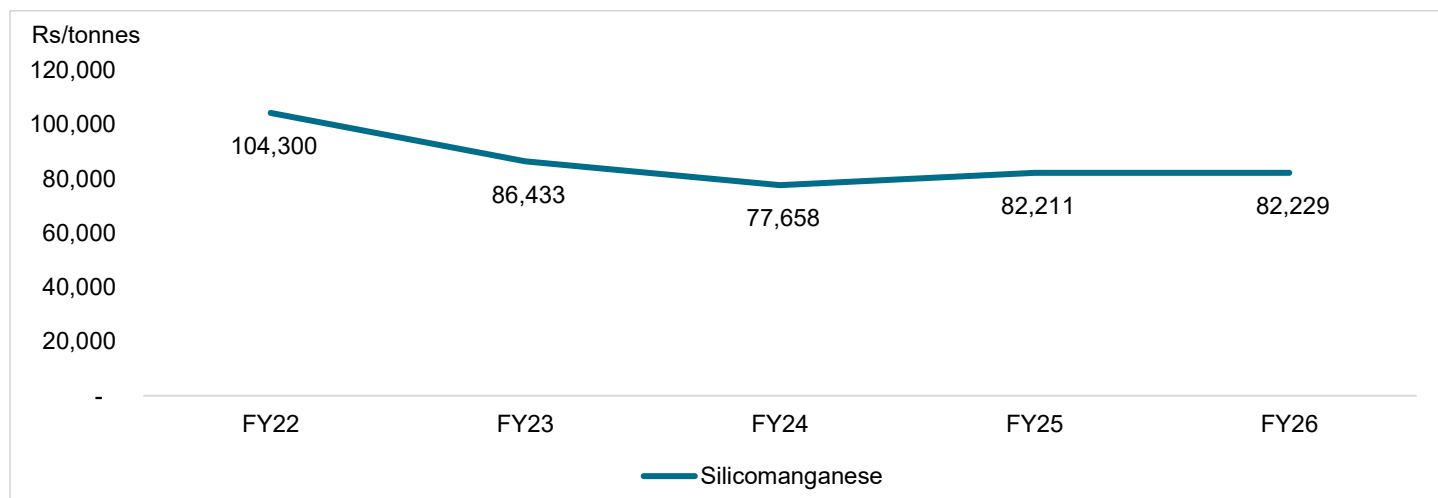


P: Projected; E: Estimated

Source: Crisil Intelligence

Silicomanganese prices moderated from around ₹104,300 per tonne in FY2022 to ₹77,658 per tonne in FY2024, primarily due to softer global steel demand and fluctuations in raw material prices. However, prices stabilized during FY2025-FY2026 at approximately ₹82,000 per tonne, supported by improving steel demand and balanced market conditions. Going forward, healthy growth in steel production and sustained demand from both domestic and export markets are expected to support stable demand fundamentals for silicomanganese over the medium term.

Silicomanganese price trend



Source: Crisil Intelligence

Trade analysis of ferro alloys

Import (FY26)

Country	Volume (MnTPA)
Indonesia	0.08
China	0.04
Russia	0.02

Malaysia	0.01
Brazil	0.01
Others	0.32
Total	0.48

Source: JPC, Crisil Intelligence
MnTPA: million tonnes per annum

Export (FY26)

Country	Volume (MnTPA)
Korea	0.25
USA	0.23
Turkey	0.22
Italy	0.20
Japan	0.18
UAE	0.17
Netherlands	0.14
China	0.14
Egypt	0.14
Taiwan	0.13
Others	0.88
Total	2.68

Source: JPC, Crisil Intelligence
MnTPA: million tonnes per annum

Ferro alloys are critical inputs in steelmaking and are used to impart specific metallurgical properties such as strength, hardness, wear resistance and corrosion resistance to steel products. India's ferro alloys industry benefits from the availability of key raw materials, including manganese ore and chrome ore, as well as a well-established steel manufacturing base. The trade profile of ferro alloys indicates that India remains a net exporter, reflecting its competitive production capabilities and strong presence in international markets.

In FY26, ferro alloy imports stood at approximately 0.48 MnTPA. Indonesia emerged as the largest source of imports, contributing 0.08 MnTPA, followed by China at 0.04 MnTPA and Russia at 0.02 MnTPA. Imports from Malaysia, Brazil and other countries supplemented domestic availability and catered to specific grade requirements of steel producers. The relatively low level of imports compared with exports indicates that domestic production remains largely sufficient to meet the requirements of the Indian steel industry.

On the export front, ferro alloy exports were substantially higher at 2.68 MnTPA in FY26, resulting in a significant trade surplus. South Korea emerged as the largest export destination with imports of 0.25 MnTPA from India, followed by the United States at 0.23 MnTPA and Turkey at 0.22 MnTPA. Other important markets included Italy, Japan, the UAE, the Netherlands, China, Egypt and Taiwan. The broad geographical distribution of exports demonstrates the global competitiveness of Indian ferro alloy manufacturers and the widespread acceptance of Indian ferro alloy products across developed and emerging steel-producing regions.

The strong export orientation of the ferro alloys industry highlights its strategic importance within India's steel value chain. Growing steel production across Asia, the Middle East and developed economies is expected to continue supporting international demand for ferro alloys. At the same time, increasing domestic steel production, expanding steelmaking capacity and rising demand for value-added steel products are expected to support ferro alloy consumption within India. Consequently, the ferro alloys industry is expected to benefit from both domestic demand growth and export opportunities, reinforcing its role as a critical upstream segment of the steel industry.

Ferro alloys industry – market share by capacity (FY24)

Player	Market share %
Tata Steel	9%
Indian Metals & Ferro Alloys Limited (IMFA)	5%
Maithan Alloys Limited	5%
Jindal Stainless Steel	5%
Ferro Alloys Corporation Limited (FACOR)	3%
Others	73%
Total	100%

Source: Crisil Intelligence

The Indian ferro alloys industry remains highly fragmented, with the top five players collectively accounting for approximately 27% of the industry's installed capacity in FY24. Tata Steel emerged as the largest individual player, accounting for around 9% of industry capacity, followed by Indian Metals & Ferro Alloys Limited (IMFA), Maithan Alloys Limited and Jindal Stainless Steel, each holding approximately 5% market share. Ferro Alloys Corporation Limited (FACOR) accounted for an additional 3% share. The remaining 73% of industry capacity is distributed among a large number of regional and mid-sized manufacturers operating across different ferro alloy categories.

The fragmented structure of the ferro alloys industry can be attributed to relatively moderate capital requirements compared with integrated steel production facilities, availability of raw materials in certain mineral-rich regions and the flexibility to switch production between various ferro alloy products depending on prevailing market conditions. Producers are able to adjust production mixes between ferro manganese, silico manganese, ferro chrome and other ferro alloy grades based on changes in demand, pricing and profitability, providing operational flexibility within the sector.

The industry comprises both integrated steel producers with captive ferro alloy facilities and standalone ferro alloy manufacturers. Companies such as Tata Steel and Jindal Stainless largely utilize ferro alloys as part of their integrated steelmaking operations, while dedicated ferro alloy producers such as IMFA, Maithan Alloys and FACOR primarily cater to both domestic and export markets. The presence of a large number of smaller manufacturers contributes to a competitive market environment and supports supply availability across various steelmaking segments.

The diversified supply landscape enhances the resilience of the domestic ferro alloys industry by reducing concentration risk and supporting competition. Going forward, rising domestic steel production, increasing demand for value-added steel products and continued growth in exports are expected to support capacity utilization and investments across the ferro alloys sector. In addition, the expansion of steelmaking capacity under the National Steel Policy and growth in specialty steel production are expected to create additional demand opportunities for ferro alloy manufacturers over the medium term.

Key demand drivers

- **Growth in Steel Production:** Demand for ferro alloys is directly linked to crude steel production and consumption, as ferro alloys are used to enhance the strength, durability and metallurgical properties of steel.
- **Infrastructure and Manufacturing Growth:** Continued investments in infrastructure, construction, transportation and manufacturing sectors are expected to support steel consumption and, consequently, demand for ferro alloys.
- **Rising Specialty Steel Consumption:** Increasing usage of high-strength and specialty steel in automotive, defence, railways, engineering and energy sectors is driving higher ferro alloy intensity in steelmaking.
- **Export Opportunities and Raw Material Availability:** India's availability of manganese and chrome ore, coupled with a competitive manufacturing base, supports ferro alloy production and export growth.

Key growth inhibitors

- **Dependence on Steel Industry Cycles:** Ferro alloy demand is closely linked to steel production and consumption; consequently, slowdowns in construction, infrastructure, manufacturing or automotive sectors can adversely impact demand.
- **Raw Material and Power Cost Volatility:** Ferro alloy production is exposed to fluctuations in the prices of manganese ore, chrome ore, reductants, electricity and fuel, which can affect operating margins and production economics.
- **Import Competition and Trade Risks:** Domestic producers face competition from lower-cost imports, while changes in trade policies, freight rates and currency movements can influence export competitiveness and market realizations.
- **Environmental and Regulatory Compliance:** Increasing focus on emissions reduction, energy efficiency and sustainability may necessitate additional capital expenditure and compliance-related investments, potentially increasing operating costs for ferro alloy manufacturers.

Power sector in India

Overview

Sector	Installed Generation Capacity (MW)	% Share in Total
Central Sector	1,24,108	23.30%
State Sector	1,30,000	24.40%
Private Sector	2,78,632	52.30%
Total Installed Capacity	5,32,740	100.00%

Source: Central Electricity Authority

MW: mega watt

Category	Capacity (MW)	Share (%)
Coal	2,21,940	41.70%
Lignite	6,620	1.20%
Gas	20,122	3.80%
Diesel	589	0.10%
<i>Total Fossil Fuel</i>	<i>2,49,272</i>	<i>46.80%</i>
RES (including Hydro)	2,74,688	51.60%
Nuclear	8,780	1.60%
<i>Total Non-Fossil</i>	<i>2,83,468</i>	<i>53.20%</i>
Total Installed Capacity	5,32,740	100.00%

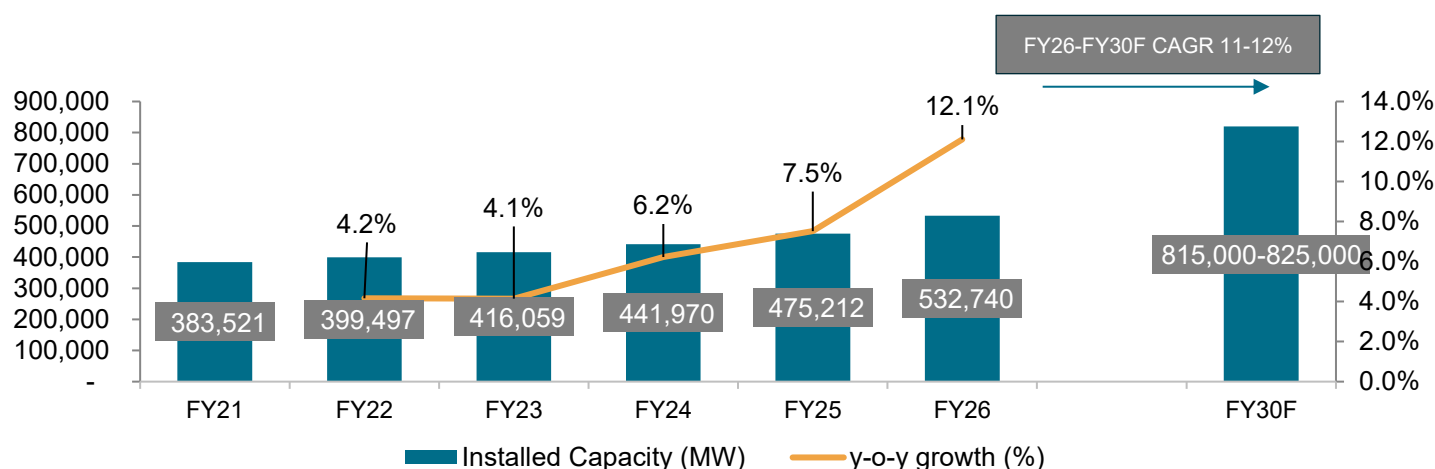
Source: Central Electricity Authority

MW: mega watt

India has emerged as one of the world's largest electricity markets, supported by sustained capacity additions across thermal, renewable and nuclear power generation. As of March 31, 2026, India's total installed power generation capacity stood at 532.7 GW. Renewable energy and hydro power collectively accounted for 51.6% of installed capacity, while thermal power continued to represent a substantial 46.8% of capacity. Despite the increasing share of renewable energy, thermal power remains the backbone of the country's electricity system owing to its ability to provide stable baseload power and support industrial consumption.

Coal-based generation continues to dominate India's thermal power segment with installed capacity of approximately 221.9 GW, accounting for 41.7% of total capacity. The continued importance of thermal generation reflects the growing electricity requirements of industrial, commercial and infrastructure sectors, which require reliable and uninterrupted power supply for operations.

Growth in the installed capacity (in MW)



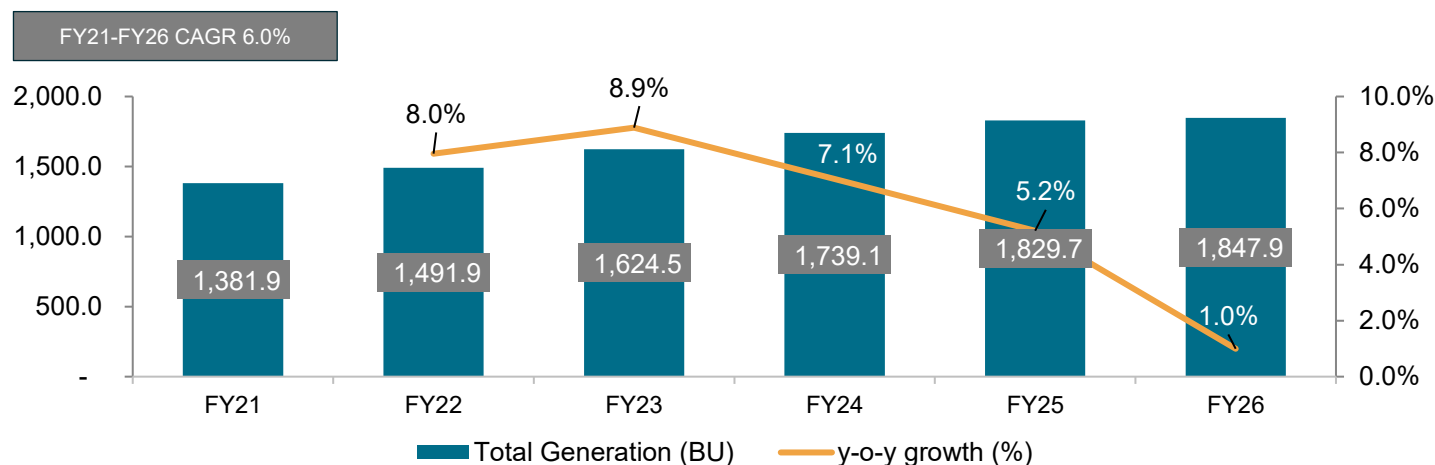
F: Forecast

Source: Crisil Intelligence

MW: mega watt

India's installed power generation capacity increased steadily from 383.5 GW in FY21 to an estimated 532.7 GW in FY26, registering a CAGR of approximately 6.8% over the period. Capacity addition was driven by sustained investments in renewable energy, thermal power generation, transmission infrastructure and electrification initiatives aimed at meeting the country's growing energy requirements. Growth accelerated from 4.1-4.2% during FY22-FY23 to 12.1% in FY26, supported by increasing power demand from industrial, commercial and residential consumers, as well as the government's continued focus on energy security and renewable energy expansion. Going forward, installed power capacity is projected to increase to approximately 815-825 GW by FY30F, implying a CAGR of 11-12% during FY26-FY30F. The anticipated growth is expected to be led by substantial additions in renewable energy capacity, including solar and wind power, along with investments in grid modernization, energy storage systems and conventional power generation assets to ensure reliable and uninterrupted power supply.

Growth in the total generation (in BU)



Source: CEA, Crisil Intelligence

BU: billion units

India's total electricity generation increased from approximately 1,382 billion units (BU) in FY2021 to an estimated 1,848 BU in FY2026, registering a healthy CAGR of 6.0% during the period. Generation growth was driven by rising industrial activity, increasing urbanization, growing electrification and sustained demand from infrastructure and manufacturing sectors. Annual growth in generation remained strong during FY2022-FY2025, ranging between 5.2% and 8.9%, before

moderating to an estimated 1.0% in FY2026, reflecting a higher base and relatively stable demand conditions. The steady increase in power generation highlights the continued expansion of India's power sector and supports the long-term demand outlook for industrial consumers, including energy-intensive sectors such as steel and ferro-alloy manufacturing.

Growth in fuel-wise generation (in BU)

Category	FY21	FY22	FY23	FY24	FY25	FY26
Total Fossil Fuel	1,032.5	1,114.7	1,206.2	1,326.5	1,363.9	1,327.8
Total Non-Fossil Fuel	349.4	377.2	418.3	412.5	465.8	520.1
Total Installed Capacity	1,381.9	1,491.9	1,624.5	1,739.1	1,829.7	1,847.9

Source: Central Electricity Authority

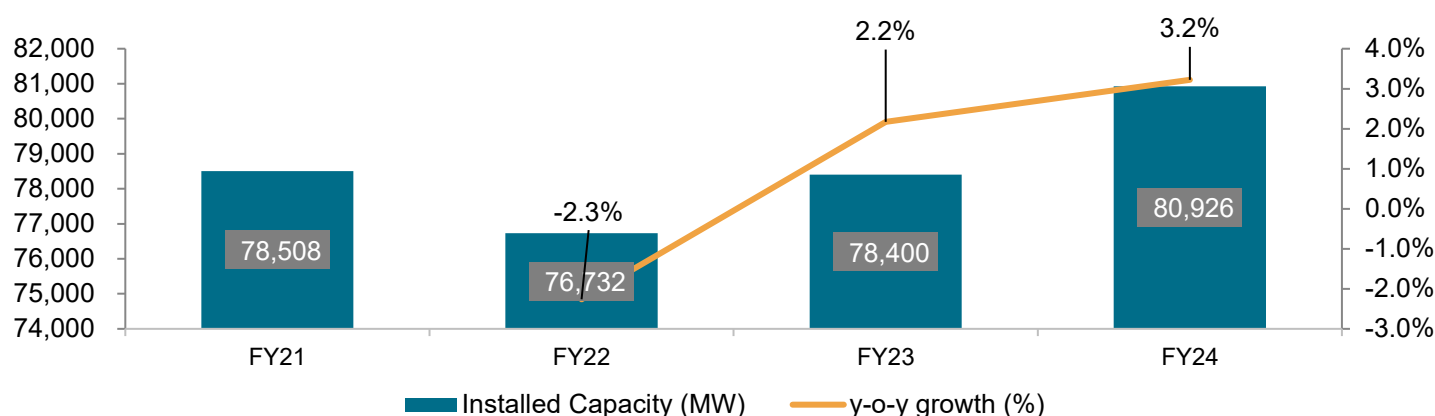
BU: billion units

India's power generation continues to be dominated by fossil-fuel-based sources, although the contribution of non-fossil fuel generation has increased steadily over the last five years. Total fossil fuel-based generation increased from approximately 1,033 BU in FY2021 to 1,328 BU in FY2026, accounting for nearly 72% of total electricity generation in FY2026. At the same time, non-fossil fuel generation, comprising renewable energy, hydro and nuclear power, grew from 349 BU in FY2021 to 520 BU in FY2026, reflecting a faster growth trajectory than conventional generation. Consequently, the share of non-fossil fuel generation increased from approximately 25% in FY2021 to 28% in FY2026, supported by significant investments in renewable energy capacity and the Government's focus on energy transition. Despite the growing contribution of renewable sources, fossil fuels continue to form the backbone of India's electricity sector, ensuring grid stability and meeting the increasing power requirements of industrial, commercial and residential consumers.

Major industries consuming power (FY26)

Segment	% Share
Industrial	34%
Domestic	27%
Agriculture	20%
Commercial	10%
Others	9%

Growth in the installed captive power capacity (in MW)



F: Forecast

Source: Central Electricity Authority

MW: mega watt

Installed captive power generation capacity in India remained relatively stable during FY21-FY24, having a stable 18-20% share in the total installed capacity, increasing from 78,508 MW in FY21 to 80,926 MW in FY24, reflecting a CAGR of approximately 1.0%. Capacity declined marginally by 2.3% in FY22 to 76,732 MW before recovering to 78,400 MW in FY23 and further expanding by 3.2% in FY24. The growth in captive power capacity was primarily driven by power-intensive industries such as steel, cement, aluminium, ferro alloys and chemicals, which continue to invest in captive generation facilities to ensure reliable power supply, enhance energy security and manage electricity costs. Captive power plants remain particularly important for energy-intensive industries due to the need for uninterrupted operations and greater control over power procurement costs. Going forward, capacity additions are expected to be supported by industrial expansion, increasing electricity demand and investments in captive renewable energy and waste heat recovery-based power generation facilities, particularly among large manufacturing and metals sector players.

Role of captive power and WHRB-based generation in energy-intensive industries

Power availability and energy efficiency are critical determinants of competitiveness for energy-intensive industries such as steel, sponge iron, cement and ferro alloys. While coal-based sponge iron plants typically consume approximately 55-65 kWh of electricity per tonne of DRI produced, induction furnaces used for steel melting are also significant power consumers, with power consumption typically ranging between 550-680 kWh per tonne of steel, depending on operating efficiency and furnace characteristics. In addition, ferro-alloy manufacturing is substantially more power-intensive, with electricity consumption generally ranging between 3,000-12,000 kWh per tonne, depending on the alloy type and production process. For silicomanganese production specifically, power consumption typically ranges from 3,800-4,800 kWh per tonne, highlighting the importance of reliable and cost-effective power availability in maintaining operational efficiency, cost competitiveness and profitability across integrated steel and ferro-alloy manufacturing operations.

To reduce dependence on external power procurement and enhance energy security, many sponge iron manufacturers have established captive power generation facilities. A key source of captive power in coal-based sponge iron plants is the Waste Heat Recovery Boiler (WHRB) system, which captures thermal energy contained in rotary kiln exhaust gases and converts it into electricity. Since WHRB-based generation utilizes waste energy that would otherwise be lost to the atmosphere, it improves overall plant efficiency and reduces specific energy consumption.

In addition to WHRB-based generation, sponge iron producers often operate AFBC/CFBC-based captive power plants utilizing dolochar generated during the sponge iron manufacturing process. The combined utilization of waste heat and dolochar enables manufacturers to improve resource efficiency, lower dependence on grid power, reduce waste disposal requirements and enhance overall energy self-sufficiency. Consequently, integrated steel manufacturers with captive WHRB and AFBC-based power generation facilities benefit from improved operating efficiency, greater power reliability and a structural cost advantage over standalone producers that rely primarily on grid-supplied electricity.

For integrated steel manufacturers such as B.S. Sponge, captive power generation provides a meaningful operating-cost advantage and reduces dependence on grid power. Given the significant electricity requirements across sponge iron production, steel melting and downstream processing operations, reliable power availability remains a critical factor influencing operating efficiency and cost competitiveness. WHRB facilities enable recovery of waste heat from rotary kiln exhaust gases for electricity generation, while AFBC-based plants utilize dolochar generated during the sponge iron manufacturing process. This integrated approach facilitates efficient utilization of process waste streams and reduces reliance on externally procured power. In addition to improving energy security and operational reliability, captive power generation lowers exposure to grid tariff escalation and supply disruptions, thereby supporting margin stability and enhancing the competitiveness of integrated steel producers relative to manufacturers dependent on purchased power.

Overview of CFBC technology and WHRB systems

Integrated sponge iron manufacturers widely utilize Waste Heat Recovery Boiler (WHRB) and Atmospheric/Circulating Fluidized Bed Combustion (AFBC/CFBC) technologies to improve energy efficiency and reduce dependence on externally procured power. WHRB systems recover thermal energy from high-temperature rotary kiln exhaust gases and utilize it for steam-based power generation, while AFBC/CFBC boilers utilize low-grade fuels and process by-products such as dolochar generated during sponge iron production.

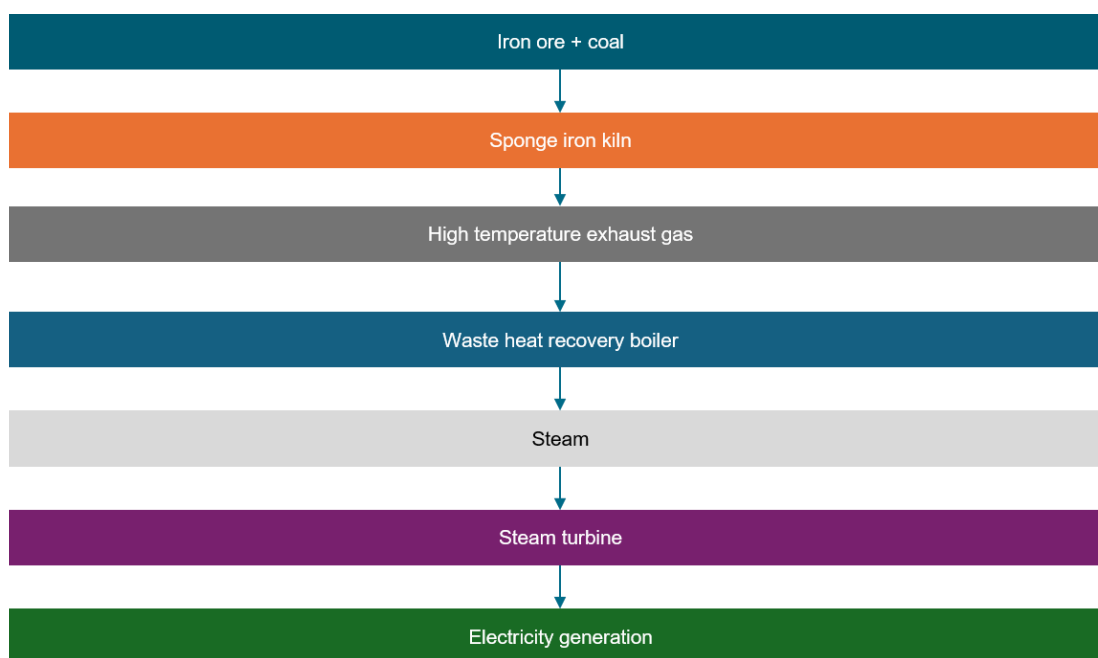
The combined deployment of these technologies enables manufacturers to recover energy from both waste heat and solid by-products, thereby improving overall resource utilization and reducing fuel and power costs. Consequently, WHRB and AFBC/CFBC-based captive power generation has become an established industry practice among integrated sponge iron and steel producers.

In addition to providing economic benefits, these technologies support sustainability objectives by reducing waste generation, improving plant efficiency and lowering the environmental footprint of steel manufacturing operations. As a result, captive power generation based on WHRB and AFBC/CFBC systems is widely regarded as a key competitive advantage for integrated sponge iron manufacturers.

Waste Heat Recovery Boiler (WHRB) Systems

WHRB systems recover thermal energy from rotary kiln exhaust gases and utilize it for steam generation and electricity production. Since power is generated from waste heat that would otherwise be lost, the system improves overall plant efficiency and reduces specific energy consumption.

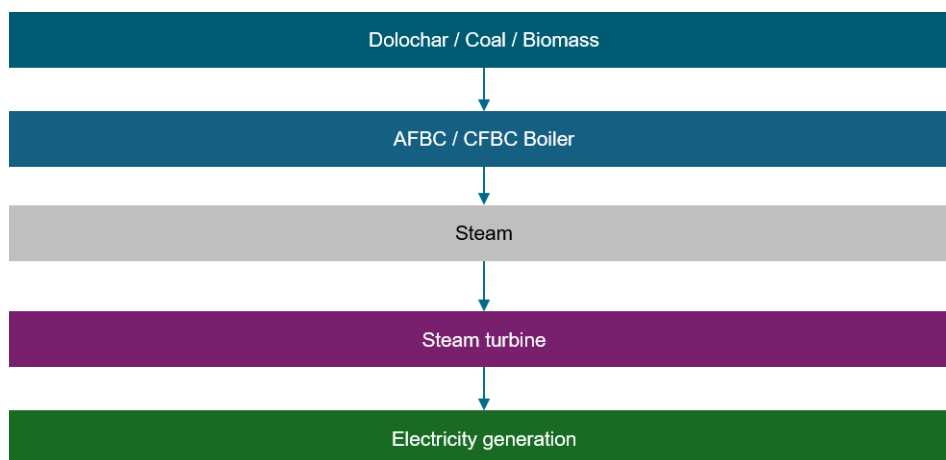
Working Mechanism of a WHRB System



Atmospheric and Circulating Fluidized Bed Combustion (AFBC/CFBC) Technology

AFBC/CFBC boilers utilize low-grade fuels and process by-products such as dolochar for steam and power generation. The technology enables efficient fuel utilization while reducing waste disposal requirements and improving combustion efficiency.

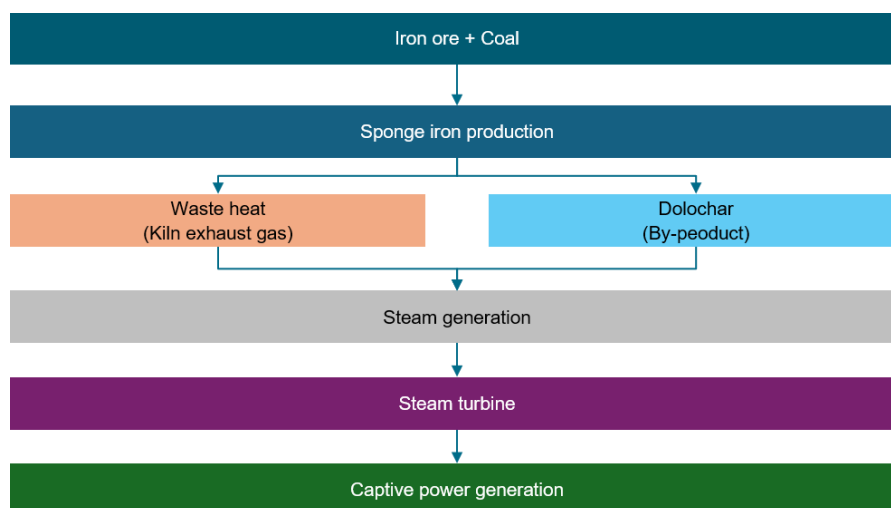
Working Mechanism of a AFBC/CFBC System



Integrated Energy Recovery Model in Sponge Iron Plants

Integrated sponge iron plants typically combine WHRB and AFBC/CFBC systems to recover energy from both waste heat and dolochar, thereby maximizing captive power generation, improving resource efficiency and reducing dependence on external power sources.

Industry-wide energy recovery model



Benefits of By-product Utilization and Waste Heat Recovery

The increasing adoption of WHRB and AFBC-based captive power generation reflects the industry's focus on improving operational efficiency and sustainability. Key benefits include:

- Improved overall energy efficiency of sponge iron plants.
- Reduction in purchased power requirements.
- Lower fuel consumption and power generation costs.
- Productive utilization of industrial by-products such as dolochar.
- Reduced waste disposal and environmental impact.

- Improved compliance with sustainability and emission reduction objectives.
- Enhanced competitiveness through lower operating costs.

As energy costs continue to represent a significant component of steel manufacturing expenses, the utilization of dolomite and waste heat for captive power generation is expected to remain an important feature of integrated sponge iron and steel plants. The practice supports both economic efficiency and environmental sustainability, making it a key element of modern steel manufacturing operations.

Key regulatory framework applicable to captive power plants and WHRB installations

Regulatory framework governing captive power generation

The Indian power sector is governed by a comprehensive regulatory framework aimed at ensuring reliable power supply, promoting competition and encouraging efficient utilization of energy resources. The Electricity Act, 2003 serves as the principal legislation governing generation, transmission, distribution and trading of electricity in India. One of the key provisions of the Act is the recognition and promotion of captive power generation, allowing industrial consumers to establish power plants for self-consumption and thereby improve energy security and cost competitiveness.

Under the captive power framework, industries are permitted to generate electricity primarily for their own use, subject to prescribed ownership and consumption criteria. Captive power generation has emerged as an important component of India's industrial ecosystem, particularly among energy-intensive sectors such as steel, cement, chemicals and aluminium. The framework encourages industries to invest in efficient power generation facilities while reducing dependence on the grid and minimizing transmission losses.

Environmental and emission Regulations

Captive power plants and WHRB installations are subject to various environmental regulations administered by the Ministry of Environment, Forest and Climate Change (MoEFCC), Central Pollution Control Board (CPCB) and respective State Pollution Control Boards (SPCBs). These regulations prescribe emission standards for particulate matter, sulphur oxides (SO_x), nitrogen oxides (NO_x) and other pollutants generated during combustion processes.

Steel manufacturers operating AFBC or CFBC-based captive power plants are required to implement appropriate pollution-control equipment such as electrostatic precipitators, bag filters and continuous emission monitoring systems. Compliance with these regulations is essential not only for maintaining operational continuity but also for meeting increasingly stringent sustainability expectations from regulators, lenders and customers.

Energy Efficiency and Waste Heat Recovery

The Government of India has increasingly focused on improving industrial energy efficiency through initiatives such as the Energy Conservation Act and the Perform, Achieve and Trade (PAT) Scheme administered by the Bureau of Energy Efficiency (BEE). The PAT Scheme identifies energy-intensive industries, including iron and steel, and establishes specific energy consumption reduction targets. Companies that outperform their targets can generate tradable energy-saving certificates, while underperforming entities may be required to purchase such certificates to meet compliance obligations.

Waste Heat Recovery Boiler (WHRB) systems align closely with these energy-efficiency objectives by enabling recovery of thermal energy that would otherwise be wasted. The installation of WHRB systems improves overall energy utilization, reduces fuel consumption and lowers specific energy consumption levels within industrial plants. As a result, WHRB-based power generation is increasingly viewed as a best practice within the steel industry.

Sustainability and Decarbonization Initiatives

The regulatory landscape is progressively evolving towards lower-carbon industrial operations. The Government of India has introduced various initiatives aimed at improving resource efficiency, reducing carbon intensity and promoting sustainable manufacturing practices. Integrated steel manufacturers are increasingly expected to improve energy efficiency, enhance waste utilization and reduce emissions through adoption of advanced technologies and cleaner production methods.

In this context, captive power generation through WHRB systems and the utilization of by-products such as dolochar in AFBC/CFBC boilers assume greater importance. These technologies contribute to improved resource utilization, reduced dependence on external fuels and enhanced environmental performance. Consequently, they are expected to remain key components of sustainable steel manufacturing practices in the coming years.

Implications for Integrated Steel Manufacturers

For integrated sponge iron and steel manufacturers, compliance with power, environmental and energy-efficiency regulations is a critical aspect of business operations. Manufacturers that effectively utilize waste heat and process by-products through captive power generation are generally better positioned to manage energy costs, improve operational efficiency and comply with evolving sustainability requirements. Accordingly, WHRB and AFBC/CFBC-based power generation systems have become an integral part of the operational strategy of many integrated steel producers, supporting both regulatory compliance and long-term competitiveness.

Demand–Supply dynamics and outlook for thermal, captive and WHRB-based power generation

Demand–Supply dynamics of the Indian power sector

India's power demand has grown significantly over the past decade, driven by economic growth, industrialization, urbanization and increasing electrification. Total electricity generation increased from 1,739.1 billion units (BU) in FY24 to 1,829.7 BU in FY25 and further to 1,847.9 BU in FY26. Although generation growth moderated to 0.99% in FY26, the long-term trend continues to reflect rising electricity consumption across industrial, commercial and residential segments.

The country's power supply position has improved considerably over time owing to substantial investments in generation capacity, transmission infrastructure and grid modernization. The energy deficit declined from 10.1% in FY10 to only 0.03% in FY26, while the peak power deficit reduced from 12.7% to virtually zero during the same period. In FY26, against an energy requirement of 1,707 BU, availability stood at 1,707 BU, indicating a well-balanced supply demand scenario. Similarly, peak demand of 245.4 GW was almost entirely met, highlighting the increasing reliability of the national power system.

Despite the rapid expansion of renewable energy capacity, thermal power continues to play a critical role in India's electricity ecosystem. As of March 31, 2026, thermal power accounted for 249.3 GW of installed capacity, representing approximately 46.8% of total installed capacity. Coal-based power generation alone contributed 221.9 GW, making it the single largest source of electricity generation in the country. The continued importance of thermal generation stems from its ability to provide baseload power and maintain grid stability alongside intermittent renewable energy sources.

Outlook for captive power generation

The increasing electricity requirements of energy-intensive industries are expected to support continued growth in captive power generation across sectors such as steel, cement, aluminium, chemicals and mining. Captive power plants enable industrial consumers to improve energy security, reduce exposure to grid tariff volatility and ensure uninterrupted operations. As manufacturing activity expands under government initiatives such as Make in India and increasing infrastructure investment, demand for reliable industrial power is expected to remain strong.

Captive power generation is likely to gain further importance as industries focus on improving operational efficiency and reducing overall production costs. Integrated steel producers, in particular, are expected to continue investing in captive generation facilities owing to the significant contribution of power costs to total manufacturing expenses. The ability to generate electricity internally enables manufacturers to maintain greater control over operating costs while enhancing competitiveness.

Outlook for WHRB and waste-to-energy power generation

Waste Heat Recovery Boiler (WHRB)-based power generation is expected to witness increasing adoption within the sponge iron and steel industries as manufacturers focus on energy efficiency, sustainability and cost optimization. WHRB systems provide an efficient mechanism for converting waste thermal energy into electricity without additional fuel consumption, thereby improving overall plant economics.

Similarly, the utilization of sponge iron by-products such as dolochar in AFBC and CFBC-based captive power plants is expected to remain an important industry practice. The combined use of WHRB and AFBC technologies enables integrated steel producers to recover energy from both waste heat and process by-products, resulting in lower energy costs and improved resource utilization. As environmental regulations become increasingly stringent and industries place greater emphasis on decarbonization, energy-efficient technologies such as WHRB systems are expected to assume a more prominent role within the steel manufacturing ecosystem.

Relevance for integrated steel manufacturers

For integrated steel manufacturers, power availability and cost competitiveness remain critical determinants of operational performance. In this context, captive power generation supported by WHRB and AFBC/CFBC technologies provides significant strategic advantages through improved energy security, lower operating costs and enhanced sustainability performance. Consequently, investments in captive power infrastructure and waste heat recovery systems are expected to remain integral to the growth strategy of sponge iron and steel producers over the medium to long term.

Relevance of captive power generation for B.S. Sponge

B.S. Sponge has established a captive power generation infrastructure comprising a 48 MW Waste Heat Recovery Boiler (WHRB)-based power plant, a 4 MW AFBC, 15 MW CFBC-based power plant, resulting in an aggregate captive power capacity of 67 MW. The Company's captive generation facilities enable efficient utilization of sponge iron manufacturing by-products, including waste heat and dolochar, thereby improving energy efficiency and reducing dependence on externally sourced power. This integrated energy model provides operational reliability, lowers power procurement costs and enhances overall manufacturing competitiveness.

The combination of WHRB and AFBC technologies allows the Company to recover energy from multiple process streams while supporting sustainable manufacturing practices. Given the energy-intensive nature of steel production, captive power generation remains a key competitive advantage for the Company, contributing to cost optimization, operational stability and improved resource utilization. As environmental regulations continue to evolve and energy costs remain a significant component of steel manufacturing expenses, the Company's captive power infrastructure is expected to remain an important contributor to long-term operational efficiency and profitability.

Competition benchmarking

Operational benchmarking

To assess B.S. Sponge's competitive positioning within the Indian steel industry, a peer set comprising Shyam Metalics & Energy Limited, Gallantt Ispat Limited, Sambhv Steel Tubes Limited and Jai Balaji Industries Limited has been considered. These companies operate across similar segments of the steel value chain, including sponge iron, billets, long steel products, pipes, ferro alloys and captive power generation. The selected peers have been benchmarked based on operational scale, product portfolio, manufacturing integration, plant footprint, captive power infrastructure and strategic growth initiatives.

Brief profile of the peer companies

Company	Brief Profile
B.S. Sponge Limited	Integrated steel manufacturer based in Raigarh, Chhattisgarh with presence across sponge iron, billets and slabs, TMT bars, HR coils, wire rods, ERW pipes, ferro alloys and captive power generation.
Shyam Metalics & Energy Limited	One of India's leading integrated metal producers with operations across carbon steel, stainless steel, ferro alloys and aluminium. The company operates an ore-to-metal model with integrated facilities across Odisha, West Bengal, Madhya Pradesh and Jharkhand.
Gallantt Ispat Limited	Integrated steel producer engaged in pellets, sponge iron, billets, TMT bars and captive power generation with manufacturing facilities in Uttar Pradesh and Gujarat. The company follows a backward-integrated steel manufacturing model supported by captive power and raw material infrastructure.
Sambhv Steel Tubes Limited	Backward-integrated steel pipe manufacturer with presence across sponge iron, blooms, slabs, HR coils, CR coils, galvanized products and ERW pipes. The company operates integrated manufacturing facilities in Chhattisgarh and has significant exposure to value-added downstream steel products.
Jai Balaji Industries Limited	Integrated steel manufacturer operating four manufacturing facilities across West Bengal and Chhattisgarh with presence across sponge iron, billets, TMT bars, ferro alloys, pig iron, coke, ductile iron pipes and captive power generation. The company follows a backward-integrated manufacturing model and has a captive power capacity of 101.1 MW. Jai Balaji is increasingly focused on value-added products, with ductile iron pipes and specialised ferro alloys contributing a significant share of revenues.

Source: Crisil Intelligence

MnTPA: million tonnes per annum

Product portfolio

Company	Captive Power	Pellets	Sponge Iron	Pig Iron	Billets/S labs	TMT/ Long Product s	HR Coils	Wire Rods	Pipes & Tubes	Ferro Alloys
B.S. Sponge										

Shyam Metalics										
Gallantt Ispat										
Sambhv Steel Tubes										
Jai Balaji Industries										

Green Colour- Product present in the portfolio; Red Colour- Product not present in the portfolio

Source: Crisil Intelligence

Capacity overview (FY25)

Particulars	B.S. Sponge	Shyam Metalics	Gallantt Ispat	Sambhv Steel Tubes	Jai Balaji Industries
Iron Pellets (MnTPA)	-	6.00	0.79	-	-
Sponge Iron (MnTPA)	0.68	3.05	0.92	0.28	0.27
Billets / Blooms / Slabs (MnTPA)	0.37	2.01	0.96	0.36	0.21
TMT / Long Products (MnTPA)	0.11	2.07	0.95	-	0.24
HR Coils (MnTPA)	0.17	-	-	0.39	-
Pipes & Tubes (MnTPA)	0.12	Included in long products	-	0.45	-
Wire Rods (MnTPA)	0.17	0.92	-	-	-
Ferro Alloys (MnTPA)	0.03	0.22	-	-	0.17
Stainless Steel Products (MnTPA)	-	0.27	-	0.18	-
Captive Power (MW)	67	467	129	25	101.1
Total Capacity of above mentioned products	1.63	14.54	3.62	1.66	0.89

N/A: Data not available; MnTPA: Million Tonnes per Annum; MW: Mega Watt

Note: Aggregate capacity represents the arithmetic sum of capacities across various production stages and products. As several facilities are integrated and intermediate products are consumed internally (e.g., sponge iron, billets and rolling products), the aggregate capacity may involve double counting and should not be interpreted as the company's effective crude steel or finished steel production capacity.

Source: Crisil Intelligence

Plant locations, strategic advantages & disadvantages

Company	Manufacturing Locations	Strategic Advantages	Strategic Disadvantages
B.S. Sponge Limited	1. Taraimal, Raigarh, Chhattisgarh	• Integrated manufacturing complex spanning sponge iron, billets, TMT bars, HR coils, wire rods, pipes, ferro alloys and captive power generation.	• Manufacturing operations concentrated at a single location.
		• Strong operational integration within a single facility, enabling efficient material flow and reduced intra-plant logistics costs.	• Lower operating scale compared with larger integrated peers.
		• High degree of captive power dependence through WHRB and AFBC-based generation.	• Significant dependence on Central Indian markets.

		• Diversified product portfolio despite relatively modest scale.	
Shyam Metalics & Energy Limited	1. Sambalpur (Odisha) 2. Jamuria (West Bengal) 3. Mangalpur (West Bengal) 4. Kharagpur (West Bengal) 5. Pithampur (Madhya Pradesh) 6. Giridih (Jharkhand) 7. Pakuria (West Bengal)	• Largest and most diversified player within the peer set with operations across carbon steel, stainless steel, ferro alloys and aluminium products.	• Higher operational complexity arising from diversified product portfolio and multiple manufacturing facilities.
		• Extensive manufacturing footprint across multiple states.	• Larger capital expenditure requirements to sustain growth and maintain diversified operations.
		• Strong backward and forward integration across the metal value chain.	• Greater exposure to fluctuations across multiple metal segments.
		• Large captive power capacity supporting cost competitiveness.	
		• Broad product portfolio spanning intermediate and value-added products.	
Gallantt Ispat Limited	1. Gorakhpur (Uttar Pradesh) 2. Samakhiyali, Kutch (Gujarat)	• Strong backward integration through captive iron ore mining assets.	• Relatively limited presence in downstream value-added products compared with some peers.
		• Integrated manufacturing platform across pellets, sponge iron, billets and rolled products.	• Product portfolio remains concentrated around core steel products.
		• Large captive power infrastructure and logistics capabilities, including railway assets.	• Limited exposure to specialty steel or higher-margin downstream segments.
		• Presence in both Northern and Western India.	
Sambhv Steel Tubes Limited	1. Sarora (Raipur), Chhattisgarh 2. Kuthrel (Raipur), Chhattisgarh	• Strong downstream integration through HR coils, ERW pipes, galvanized products and stainless-steel products.	• Lower sponge iron capacity compared with larger integrated steel peers.
		• One of the few integrated steel-to-pipe manufacturing platforms within the peer group.	• Manufacturing footprint concentrated within a single state.
		• High exposure to value-added steel products.	• Greater exposure to cyclical demand in pipe and tube markets.
		• Captive power infrastructure supports manufacturing operations.	• Comparatively lower scale of captive power generation.
Jai Balaji Industries Limited	1. Durgapur (West Bengal) 2. Raniganj (West Bengal) 3. Purulia (West Bengal) 4. Raigarh (Chhattisgarh)	• Integrated steel manufacturing operations spanning sponge iron, pig iron, billets, TMT bars, ferro alloys, ductile iron pipes, coke and captive power.	• Manufacturing assets are primarily concentrated in Eastern India, resulting in relatively higher dependence on eastern and central markets.
		• Diversified manufacturing footprint across four integrated plants, providing better geographic diversification than single-location peers.	• Absence of flat steel products such as HR coils, CR coils and steel pipes limits participation in certain downstream steel segments.
		• Increasing focus on value-added products such as ductile iron pipes and specialised ferro alloys, which contributed a significant share of revenue in FY25.	• Lower overall manufacturing scale compared with larger integrated peers such as Shyam Metalics.
		• Strong backward integration and internal consumption of intermediate products across the value chain.	• Revenue exposure remains influenced by cyclicity in long steel, ferro alloy and commodity steel

			markets despite increasing share of value-added products.
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Source: Crisil Intelligence

Value chain integration

Company	Integration Assessment	Remarks
Shyam Metalics	Very High	Presence across pellets, sponge iron, billets, long products, ferro alloys, stainless steel, aluminium and captive power.
B.S. Sponge	Very High	Presence across sponge iron, billets, TMT bars, HR coils, wire rods, pipes, ferro alloys and captive power generation.
Gallantt Ispat	High	Backward integration through pellets, sponge iron, billets, long products and captive power.
Sambhv Steel	Moderate to High	Strong downstream integration through HR coils, galvanized products, stainless steel products and pipes.
Jai Balaji Industries	High	Integrated operations across sponge iron, pig iron, billets, TMT bars, ferro alloys, ductile iron pipes, coke and captive power generation Increasing focus on value-added products such as ductile iron pipes and specialised ferro alloys..

Note: The integration assessment is based on the extent of participation across the steel value chain, including raw material processing, intermediate steel production, finished steel products, value-added downstream products and captive power generation.

Very High: Presence across almost the entire steel value chain

High: Presence across multiple stages of steel value chain

Moderate to High: Presence across core steelmaking operations and selected downstream products

Source: Crisil Intelligence

- **Shyam Metalics** demonstrates the highest level of integration within the peer set, operating an ore-to-metal manufacturing model spanning pellets, sponge iron, steelmaking, finished steel products, ferro alloys, stainless steel products, aluminium products and captive power generation.
- **B.S. Sponge** exhibits one of the most diversified and integrated manufacturing chains among mid-sized steel producers in India. The Company participates across multiple stages of the steel value chain including sponge iron, billets and slabs, TMT bars, HR coils, ERW pipes and tubes, wire rods and ferro alloys, supported by captive power generation. This diversification provides flexibility in product mix optimization and enables participation across multiple end-user industries.
- **Gallantt Ispat** demonstrates strong backward integration through pellet production, sponge iron manufacturing and captive power generation. However, its downstream product portfolio is relatively narrower compared with B.S. Sponge and Shyam Metalics.
- **Sambhv Steel** is differentiated by its downstream integration strategy, converting steel intermediates into higher value-added products such as HR coils, ERW pipes, galvanized pipes and stainless-steel products.
- **Jai Balaji Industries** maintains a high level of integration through operations spanning sponge iron, pig iron, billets, TMT bars, ferro alloys, ductile iron pipes, coke and captive power generation. The company's increasing focus on value-added products such as ductile iron pipes and specialised ferro alloys further strengthens its integration profile

From an integration perspective, B.S. Sponge occupies a differentiated position within the peer group. The Company has developed a relatively comprehensive manufacturing value chain spanning sponge iron, billets, TMT bars, HR coils, pipes & tubes, wire rods, ferro alloys and captive power generation. Such breadth of integration across multiple stages of the steel value chain is relatively uncommon among companies of its scale and provides operational flexibility through captive consumption of intermediate products and participation across multiple steel product segments.

Captive power (FY26)

Company	Captive Power Capacity (MW)	Captive power as a % of total power requirement	Key Technology / Source
B.S. Sponge	67	96%	WHRB + AFBC + CFBC
Shyam Metalics	467	83%	Captive thermal, WHRB, AFBC and renewable power
Gallantt Ispat	129	90-100%	Thermal and WHRB-based generation
Sambhvi Steel Tubes	25	50%	16 MW WHRB + 9 MW AFBC
Jai Balaji Industries	101.1	N/A	Thermal and WHRB-based generation

N/A: Data not available; WHRB: Waste Heat Recovery Boiler; AFBC: Atmospheric Fluidized Bed Combustion; CFBC: Circulating Fluidized Bed Combustion

Source: Crisil Intelligence

MW: mega watt

B.S. Sponge's captive power infrastructure meets a substantial majority of its power requirements, highlighting a high degree of energy self-sufficiency relative to its scale of operations. Captive power generation met approximately 95.86%, 98.14% and 96.01% of the Company's total operational power requirement in FY2024, FY2025 and FY2026, respectively. Supported by a 67 MW captive power plant comprising WHRB, AFBC, and CFBC-based generation facilities, the Company benefits from lower dependence on external power procurement and enhanced cost competitiveness in its energy-intensive manufacturing operations. Although larger peers such as Shyam Metalics, Gallantt Ispat and Jai Balaji Industries operate higher captive power capacities in absolute terms, B.S. Sponge's captive power generation capability remains highly competitive relative to its scale of operations and provides a meaningful cost and operational advantage in energy-intensive steel manufacturing.

Strategic initiatives and growth strategy

Company	Key Strategic Focus	Announced Capex
B.S. Sponge	Product diversification, downstream integration, capacity expansion, captive power augmentation	Company is planning to commission the Nawapara Facility, a greenfield integrated steel manufacturing facility at Nawapara, Gharghoda, Raigarh, Chhattisgarh, India, to be executed in phases. Subject to receipt of the requisite approvals, including environmental approvals, implementation of the project as planned and completion of all the proposed phases, the Nawapara Facility, as on the date of this report, can have a maximum installed manufacturing capacity limit of 858,000 TPA of sponge iron, 792,000 TPA of billets and slabs and 160,000 TPA of silico manganese, together with proposed production facilities for various value-added finished steel products, captive power plants with an aggregate installed capacity of 200 MW and a coal washery basis the TOR approved by the Ministry of Environment, Forest and Climate Change, Government of India, by way of its letter dated June 11, 2026. The company has acquired 44.78 hectares of freehold land for the Nawapara Facility. The proposed Nawapara Facility is located in proximity to the existing Manufacturing Facility, enabling operational synergies and supply chain efficiencies.
Shyam Metalics	Value-added products, stainless steel, aluminium, captive power expansion, diversified metal platform	₹10,025 crore expansion plan, of which ₹6,584 crore invested till FY25; balance ₹3,441 crore earmarked for aluminium foil, stainless steel, captive power and value-added products.

Gallantt Ispat	Capacity expansion, raw material security through mining assets, captive power and logistics integration	₹1,015 crore approved expansion at the Gorakhpur integrated steel plant, including a 100 MW captive solar power plant.
Sambhv Steel Tubes	Pipe and tube leadership, stainless steel expansion, value-added flat products, greenfield expansion	Kesda greenfield project to add 1.2 MMTPA finished steel capacity; FY25 capex additions of approximately ₹690 crore (PPE and CWIP additions).
Jai Balaji Industries	Value-added products, ductile iron pipe expansion, ferro alloy capacity expansion, captive power integration, brownfield growth	Brownfield expansion focused on ductile iron pipes, ferro alloys and OPVC products, funded largely through internal accruals.

Source: Crisil Intelligence

B.S. Sponge

Over the last several years, B.S. Sponge has transformed from a sponge iron-focused producer into an integrated steel manufacturer through successive capacity additions across billets and slabs, TMT bars, HR coils, ERW pipes and tubes, ferro alloys and wire rods. The Company's strategy has focused on increasing value-added product contribution while strengthening its captive power infrastructure and manufacturing integration. This approach has enabled diversification across multiple steel segments without significantly expanding its geographic footprint.

Shyam Metalics & Energy

Shyam Metalics has pursued one of the most diversified growth strategies within the peer set. In addition to capacity expansion across conventional steel products, the company has entered stainless steel, aluminium foil, colour-coated products, battery foil and other higher-margin segments. The company is also undertaking significant investments in captive power infrastructure and downstream manufacturing facilities.

Gallant Ispat

Gallantt's strategy is centred around strengthening backward integration through captive iron ore resources, pellet production and captive power generation. The company has also invested in logistics capabilities and expansion of its integrated steel manufacturing platform. Future growth is expected to be supported by mining security and ongoing brownfield expansion initiatives.

Sambhv Steel Tubes

Sambhv Steel has adopted a differentiated strategy focused on value-added downstream steel products, particularly pipes, galvanized products and stainless-steel offerings. The company is undertaking significant greenfield expansion and increasing exposure to higher-margin steel processing activities. This positioning provides stronger participation in infrastructure, construction and industrial end-use segments.

Jai Balaji Industries

Jai Balaji Industries has focused on strengthening its position within value-added steel segments, particularly ductile iron pipes and specialised ferro alloys. The company has pursued a strategy of brownfield capacity expansion, enhanced manufacturing integration and captive power utilization while maintaining a disciplined balance sheet. This approach has enabled diversification beyond conventional steel products and increased exposure to relatively higher-margin and less cyclical end markets.

Financial benchmarking

Comparison of KPIs with company's listed industry peers

Key performance indicators	Unit	B.S. Sponge Limited			Shyam Metals Limited			Gallant Ispat Limited			Sambhv Steel Tubes Limited			Jai Balaji Industries Limited			Peer Average		
		Fiscal 2026	Fiscal 2025	Fiscal 2024	Fiscal 2026	Fiscal 2025	Fiscal 2024	Fiscal 2026	Fiscal 2025	Fiscal 2024	Fiscal 2026	Fiscal 2025	Fiscal 2024	Fiscal 2026	Fiscal 2025	Fiscal 2024	Fiscal 2026	Fiscal 2025	Fiscal 2024
Revenue from Operations ⁽¹⁾	₹ in million	25,925.24	21,878.19	14,943.90	18,5522.10	15,1375.00	13,1952.20	44,189.22	42,927.29	42,271.18	24,132.43	15,113.55	12,857.57	57,842.70	63,508.00	64,137.80	-	-	-
Y-o-Y Revenue growth ⁽²⁾	%	18.50%	46.40%	83.93%	22.56%	14.72%	22.60%	2.94%	1.55%	4.20%	59.67%	17.55%	37.19%	(8.92)%	(0.98)%	4.71%	-	-	-
Total Income ⁽³⁾	₹ in million	26,060.61	21,925.16	14,962.47	18,7558.20	15,3681.30	13,3542.00	44,785.16	43,083.44	42,339.68	24,204.61	15,167.01	12,893.75	58,205.90	64,184.60	66,288.70	-	-	-
Operating EBITDA ⁽⁴⁾	₹ in million	3,730.12	3,365.88	2,850.78	23,330.40	18,655.30	15,700.20	7,164.44	6,944.32	4,481.97	2,762.05	1,544.82	1,598.72	3,495.40	8,667.80	9,062.60	-	-	-
Operating EBITDA Margin ⁽⁵⁾	%	14.39%	15.38%	19.08%	12.58%	12.32%	11.90%	16.21%	16.18%	10.60%	11.45%	10.22%	12.43%	6.04%	13.65%	14.13%	11.57%	13.09%	12.27%
EBITDA (including other income) ⁽⁶⁾	₹ in million	3,865.49	3,412.87	2,869.35	25,366.50	20,961.60	17,290.00	7,760.38	7,100.48	4,550.48	2,834.23	1,598.28	1,634.90	3,858.60	9,344.40	11,213.50	-	-	-
EBITDA Margin (including other income) ⁽⁷⁾	%	14.83%	15.57%	19.18%	13.52%	13.64%	12.95%	17.33%	16.48%	10.75%	11.71%	10.54%	12.68%	6.63%	14.56%	16.92%	12.30%	13.81%	13.33%
Profit After Tax (PAT) for the year ⁽⁸⁾	₹ in million	1,711.06	1,584.30	1,439.47	10,601.70	9,092.60	10,290.00	4,842.68	4,007.42	2,253.38	1,421.51	572.65	824.39	1,299.50	5,578.80	8,795.60	-	-	-
PAT Margin ⁽⁹⁾	%	6.60%	7.24%	9.63%	5.71%	6.01%	7.80%	10.96%	9.34%	5.33%	5.89%	3.79%	6.41%	2.25%	8.78%	13.71%	6.20%	6.98%	8.31%
ROE ⁽¹⁰⁾	%	24.18%	29.61%	37.88%	9.60%	9.00%	12.16%	15.73%	15.14%	9.64%	18.35%	12.27%	25.42%	5.93%	30.75%	85.39%	12.40%	16.79%	33.15%
ROCE ⁽¹¹⁾	%	22.90%	25.51%	29.68%	14.21%	12.92%	10.81%	18.88%	20.04%	13.31%	18.34%	15.16%	22.88%	11.30%	36.98%	57.29%	15.68%	21.28%	26.07%
Debt ⁽¹²⁾	₹ in million	7,732.22	6,264.40	5,152.98	10,050.70	7,894.30	5,969.10	5,476.87	3,776.65	4,619.11	3,733.41	5,067.03	3,505.40	4,166.30	5,586.50%	4,725.30	-	-	-

Key performance indicators	Unit	B.S. Sponge Limited			Shyam Metals Limited			Gallant Ispat Limited			Sambhv Steel Tubes Limited			Jai Balaji Industries Limited			Peer Average		
		Fiscal 2026	Fiscal 2025	Fiscal 2024	Fiscal 2026	Fiscal 2025	Fiscal 2024	Fiscal 2026	Fiscal 2025	Fiscal 2024	Fiscal 2026	Fiscal 2025	Fiscal 2024	Fiscal 2026	Fiscal 2025	Fiscal 2024	Fiscal 2026	Fiscal 2025	Fiscal 2024
Net Debt ⁽¹³⁾	₹ in million	6,721.42	5,341.78	4,898.38	8,994.10	7,211.80	5,464.40	445.40	1,195.32	4,496.03	2,891.32	4,904.50	3,075.53	356.29	432.45	381.55	-	-	-
Debt/Equity Ratio ⁽¹⁴⁾	Times	0.97	1.01	1.14	0.09	0.07	0.06	0.17	0.13	0.19	0.35	1.02	0.80	0.18	0.26	0.31	-	-	-
Net Debt/Operating EBITDA ⁽¹⁵⁾	Times	1.80	1.59	1.72	0.39	0.39	0.35	0.06	0.17	1.00	1.05	3.17	1.92	1.02	0.50	0.42	-	-	-
Interest Coverage Ratio ⁽¹⁶⁾	Times	4.75	5.08	5.24	8.61	9.62	8.05	15.49	26.83	12.04	5.69	2.65	4.48	3.96	13.42	14.28	8.44	13.13	9.71
Fixed Asset Turnover Ratio ⁽¹⁷⁾	Times	2.7	2.66	2.43	2.3	2.42	3.38	2.49	2.53	2.41	3.3	2.02	3.82	3.69	3.94	4.64	2.95	2.73	3.56
Net Working Capital Days ⁽¹⁸⁾	Days	37	32	43	14	16	25	41	39	43	14	26	41	61	37	13	32.50	29.50	30.50

Source: All the financial information for Company's listed peer mentioned in the above table is from the annual report and published financial results and investor presentation for the respective fiscal.

Note: All financial information for Company's listed peer mentioned in the above table is on a consolidated basis.

Notes:

⁽¹⁾ Revenue from Operations: Revenue from Operations is the Revenue recognized as per Ind-AS, as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽²⁾ Y-o-Y Revenue growth: Y-o-Y Revenue growth represents the increase percentage in Revenue from Operations of the relevant fiscal over Revenue from Operations of the previous fiscal.

⁽³⁾ Total income: Total income is calculated as the sum of revenue from operations & other income as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽⁴⁾ Operating EBITDA: Operating EBITDA is calculated as profit for the year plus total tax expenses, finance costs, and depreciation and amortisation expenses, minus other income as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽⁵⁾ Operating EBITDA margin: Operating EBITDA margin is calculated as Operating EBITDA, as calculated above, divided by revenue from operations as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽⁶⁾ EBITDA (including other income): EBITDA (including other income) is calculated as profit for the year plus total tax expenses, finance costs, and depreciation and amortisation as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽⁷⁾ EBITDA Margin (including other income): EBITDA Margin (including other income) is calculated as EBITDA (including other income) as calculated above divided by Total Income as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽⁸⁾ Profit After Tax (PAT) for the year: PAT for the year refers to total income, less total expenses, less exceptional items, less total tax expenses for the year as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽⁹⁾ PAT Margin: PAT Margin is calculated as PAT for the year divided by Revenue from operations as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽¹⁰⁾ Return on Equity (ROE): ROE is calculated as PAT for the year divided by average equity for the relevant fiscal; where average equity is the average of opening and closing equity for the relevant fiscal.

⁽¹¹⁾ Return on Capital Employed (ROCE): ROCE is calculated as EBIT for the relevant fiscal divided by capital employed as at the end of relevant fiscal; where EBIT is calculated as profit for the year plus total tax expense and finance costs; and Capital Employed represents the sum of total equity and long-term borrowings including lease liabilities, as appearing in the Restated Financial Information of the Company as at the end of the respective fiscal.

⁽¹²⁾ Debt: Debt represents the sum of long-term borrowings, short term borrowings and lease liabilities as appearing in the Restated Financial Information of the Company as at the of the respective fiscal.

⁽¹³⁾ Net Debt: Net Debt represents the sum of long-term borrowings, short-term borrowings and lease liabilities, less Cash and Cash Equivalents, Fixed Deposits and Interest accrued on Fixed Deposits as appearing in the Restated Financial Information of the Company as at the of the respective fiscal.

⁽¹⁴⁾ Debt/Equity Ratio: Debt/Equity is calculated as debt, as mentioned above, divided by total equity, where total equity represents the sum of equity share capital and other equity as at the of the respective fiscal.

⁽¹⁵⁾ *Net Debt / Operating EBITDA: Net Debt / Operating EBITDA is calculated as Net debt divided by Operating EBITDA, as enumerated above for and as at the relevant fiscal.*

⁽¹⁶⁾ *Interest Coverage Ratio: Interest Coverage Ratio is calculated as EBIT divided by Finance Cost as appearing in the Restated Financial Information of the Company as at the of the respective fiscal, where EBIT is calculated as profit for the year plus total tax expense and finance costs.*

⁽¹⁷⁾ *Fixed Asset Turnover Ratio: Fixed Asset Turnover Ratio is calculated as Revenue from operations divided by net block of Property, plant and equipment, including ROU Asset, as appearing in the Restated Financial Information of the Company as at the of the respective fiscal.*

⁽¹⁸⁾ *Net Working capital days: Net Working capital days is computed as Inventory days plus Trade receivable days minus Trade payable days; where Inventory days are calculated as average Inventory divided by revenue from operations multiplied by 365 days, Trade receivables days are calculated as average Trade receivables divided by revenue from operations multiplied by 365 days; and Trade payable days are calculated as average Trade payable divided by revenue from operations multiplied by 365 days.*

Revenue performance across the peer group remained varied during FY2025-FY2026. While Shyam Metalics remained the largest player in terms of revenue from operations, B.S. Sponge and Sambhv Steel Tubes recorded the strongest growth trajectories among the selected peers. B.S. Sponge's revenue from operations increased from ₹14,943.90 million in FY2024 to ₹25,925.24 million in FY2026, translating into growth of 46.40% in FY2025 and 18.50% in FY2026, resulting in a FY2024-FY2026 CAGR of 31.71%. Sambhv Steel Tubes recorded the highest CAGR among peers at 36.98%, supported by ongoing capacity additions and business expansion. In contrast, Jai Balaji Industries reported a decline in revenue during the period, while Gallantt Ispat and Shyam Metalics recorded relatively moderate growth. Overall, B.S. Sponge emerged as one of the fastest-growing companies within the selected peer set during the review period.

B.S. Sponge reported EBITDA of ₹2,850.78 million in FY2024, increasing to ₹3,365.88 million in FY2025 and further to ₹3,730.12 million in FY2026, reflecting growth of 18.07% and 10.82%, respectively. Although the Company's EBITDA remained lower than larger peers such as Shyam Metalics and Gallantt Ispat owing to differences in scale, it maintained one of the strongest margin profiles within the peer group. EBITDA margin moderated from 19.08% in FY2024 to 15.38% in FY2025 and 14.39% in FY2026, but remained above Shyam Metalics (12.58%), Sambhv Steel Tubes (11.45%) and Jai Balaji Industries (6.04%) in FY2026. The Company's ability to maintain superior operating margins reflects the benefits of its integrated manufacturing operations, captive power infrastructure and diversified product mix.

B.S. Sponge reported PAT growth of 10.06% in FY2025 and 8.00% in FY2026, with PAT increasing from ₹1,439.47 million in FY2024 to ₹1,584.30 million in FY2025 and ₹1,711.06 million in FY2026. PAT margin stood at 9.63% in FY2024, moderating to 7.24% in FY2025 and 6.60% in FY2026. While Gallantt Ispat reported stronger profitability and PAT margins during the period, B.S. Sponge maintained a higher PAT margin than Sambhv Steel Tubes and remained broadly comparable with Shyam Metalics. Jai Balaji Industries witnessed a significant decline in profitability, with PAT decreasing from ₹8,795.65 million in FY2024 to ₹1,299.50 million in FY2026, resulting in substantial margin compression. Overall, B.S. Sponge demonstrated stable earnings growth and profitability despite a challenging operating environment.

B.S. Sponge reported a strong return profile relative to the selected peer group, with RoE of 37.88%, 29.61% and 24.18% in FY2024, FY2025 and FY2026, respectively, and RoCE of 29.68%, 25.51% and 22.90% over the same period. While Jai Balaji Industries reported exceptionally high return ratios in FY2024 and FY2025, its metrics declined sharply in FY2026 owing to lower profitability. Among the peers, B.S. Sponge recorded the strongest RoE and RoCE in FY2026, reflecting efficient capital deployment, healthy profitability and benefits derived from its integrated manufacturing operations and captive power infrastructure. The Company's return profile positions it among the stronger performers within the selected peer group from a capital efficiency perspective.

Peer comparison [Credit Rating]

Particulars	Credit Rating		Outlook	Agency
	Long Term	Short term		
Companies				
Gallantt Ispat Limited	IND AA-	IND A1+	Stable	India Rating & Research
Jai Balaji Industries Limited	Crisil BBB	Crisil A3+	Stable	Crisil Ratings
Sambhv Steel Tubes Limited	CARE A	CARE A1	Stable	CARE Ratings
Shyam Metalics and Energy Limited	Crisil AA+	Crisil A1+	Stable	Crisil Ratings
B.S. Sponge Limited	Crisil A+	Crisil A1	Stable	Crisil Ratings

Source: Company financials, Crisil Intelligence

N/A: Not Available

Credit ratings across the peer group indicate varying levels of creditworthiness, reflecting differences in operating scale, business risk profiles, leverage and financial flexibility. Among the selected peers, Shyam Metalics and Gallantt Ispat hold the strongest credit ratings at AA+ and AA-, respectively, supported by their larger scale of operations, diversified product portfolios and stronger financial profiles. Sambhvi Steel Tubes is rated in the A category, and Jai Balaji Industries is rated in BBB category, reflecting moderate credit risk and established operating track records. Jai Balaji Industries' rating profile improved from CRISIL BBB-/A3 in FY24 to CRISIL BBB/A3+ with a Stable outlook, indicating strengthening credit metrics and financial position.

In comparison, B.S. Sponge was assigned a CRISIL A+ long-term rating and CRISIL A1 short-term rating with a Stable outlook. While the Company's long-term rating remains below those of larger integrated steel producers such as Shyam Metalics and Gallantt Ispat, it is superior to the ratings assigned to Jai Balaji Industries and comparable to the rating category of Sambhvi Steel Tubes. Overall, B.S. Sponge's credit ratings reflect a satisfactory credit profile supported by its integrated manufacturing operations, diversified product portfolio, strong energy self-sufficiency and ongoing growth trajectory.

Company profiling

Business profile

B.S. Sponge Limited (formerly B.S. Sponge Private Limited) is an integrated steel manufacturer with operations spanning multiple stages of the steel value chain, from the production of sponge iron to the manufacture of value-added finished steel products. The Company commenced operations in 2005 with a single sponge iron kiln having an installed capacity of 30,000 TPA (tonnes per annum). Over the last two decades, it has transformed into a diversified steel producer through a series of capacity expansions and forward integration initiatives. B.S. Sponge is one of the leading manufacturers of steel and steel products in India in terms of installed capacity as of March 31, 2026. The company has an aggregate installed capacity of 1,627,500 TPA (tonnes per annum) across its portfolio of semi-finished and value-added finished steel products. The Manufacturing Facility is also equipped with a 67 MW captive power generation capacity as on the date of this report. The Company's product portfolio comprises sponge iron, billets and slabs, TMT bars, hot-rolled coils (strips), wire rods, ERW pipes and tubes, and ferro alloys (primarily silico manganese).

The Company operates a Manufacturing Facility strategically located in the mineral-rich state of Chhattisgarh, the steel capital of India enabling it to manufacture finished steel products from iron ore through an efficient and largely self-sufficient production process. The state of Chhattisgarh is geographically located at the centre of the country, with Raigarh being a major industrial hub surrounded by major mineral-rich industrial states including Odisha and Jharkhand. Raigarh has a well-developed industrial ecosystem with the presence of numerous steel, power and allied manufacturing industries, and continues to witness the establishment of new industrial projects and manufacturing facilities which provides us with access to a robust supplier network, skilled manpower, logistics infrastructure and other ancillary facilities that support our manufacturing operations. The Company's Manufacturing Facility located at Taraimal, post office Gerwani, Tamnar, Raigarh, Chhattisgarh, India, is in close proximity to key raw material sources and suppliers of iron ore, iron ore pellets and coal, and is well-connected via road and railway infrastructure to support efficient inward and outward logistics. The strategic proximity of the manufacturing facility to the raw material sources enables efficient procurement, reduces inbound transportation costs and transit time, mitigates supply chain disruptions, and allows it to benefit from bulk procurement advantages. The strategic location also facilitates easy availability of transportation infrastructure and heavy commercial vehicles, ensuring efficient outward logistics for nationwide product distribution and contributing to timely delivery of products to the customers. The Company's integrated operations allow it to exercise greater control over quality, costs, production scheduling and supply chain management.

A key strength of the Company is its captive power infrastructure of 67 MW, comprising a 48 MW waste heat recovery boiler (WHRB)-based power plant, a 4 MW AFBC-based power plant and a 15 MW CFBC-based power plant. Reliable and uninterrupted availability of power is critical for steel manufacturing operations, where disruptions in electricity supply may adversely impact production efficiency, product quality and operating costs. The captive power generation capabilities significantly reduce dependence on external sources of power and mitigate risks associated with grid interruptions, power shortages, fluctuations in tariffs and supply constraints.

Power is a critical input in steel manufacturing and constitutes a significant component of manufacturing costs for steel producers. The WHRB-based power generation model is significantly cost-efficient, as it requires no additional fuel consumption, and is classified as a renewable and environmentally sustainable source of energy as it recovers and utilizes heat that would otherwise be vented as waste. The AFBC and CFBC based power plants are also very cost-efficient, as they primarily utilize dolomite, a by-product generated during the sponge iron manufacturing process, as primary fuel source. This enables the company to convert an internal by-product into a valuable energy resource, reducing waste disposal requirements while enhancing operational efficiency and environmental performance.

The Company has also implemented advanced manufacturing technologies such as THERMEX® QST technology for TMT bars, hot charging processes for rolling operations and AGC-enabled 4-Hi rolling mills for HR coil production.

The Company serves customers across India through a diversified distribution network comprising traders, dealers, steel manufacturers, pipe manufacturers and industrial customers. During FY26, its products were sold across 21 states and three union territories, reflecting a broad market presence and diversified customer base.

Mapping of Key Products in the Steel Value-Chain Across End-Use Sectors

B.S. Sponge Limited operates a backward integrated steel manufacturing facility with a diversified product portfolio comprising sponge iron, billets/slabs, TMT bars, wire rods, HR coils (strips), ERW pipes & tubes and ferro alloys. The Company's presence across multiple stages of the steel value chain enables its products to cater to a diverse range of end-use industries and applications, including steel manufacturing, construction and infrastructure, residential and commercial development, agriculture, industrial and engineering applications, and the manufacture of wires, cables, fasteners, nails, fencing products, springs, welding electrodes and other downstream steel products. The products are used both for captive consumption in the company's downstream manufacturing operations and are also sold in the open market primarily through direct institutional sales and a network of traders, distributor and dealers enabling it to cater to customers across multiple geographies and end-use segments including third-party steel manufacturers, re-rollers, pipe manufacturers, fabricators and other industrial customers.

Products	FY26 Industry Size (in MnTPA)	Industry CAGR % (FY26-30P)	Growth in Domestic Demand CAGR % (FY21-26)	Growth in Domestic Production CAGR % (FY21-26)	Key Applications	Principal end-use and markets
Semi-finished steel products						
Sponge Iron	59.9	8-9%	12.1%	11.9%	Raw material for steelmaking through induction furnaces and electric arc furnaces	- Captively consumed in our Steel Melting Shop ("SMS") - Sold to other steel product manufacturers (induction/ EAF furnace operators)
Billets / Slabs	164.2*	6-8%*	10.7%*	10.9%*	Intermediate steel products used for rolling into finished steel products	- Captively consumed for downstream rolling into TMT Bars, Wire rods and HR Coils - Sold to other re-rollers and steel product manufacturers
Value-added finished steel products						
TMT Bars	54.0	6-7%	15.1%	14.9%	Reinforcement in concrete structures	Residential and commercial construction, infrastructure construction projects, industrial and engineering / capital goods.
Wire Rods	9.0	5-7%	13.2%	12.1%	Manufacturing of wires, fasteners, welding electrodes, wire mesh, springs and fencing products	Used in manufacturing of wires and cables, fasteners, nails, fencing products, wire mesh, springs, welding electrodes, and various engineering and construction products

HR Coils (Strips)	59.9	6-7%	9.7%	7.0%	Fabrication, pipes, tubes, structural components and downstream steel processing	• Captively consumed for ERW Pipe and Tube manufacturing • Sold to other pipe manufacturers and fabricators
ERW Pipes and Tubes	11.7	8-10%	9.9%	12.0%	Transportation of fluids, structural applications and fabrication	• Construction, irrigation, infrastructure, agricultural, industrial and general engineering applications
Ferro Alloys (Silico manganese)	0.8	7-9%	7.4%	10.4%	Deoxidizing and alloying agent in carbon steel and alloy steel production	• Captively consumed in SMS • Sold to other steel manufacturers

*Finished steel taken as a proxy for Billet/Slabs

Source: Crisil Intelligence

The Company's product portfolio serves a diverse set of end-use industries, reducing dependence on any single demand segment and providing flexibility to benefit from growth across multiple sectors.

Construction and infrastructure remain among the key end-use segments, primarily driven by demand for TMT bars, ERW pipes and tubes and wire rods manufactured from billets and slabs. India's continued focus on housing development, transportation infrastructure and industrial corridor development is expected to support long-term demand for these products.

The engineering and manufacturing sectors represent another important demand driver for the Company. HR coils, ERW pipes and tubes and wire rods are widely used in the production of industrial machinery, fabricated products, engineering equipment, agricultural equipment, fasteners, automotive components and capital goods among other end-use and applications. Sponge iron, billets and slabs and ferro alloys are primarily used as inputs in steel manufacturing. The increasing emphasis on domestic manufacturing, supported by initiatives such as Make in India and Production Linked Incentive (PLI) schemes, is expected to contribute to rising consumption of these products.

The Company's diversified, integrated product portfolio across the steel value chain, combined with their ability to dynamically allocate intermediate products between captive consumption and open market sales, positions them to capture opportunities across multiple end-use sectors, mitigate risks associated with demand volatility in any single product or market segment. This broad exposure positions the Company to benefit from India's ongoing economic growth, infrastructure expansion and increasing steel consumption.

Past performance review

Key performance indicators	Unit	Fiscal 2026	Fiscal 2025	Fiscal 2024
Revenue from Operations ⁽¹⁾	₹ in million	25,925.24	21,878.19	14,943.90
Y-o-Y Revenue growth ⁽²⁾	%	18.50	46.40	83.93
Total Income ⁽³⁾	₹ in million	26,060.61	21,925.16	14,962.47
Operating EBITDA ⁽⁴⁾	₹ in million	3,730.12	3,365.88	2,850.78
Operating EBITDA Margin ⁽⁵⁾	%	14.39	15.38	19.08
EBITDA (including other income) ⁽⁶⁾	₹ in million	3,865.49	3,412.87	2,869.35
EBITDA Margin (including other income) ⁽⁷⁾	%	14.83	15.57	19.18
Profit After Tax (PAT) for the year ⁽⁸⁾	₹ in million	1,711.06	1,584.30	1,439.47
PAT Margin ⁽⁹⁾	%	6.60	7.24	9.63
Return on Equity (ROE) ⁽¹⁰⁾	%	24.18	29.61	37.88
Return on Capital Employed (ROCE) ⁽¹¹⁾	%	22.90	25.51	29.68
Debt ⁽¹²⁾	₹ in million	7,732.22	6,264.40	5,152.98
Net Debt ⁽¹³⁾	₹ in million	6,721.42	5,341.78	4,898.38

Key performance indicators	Unit	Fiscal 2026	Fiscal 2025	Fiscal 2024
Debt /Equity Ratio ⁽¹⁴⁾	Times	0.97	1.01	1.14
Net Debt/ Operating EBITDA ⁽¹⁵⁾	Times	1.80	1.59	1.72
Interest Coverage Ratio ⁽¹⁶⁾	Times	4.75	5.08	5.24
Fixed Asset Turnover Ratio ⁽¹⁷⁾	Times	2.70	2.66	2.43
Net Working Capital Days ⁽¹⁸⁾	Days	37	32	43
Production volumes by product segment (TPA) ⁽¹⁹⁾				
Sponge Iron	TPA	7,29,918	6,57,370	4,27,644
Billets and Slabs	TPA	3,10,057	2,50,150	2,30,721
Thermo-Mechanically Treated Bar (TMT Bar)	TPA	74,523	81,073	59,432
Wire Rod	TPA	12,080	-	-
Hot Rolled Coils (Strips)	TPA	1,48,419	1,33,210	1,32,250
Electric Resistance Welded Pipes and Tubes	TPA	42,129	16,059	-
Ferro Alloys	TPA	33,564	29,965	2,727
Sales volumes by product segment (TPA) ⁽²⁰⁾				
Sponge Iron	TPA	4,55,617	3,92,614	1,68,890
Billets and Slabs	TPA	62,932	22,938	30,219
Thermo-Mechanically Treated Bar (TMT Bar)	TPA	76,788	79,661	57,763
Wire Rod	TPA	11,579	-	-
Hot Rolled Coils (Strips)	TPA	1,05,820	1,16,520	1,30,707
Electric Resistance Welded Pipes and Tubes	TPA	41,589	14,296	-
Ferro Alloys	TPA	33,514	26,762	1,602

Source: B.S Sponge Limited, Crisil Intelligence

TPA: Tonnes per Annum

Notes:

⁽¹⁾ Revenue from Operations: Revenue from Operations is the Revenue recognized as per Ind-AS, as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽²⁾ Y-o-Y Revenue growth: Y-o-Y Revenue growth represents the increase percentage in Revenue from Operations of the relevant fiscal over Revenue from Operations of the previous fiscal.

⁽³⁾ Total income: Total income is calculated as the sum of revenue from operations & other income as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽⁴⁾ Operating EBITDA: Operating EBITDA is calculated as profit for the year plus total tax expenses, finance costs, and depreciation and amortisation expenses, minus other income as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽⁵⁾ Operating EBITDA margin: Operating EBITDA margin is calculated as Operating EBITDA, as calculated above, divided by revenue from operations as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽⁶⁾ EBITDA (including other income): EBITDA (including other income) is calculated as profit for the year plus total tax expenses, finance costs, and depreciation and amortisation as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽⁷⁾ EBITDA Margin (including other income): EBITDA Margin (including other income) is calculated as EBITDA (including other income) as calculated above divided by Total Income as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽⁸⁾ Profit After Tax (PAT) for the year: PAT for the year refers to total income, less total expenses, less exceptional items, less total tax expenses for the year as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽⁹⁾ PAT Margin: PAT Margin is calculated as PAT for the year divided by Revenue from operations as appearing in the Restated Financial Information of the Company for the respective fiscal.

⁽¹⁰⁾ Return on Equity (ROE): ROE is calculated as PAT for the year divided by average equity for the relevant fiscal; where average equity is the average of opening and closing equity for the relevant fiscal.

⁽¹¹⁾ Return on Capital Employed (ROCE): ROCE is calculated as EBIT for the relevant fiscal divided by average of opening and closing capital employed; where EBIT is calculated as profit for the year plus total tax expense and finance costs; and Capital Employed represents the sum of total equity and long-term borrowings including lease liabilities, as appearing in the Restated Financial Information of the Company as at the end of the respective fiscal.

⁽¹²⁾ Debt: Debt represents the sum of long-term borrowings, short term borrowings and lease liabilities as appearing in the Restated Financial Information of the Company as at the of the respective fiscal.

⁽¹³⁾ Net Debt: Net Debt represents the sum of long-term borrowings, short-term borrowings and lease liabilities, less Cash and Cash Equivalents, Fixed Deposits and Interest accrued on Fixed Deposits as appearing in the Restated Financial Information of the Company as at the of the respective fiscal.

⁽¹⁴⁾ Debt/Equity Ratio: Debt/Equity is calculated as debt, as mentioned above, divided by total equity, where total equity represents the sum of equity share capital and other equity as at the of the respective fiscal.

⁽¹⁵⁾ Net Debt / Operating EBITDA: Net Debt / Operating EBITDA is calculated as Net debt divided by Operating EBITDA, as enumerated above for and as at the relevant fiscal.

⁽¹⁶⁾ Interest Coverage Ratio: Interest Coverage Ratio is calculated as EBIT divided by Finance Cost as appearing in the Restated Financial Information of the Company as at the of the respective fiscal, where EBIT is calculated as profit for the year plus total tax expense and finance costs.

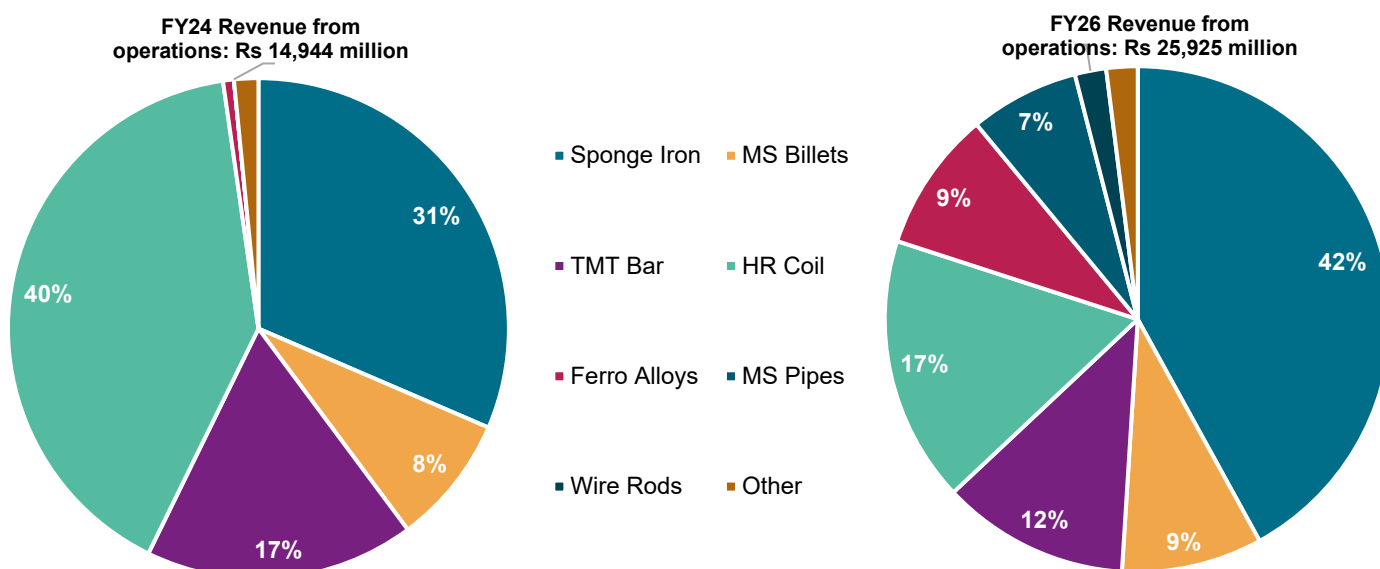
⁽¹⁷⁾ Fixed Asset Turnover Ratio: Fixed Asset Turnover Ratio is calculated as Revenue from operations divided by net block of Property, plant and equipment, including ROU Asset, as appearing in the Restated Financial Information of the Company as at the of the respective fiscal.

⁽¹⁸⁾ Net Working capital days: Net Working capital days is computed as Inventory days plus Trade receivable days minus Trade payable days; where Inventory days are calculated as average Inventory divided by revenue from operations multiplied by 365 days, Trade receivables days are calculated as average Trade receivables divided by revenue from operations multiplied by 365 days; and Trade payable days are calculated as average Trade payable divided by revenue from operations multiplied by 365 days.

⁽¹⁹⁾ Production volumes by product segment: Production volumes by product segment refers to measuring manufacturing output across various product categories for and as at the end of relevant fiscal.

⁽²⁰⁾ Sales volumes by product segment: Sales volumes by product segment represents the quantity of products sold across different product categories for and as at the end of relevant fiscal.

Product-wise Revenue contribution (fiscal 2024 and 2026)



Source: B.S Sponge Limited, Crisil Intelligence

Product wise contribution to revenue (fiscal 2024,2025 and 2026)

Particulars	FY2026		FY2025		FY2024	
	Amount (In Rs Mn)	% of Total Revenue from Operation	Amount (In Rs Mn)	% of total Revenue from operations	Amount (In Rs mn)	% of total revenue from operations
Sponge Iron	10,765	42%	9,673	44%	4702	31%
Billets and Slabs	2,334	9%	904	4%	1,250	8%
TMT Bars	3,210	12%	3,434	16%	2,603	17%
HR Coils	4,460	17%	5,087	23%	6,050	40%
Ferro Alloys	2,357	9%	1,868	9%	105	1%
ERW Pipes & Tubes	1,821	7%	628	3%	-	0%
Wire Rods	517	2%	-	0%	-	0%
Other	460	2%	286	1%	234	2%
Grand Total	25,925	100%	21,879	100%	14,944	100%

Source: B.S. Sponge Limited, Crisil Intelligence

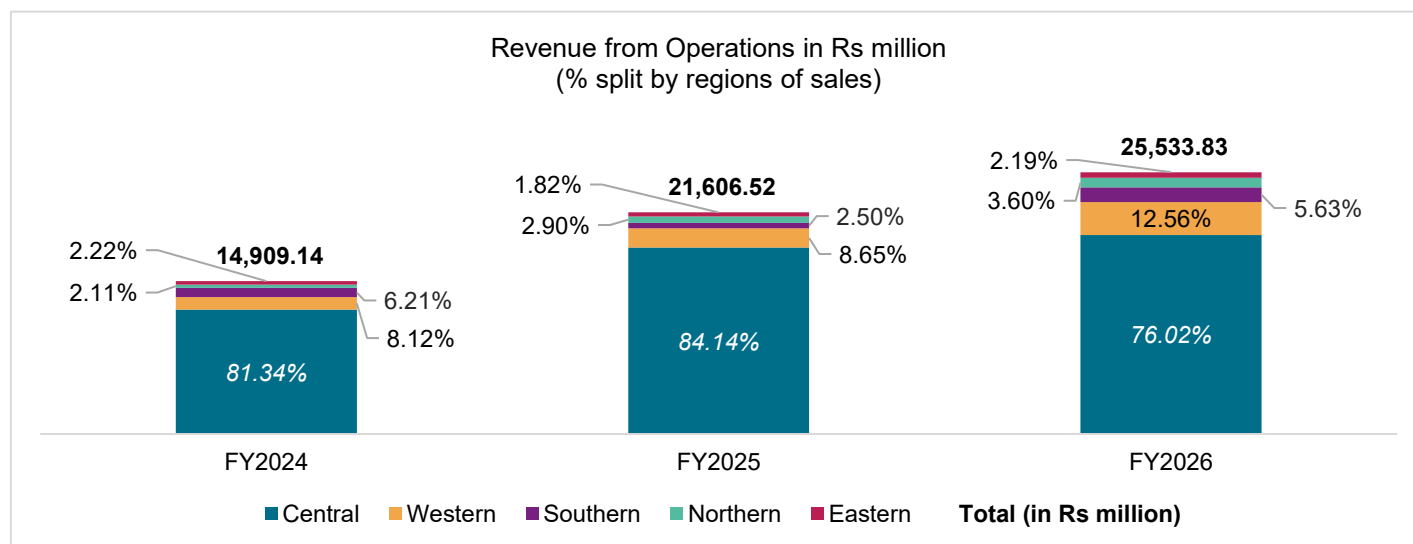
The Company has demonstrated strong operational and financial growth over the last three fiscals, supported by capacity additions, product diversification and increasing market penetration. Revenue from operations increased from approximately ₹1,494 crore in FY24 to ₹2,188 crore in FY25 and further to ₹2,593 crore in FY26, representing a CAGR of approximately 31.7% during FY24–FY26. This growth was driven by higher production volumes, increasing contribution from value-added products and continued expansion of manufacturing capabilities.

The Company's product mix has evolved considerably over the years. While sponge iron continues to be the largest contributor to revenue, contributing approximately 42% of revenue from operations in FY26, the contribution from value-added products such as TMT bars, HR coils, pipes, ferro alloys and wire rods has increased steadily. The commencement of ferro alloys, pipes and wire rod manufacturing has diversified revenue streams and reduced dependence on any single product segment.

Operational performance has strengthened significantly over the review period. Sponge iron production increased from 209,624 tonnes in FY23 to 729,918 tonnes in FY26, while billet production increased from 118,599 tonnes to 310,057 tonnes during the same period. Production of HR coils reached 148,419 tonnes in FY26, while ferro alloys, pipes and wire rods contributed incremental volumes following their commissioning.

The Company's growth trajectory has been supported by continuous investments in manufacturing infrastructure, resulting in a substantial increase in installed capacity across multiple product segments. Simultaneously, its financial profile has strengthened through growth in profitability, increasing net worth and expansion of fixed assets, reflecting the successful execution of its expansion strategy.

Region wise revenue split (FY 2024, FY 2025, and FY 2026)



Source: Company data

Existing footprint

Manufacturing facility

The Company operates a single integrated manufacturing facility located at Taraimal, post office Gerwani, Tamnar, Raigarh, Chhattisgarh, India. The facility is spread across approximately 47.19 hectares and houses all major manufacturing operations, including sponge iron kilns, induction furnaces for manufacturing billets and slab, rolling mills for manufacturing TMT bars, HR coil and wire rods, pipe mills for manufacturing ERW pipes and tubes, submerged arc furnaces for manufacturing ferro alloys and captive power plants. The Company manufactures ERW Pipes and Tubes using HR Coils that are captively produced at their Manufacturing Facility, making them one of the few integrated steel manufacturers in India to control the end-to-end supply chain for ERW pipes from iron ore conversion to finished pipe at a single facility.

The strategically located manufacturing facility in the mineral-rich region of Chhattisgarh, the steel capital of India, provides with proximity to key raw material sources, well-established road and railway connectivity, and access to a skilled labour pool. The Company benefits from a strategically located manufacturing facility in Raigarh, Chhattisgarh, which is situated in

close proximity to key sources of iron ore, iron ore pellets and coal. A significant portion of the iron-bearing raw material requirement is met through iron ore pellets in place of iron ore.

A portion of its iron ore requirement is sourced from a Navratna public sector undertaking located in Chhattisgarh and a Gold Category state PSU located in Odisha which is situated within an approximate radius of 300 kilometres from the manufacturing facility and both these PSU's are known for the high-quality of their iron ore. In addition, the Company procures iron ore and iron ore pellets from established private-sector suppliers located within a similar geographic radius, supporting sourcing flexibility and continuity of supply. The proximity to major raw material sources reduces transportation costs and transit times while mitigating supply chain disruptions.

The Company sources coal, a key raw material for sponge iron production, from subsidiaries of a Maharatna PSU that is among the largest coal producers in India. The mines of these subsidiaries are located in close proximity to our Manufacturing Facility. In particular, the Chhal and Jampali mines are located within an approximate radius of 50 kilometres from our Manufacturing Facility, while the Belpahar, Gevra and Kusmunda mines are located within an approximate radius of 100 to 150 kilometres. Further, the Company has entered into long-term coal supply arrangements under the Fuel Supply Agreement (FSA) framework for a portion of its coal requirements. These arrangements provide assured coal supplies at predetermined pricing mechanisms through contracted allocations which mitigates exposure to short-term volatility in coal prices and offer greater visibility over raw material procurement costs. The combination of long-term coal linkages, access to high-quality iron ore sources, proximity from iron ore and iron ore pellet suppliers and a diversified supplier base strengthens raw material security, supports efficient inventory management and enhances the reliability of the Company's manufacturing operations.

Installed capacities and production

Product	Installed Capacity FY26	Available Capacity FY26	Capacity Utilization %	FY26 Production
Sponge Iron	675,000 TPA	675,000 TPA	108.14%	729,918 TPA
Billets & Slabs	367,500 TPA	346,344 TPA	89.52%	310,057 TPA
TMT Bars	105,000 TPA	105,000 TPA	70.97%	74,523 TPA
HR Coils (Strips)	165,000 TPA	165,000 TPA	89.95%	148,419 TPA
ERW Pipes & Tubes	120,000 TPA	120,000 TPA	35.11%	39,865 TPA
Ferro Alloys	30,000 TPA	30,000 TPA	111.88%	34,043 TPA
Wire Rods	165,000 TPA	19,438 TPA	62.15%	12,080 TPA
Captive Power	52 MW	52 MW	93.31%	425,027,852 kWh

TPA: Tonnes per Annum; kWh: kilo Wat hour

Source: Company Data

The facility operates as an integrated steel complex where sponge iron serves as the primary feedstock for steelmaking, billets and slabs are further processed into finished products, and ferro alloys and captive power support downstream manufacturing operations. This integration provides operational flexibility and enables efficient utilization of intermediate products across the manufacturing chain.

Future expansion plans and sales tie-ups

The Company has pursued an aggressive capacity expansion strategy over the last several years and continues to focus on both brownfield and greenfield growth opportunities. Between FY23 and FY26, sponge iron capacity expanded from 345,000 TPA to 675,000 TPA, captive power capacity increased from 32 MW to 52 MW between FY23 to FY26 and further 15 MW CFBC added in July, 2026 making the total captive power capacity to 67 MW, billet capacity increased to 367,500 TPA and new product lines such as ferro alloys, ERW pipes and tubes and wire rods were commissioned.

Going forward, the Company plans to undertake further brownfield expansion at its existing Raigarh facility. Proposed projects include expansion of billet and slab manufacturing capacity by 148,500 TPA, enhancement of captive power

generation capacity by 18 MW and incremental sponge iron capacity additions of 57,090 TPA and incremental ferro alloys capacity addition of 9,000 TPA, subject to receipt of regulatory approvals. The Company is planning to commission the Nawapara Facility, a greenfield integrated steel manufacturing facility at Nawapara, Gharghoda, Raigarh, Chhattisgarh, India, to be executed in phases. Subject to receipt of the requisite approvals, including environmental approvals, implementation of the project as planned and completion of all the proposed phases, the Nawapara Facility, as on the date of this report, can have a maximum installed manufacturing capacity limit of 858,000 TPA of sponge iron, 792,000 TPA of billets and slabs and 160,000 TPA of silico manganese, together with proposed production facilities for various value-added finished steel products, captive power plants with an aggregate installed capacity of 200 MW and a coal washery basis the TOR approved by the Ministry of Environment, Forest and Climate Change, Government of India, by way of its letter dated June 11, 2026. The company has acquired 44.78 hectares of freehold land for the Nawapara Facility. The proposed Nawapara Facility is located in proximity to the existing Manufacturing Facility, enabling operational synergies and supply chain efficiencies. Further, the Nawapara Facility is also located in close proximity to key raw material sources and suppliers of iron ore, iron ore pellets and coal, and well-connected via road and railway infrastructure to support efficient inward and outward logistic

The Company has established a diversified customer base and intends to continue strengthening its distribution network across India. It is in the process of formalizing distributor relationships for TMT bars and ERW pipes while expanding its reach into new geographical markets and customer segments.

Key client segments

The Company's products cater to a diversified customer base across multiple sectors of the economy.

Key customer segments include:

- Steel manufacturers and induction furnace operators
- Rolling mills and re-rollers
- Infrastructure and construction companies
- Pipe and tube manufacturers
- Engineering and fabrication companies
- Industrial manufacturers
- Traders, distributors, and dealers
- Wire and fastener manufacturers

Geographically, the Company derives majority of its revenues from Central India. In FY26, the Central region accounted for approximately 75% of revenue

e, followed by Western India at 12%, Southern India at 6%, Northern India at 5% and Eastern India at 2%. Chhattisgarh remained the largest individual market, contributing approximately 56% of revenue.

The Company served approximately 1,000+ customers during FY26, with no single customer contributing more than 4.12% of revenue from operations, indicating a diversified customer portfolio and limited customer concentration risk.

Estimated market share of the company

B.S. Sponge has established presence across multiple steel product segments through continuous capacity expansion and product diversification. Based on FY26 installed capacities and industry production estimates, the Company is estimated to account for approximately ~1% of India's installed sponge iron capacity. While its share of the domestic sponge iron market

remains relatively modest, the Company has progressively expanded its product portfolio through downstream integration into value-added steel products. The diversified manufacturing platform provides operational flexibility and allows participation across multiple steel product segments, while future capacity additions may support further expansion of its market presence over the medium term.

The Company also has a growing position in downstream products including HR coils, TMT bars, pipes, wire rods and ferro alloys. While its market share remains relatively modest in these larger product segments, the Company's integrated manufacturing model and growing capacities provide significant opportunities to increase its presence over the medium term.

The Company's ability to manufacture products across multiple stages of the steel value chain, combined with its captive power generation capabilities and strategic location, provides a strong platform to enhance market share through future expansions and increasing value-added product sales.

SWOT analysis & unique selling propositions (USPs)

Key strengths

- Integrated steel manufacturing facility with presence across sponge iron, billets, TMT bars, HR coils, ERW pipes & tubes, wire rods and ferro alloys, enabling value addition across multiple stages of the steel value chain.
- Strong energy self-sufficiency, with a 67 MW captive power plant meeting approximately 98.1% of the Company's operational power requirement in FY2025 through WHRB and AFBC-based generation.
- Diversified product portfolio with increasing focus on value-added products such as HR coils, pipes & tubes and wire rods.
- Strategic manufacturing facility located in Chhattisgarh, providing proximity to key raw material sources and major steel-consuming markets.
- Demonstrated execution capability, reflected in successful commissioning of new capacities including wire rods and pipes & tubes facilities.
- Strong operational performance with production utilization exceeding 90% for billets, HR coils and captive power generation in FY2026.

Key weakness

- Manufacturing operations concentrated at a single integrated facility, exposing operations to geographical and plant-specific risks.
- Revenue concentration in Central and adjoining markets, resulting in relatively lower pan-India diversification compared with larger integrated steel peers.
- The Indian steel industry is highly competitive and cyclical in nature, resulting in competition from domestic and international steel and steel products manufacturers and cyclical in steel pricing, infrastructure spending and industrial demand.
- Capital-intensive business model requiring significant investments for expansion and modernization.

Opportunities

- Rising domestic steel demand driven by infrastructure, manufacturing, housing and industrial capex.
- Expansion into higher-margin downstream products such as ductile iron pipes, wire rods, pipes & tubes and specialty steel products.

- Capacity expansion program expected to enhance downstream integration and increase the contribution of value-added products.
- Increasing policy support under the National Steel Policy, Make in India and infrastructure investment initiatives.
- Potential to increase market penetration across western and southern India.

Threats

- Volatility in iron ore, coal, power and freight costs affecting operating margins.
- Intense competition from larger integrated steel producers and regional secondary steel manufacturers. The company face competition from domestic and international steel and steel product manufacturers.
- More stringent environmental and sustainability regulations leading to higher compliance costs.
- Imports and fluctuations in global steel prices impacting domestic realizations.
- Slowdown in economic activity or infrastructure spending affecting steel demand.

Unique selling propositions (USPs)

- Highly energy self-sufficient operations, with captive power generation meeting approximately 98% of operational power requirements, significantly reducing dependence on grid power.
- Fully integrated steel manufacturing platform capable of converting raw materials into multiple finished products within a single manufacturing complex.
- Diversified downstream product mix spanning long products, flat products, pipes & tubes, wire rods and ferro alloys, providing flexibility to optimize production based on market conditions.
- Strong operational utilization levels, with FY2026 utilization of approximately 108% for sponge iron, 90% for billets, 90% for HR coils and 93% for captive power generation based on available capacity.
- Strategic location advantage through proximity to raw material sources and key steel-consuming regions, supporting logistics and procurement efficiencies.
- Proven brownfield expansion capability, demonstrated through successful commissioning and ramp-up of new product lines and downstream capacities.

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