

# Assessment of the welding raw material & consumables industry

Final report

Submitted to Premier Industrial  
Corporation Ltd

**Consulting**

September 2025



## Contents

<b>Global macroeconomic overview .....</b>	<b>3</b>
GDP trend .....	3
Region-wise and country-wise economic review and outlook.....	4
Inflation overview.....	6
Five-year historical data and growth forecast .....	6
<b>Indian macroeconomic overview .....</b>	<b>9</b>
GDP trend and composition by sectors.....	9
Performance of key macroeconomic indicators .....	10
Construction investment outlook in key infrastructure segments.....	12
Key budget'2025 & 2026 announcements for construction and infrastructure segments .....	14
Announcements for Building & Urban Development.....	14
Announcements for the Infrastructure Sector .....	15
<b>Overview of Welding Raw Material &amp; Consumables Industry .....</b>	<b>18</b>
Overview of the welding industry .....	18
An overview of the welding raw material & consumables segment .....	18
Overview of welding electrodes .....	26
Overview of welding wires.....	29
Overview of welding fluxes/SAW fluxes .....	33
Overview of metal and ferro alloy Powder used as raw material for welding consumables .....	35
Raw material price review .....	38
Overview of shielding gases .....	40
<b>Company profile: Premier Industrial Corporation Ltd. ....</b>	<b>42</b>
Business profile of Premier Industrial Corporation Ltd.....	<b>Error! Bookmark not defined.</b>
Competition benchmarking .....	42
Financial benchmarking .....	45
SWOT analysis.....	<b>Error! Bookmark not defined.</b>
<b>Annexure.....</b>	<b>Error! Bookmark not defined.</b>

## Global macroeconomic overview

### GDP trend

In 2025, global gross domestic product (GDP) growth is projected to continue to trend below the historical annual average of 3.8% logged between 2000 and 2019, reflecting ongoing challenges such as geopolitical tensions, high inflation and tightening monetary policies<sup>1</sup>.

Growth had contracted 2.7% in 2020 as the Covid-19 pandemic disrupted economic activity. However, the contraction was considerably lower than estimated by the International Monetary Fund (IMF), with a strong rebound in manufacturing, shift to new ways of working, and fiscal and policy support arresting a further slide.

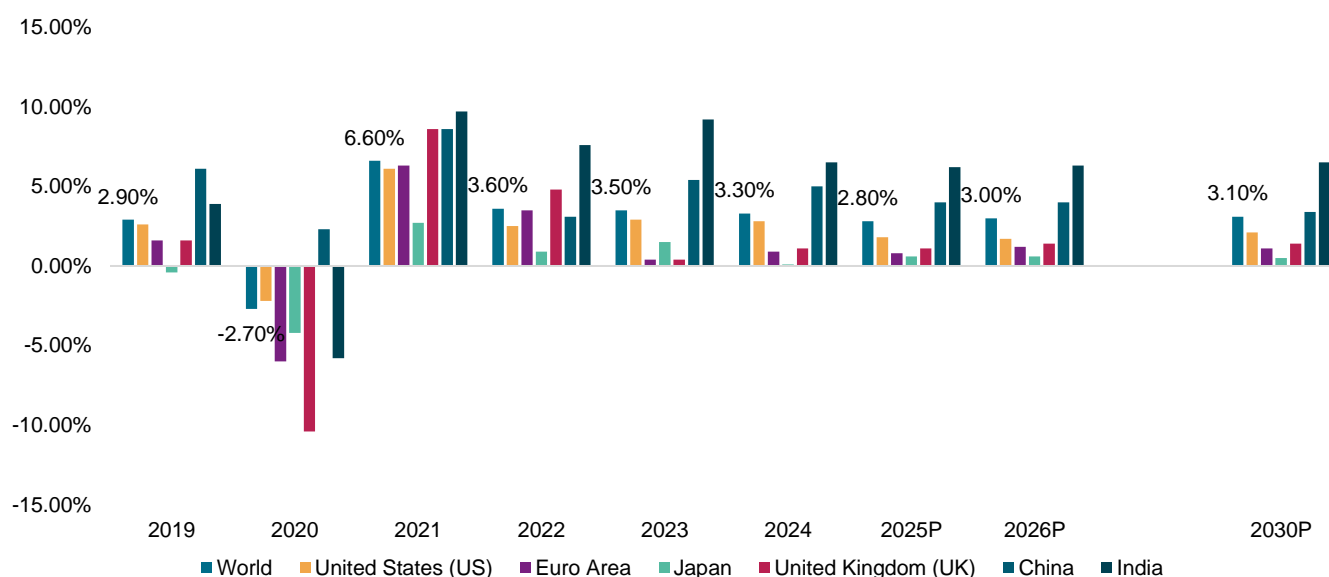
In 2021, global GDP growth rebounded to 6.6%, led by vaccine-powered normalisation and continued fiscal support. However, in 2022, 2023, and 2024, it slowed to 3.6%, 3.5%, and 3.3%, respectively, owing to challenges such as inflation driven by supply constraints, tightening financial conditions, long-term effects of the pandemic and geopolitical uncertainties.

### Five-year historical data and growth forecast

The IMF estimates global GDP growth of 3.10% for 2025, considering geopolitical uncertainties and high debt. As inflation recedes, interest rates will gradually return to natural levels, compatible with output and inflation targets.

Regional outlooks have been revised owing to recent shocks and policies. The outlooks for the Middle East, Central Asia and sub-Saharan Africa have been revised downwards because of commodity production cuts, conflicts and unrest. In contrast, growth in emerging Asia has been stronger, driven by surging demand for semiconductors and electronics, fuelled by artificial intelligence (AI) investments.<sup>2</sup>

### Economic review and outlook



<sup>1</sup> IMF – World Economic Outlook April 2025

<sup>2</sup> All outlooks as stated by IMF unless stated otherwise

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

Source: CRISIL MI&A, IMF, World Bank, S&P Global

## Region-wise and country-wise economic review and outlook<sup>3</sup>

Real GDP (on-year growth)	2020	2021	2022	2023	2024	2025P	2026P	2030P
World	-2.70%	6.60%	3.60%	3.50%	3.30%	2.80%	3.00%	3.10%
Euro area*	-6.10%	5.90%	3.40%	0.40%	0.80%	1.00%	1.40%	1.20%
Emerging and developing Asia	-0.50%	7.70%	4.40%	5.70%	5.30%	5.00%	4.60%	4.50%
Emerging and developing Europe	-1.80%	7.10%	0.50%	3.60%	3.40%	2.10%	2.40%	2.60%
Latin America and Caribbean	-6.90%	7.40%	4.20%	2.40%	2.40%	2.00%	2.40%	2.60%
Middle East and Central Asia	-2.20%	4.40%	5.50%	2.20%	2.40%	3.00%	3.50%	3.80%
Sub-Saharan Africa	-1.60%	4.80%	4.10%	3.60%	3.60%	4.30%	4.20%	4.40%

\*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

Real GDP growth (on-year)	2020	2021	2022	2023	2024	2025P	2026P	2030P
US	-2.20%	5.80%	1.90%	2.90%	2.80%	2.70%	2.10%	2.10%
China	2.20%	8.40%	3.00%	5.20%	4.80%	4.60%	4.50%	3.30%
Germany	-4.10%	3.70%	1.40%	-0.30%	-0.20%	0.00%	0.90%	0.70%
Japan	-0.40%	-4.10%	2.60%	1.00%	1.50%	-0.20%	1.10%	0.80%
India	-5.80%	9.70%	7.60%	9.20%	6.50%	6.50%	6.50%	6.50%
UK	1.60%	-10.40%	8.70%	4.30%	0.30%	0.90%	1.60%	1.50%
France	-7.60%	6.80%	2.60%	1.10%	1.10%	0.60%	1.00%	1.20%
Italy	-8.90%	8.90%	4.70%	0.70%	0.70%	0.40%	0.80%	0.70%
Canada	1.90%	-5.00%	6.00%	4.20%	1.50%	1.50%	1.40%	1.60%
Brazil	-3.30%	4.80%	3.00%	3.20%	3.40%	2.00%	2.00%	2.50%

P: Projected

Source: Crisil Intelligence, industry, IMF

The GDP trajectory varies for key economies and regions, as detailed below.

## US

The country's GDP growth, which expanded from 2.5% in 2022 to only 2.9% in 2023, would have been higher if not for high inflation and, consequently, the hike in interest rates by the US Federal Reserve (Fed) to cool the print, which impacted spending. The 2024 growth forecast has been revised up to 2.8%<sup>4</sup> because of strong consumption and non-residential investment, driven by rising real wages and wealth effects. However, growth is expected to slow to 2.7% in 2025 as fiscal policy tightens and the labour market cools, closing the output gap.

<sup>3</sup> All classifications according to IMF

<sup>4</sup> All forecasts are by the IMF unless otherwise stated

## **Euro area**

The euro area growth slowed to 0.4% in 2023 owing to geopolitical issues, tighter financial conditions and high gas prices. Growth is expected to recover to 0.8% in 2024 and 1.0% in 2025, driven by improved exports, rising real wages and looser monetary policy, despite persistent manufacturing weakness in Germany and Italy.

## **Japan**

In 2023, Japan's economy grew at 1.5%, driven by pent-up demand, tourism and accommodative policies. However, it slowed down to -0.2% in 2024 because of temporary supply disruptions and fading one-off factors. A rebound to 1.1% is predicted in 2025, driven by strengthening real wage growth and private consumption.

## **UK**

The UK's growth slowed to 0.3% in 2023 and 0.9% in 2024 owing to tight monetary policy and high energy prices but was supported by a 2022 fiscal package. Growth is expected to accelerate to 1.6% in 2025 and 1.5% in 2026, driven by falling inflation and interest rates, which will stimulate domestic demand.

## **China**

China's GDP grew at 8.7% in 2021, driven by pent-up demand and strong exports. Despite a property market-driven downturn, growth is expected to slow gradually to 4.6% in 2025 and 4.5% in 2026, supported by better-than-expected net exports. Recent policy measures may provide upside risk to near-term growth.

## **India**

After a 5.8% contraction in 2020, the country's GDP rebounded, growing at 9.7%, 7.0%, 9.2% and 6.5% in 2021, 2022, 2024 and 2025, respectively. Growth is expected to moderate to 6.5% in 2024 and 6.5% in 2025, as pent-up demand is exhausted, and the economy returns to its potential.

## **Middle East and Central Asia**

The Middle Eastern and Central Asian economy contracted 2.2% in 2020, then rebounded to grow at 4.4% and 5.5% in 2021 and 2022. Growth slowed to 2.2% in 2023 but is projected to pick up to 3.0% in 2025 and 3.5% in 2026 as oil production and shipping disruptions fade. The 2024 projection was revised down to 2.4% owing to Saudi Arabia's oil production cuts and the ongoing conflict in Sudan.

## **Sub-Saharan Africa**

Sub-Saharan Africa's GDP contracted 1.5% in 2020, then grew at 4.7% in 2021 and 4.1% in 2022. Growth slowed to 3.6% in 2023 and 4.0% in 2024 because of weather disruptions and supply constraints. However, growth is projected to increase to 3.8% in 2025 and 4.0% in 2026 as weather shocks abate and supply constraints ease.

## **Latin America and the Caribbean**

The Latin America and the Caribbean region are projected to grow at 2.0% in 2025, slower than 2.4% in 2024, before rebounding to 2.4% in 2026. Brazil's growth has been revised upwards to 2.0% in 2025, driven by strong private consumption and investment, and is expected to continue to grow at 2.0% in 2026 owing to a restrictive monetary policy and cooling labour market.

The GDP growth data reveals distinct patterns across major economies. India emerges as the standout performer, maintaining robust growth projections of 6.5% through 2030P despite the pandemic-related contraction of -5.8% in 2020. China's growth is strong but is projected to decelerate from 8.4% in 2021 to 3.3% by 2030P, reflecting its economic

maturation. The advanced economies display more modest growth trajectories. The US is projected to maintain a relatively stable growth between 2.1% throughout the forecast period, while Japan's growth remains tepid, not seen exceeding 1.1% after 2025P. European economies, particularly Germany, show concerning weakness with near-stagnant growth projections (0.0-0.7% from 2025P-2030P). The divergence between emerging and developed economies is particularly striking in the recovery patterns. While emerging markets like India and China demonstrate a resilient growth momentum, developed nations show a clear trend toward lower growth rates in the latter half of the forecast period. This pattern suggests an accelerating shift in global economic gravity toward emerging markets, with India positioned to be a primary driver of global growth.

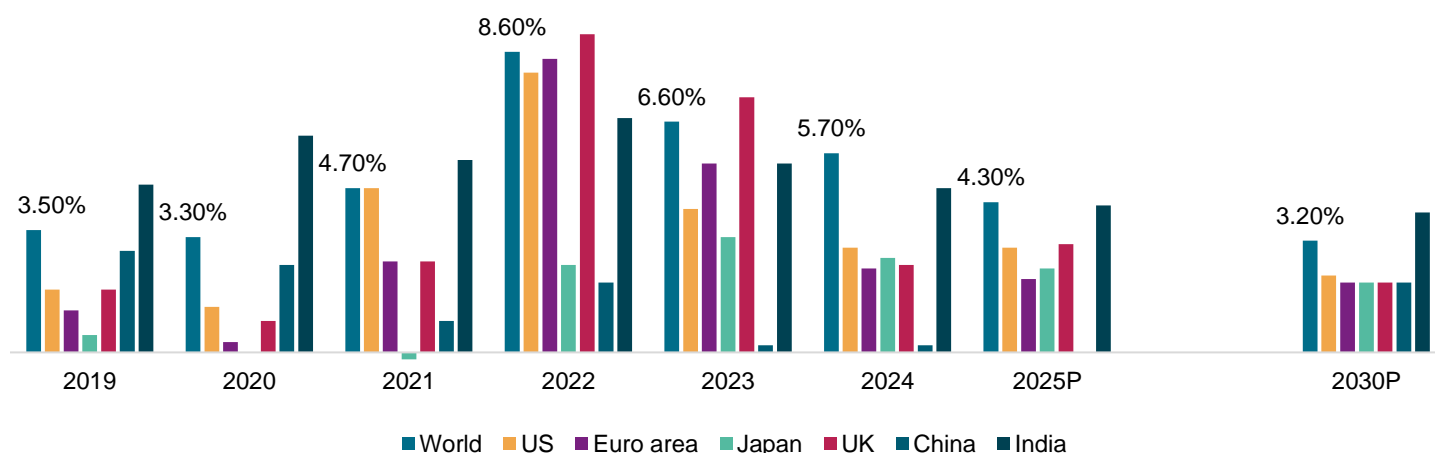
## Inflation overview

Global consumer price inflation, after ranging 3-5% between 2019 and 2021, jumped to 8.6% in 2022 because of sharp increase in prices of oil, natural gas, fertilisers and other commodities in the wake of geopolitical conflicts early on in the year. Supply chain disruption exacerbated the situation. However, in CY 2023, global inflation slowed to 6.6% because of the resolution of supply-side issues in a few industries.

## Five-year historical data and growth forecast

The IMF projects global inflation to decelerate to 5.7% in 2024 and 4.3% in 2025, driven by demand stabilization and a reduction in price-related pressures. The anticipated slowdown in inflation is attributed to a broad-based decline in global core inflation, influenced by the anticipation of tight monetary policies, a relative softening in labor markets, and a fading pass-through effect from previous price declines. In advanced economies, disinflation has come at a relatively low cost to employment, thanks to offsetting supply developments, including a faster-than-expected decline in energy prices and a surprising rebound in labor supply, bolstered by substantial immigration flows. The decline in global inflation in 2024 and 2025 reflects a broad-based decrease in core inflation, unlike the situation in 2023, when headline inflation fell mainly due to lower fuel prices. Core inflation is expected to drop by 1.3 percentage points in 2024, following a 0.1 percentage point decrease in the previous year, indicating a weakening of underlying inflation drivers and a more sustainable decline in inflationary pressures, ultimately leading to a more stable economic environment. This trend is expected to continue, supporting global economic growth.

## Inflation review and outlook



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

P: Projected (years mentioned on the horizontal axis correspond to the calendar years)

Consumer prices (on-year growth)	2019	2020	2021	2022	2023	2024	2025P	2030P
<b>World</b>	3.50%	3.20%	4.70%	8.60%	6.60%	5.70%	4.30%	3.20%
<b>US</b>	1.80%	1.30%	4.70%	8.00%	4.10%	3.00%	3.00%	2.20%
<b>Euro area</b>	1.20%	0.30%	2.60%	8.40%	5.40%	2.40%	2.10%	2.00%
<b>Japan</b>	0.50%	0.00%	-0.20%	2.50%	3.30%	2.70%	2.40%	2.00%
<b>UK</b>	1.80%	0.90%	2.60%	9.10%	7.30%	2.50%	3.10%	2.00%
<b>China</b>	2.90%	2.50%	0.90%	2.00%	0.20%	0.20%	0.00%	2.00%
<b>India</b>	4.80%	6.20%	5.50%	6.70%	5.40%	4.70%	4.20%	4.00%
<b>Emerging and developing Asia</b>	3.30%	3.20%	2.30%	3.90%	2.40%	2.00%	1.70%	2.70%

*P: Projected (years mentioned on the horizontal axis correspond to calendar years for the world and countries except India; for India year 2019 refers to fiscal 2020 and so on)*

Source: Crisil Intelligence, industry, IMF

The overall inflationary trends for major economies are detailed below.

## US

The consumer price inflation eased from 8% in 2022 to 4.1% in 2023 and further to 3.0% in 2024. The on-year increase in consumer prices is projected to remain in the 2-2.2% range till 2030. The continuous fall in inflation from the high of 2022 is because of weakening economic growth and ongoing supply-side relief amid expectation of potential Fed interest rate cuts going forward.

## Euro area

Consumer price inflation eased from 8.4% in 2022 to 5.4% in 2023 and further to 2.4% and is expected to further fall to 2.10% and 2.0% in 2025 and 2030, respectively. The expected fall in inflation in the 1.9-2.0% in the medium to long term is due to easing wage growth, lower energy prices and normalised commodity price expectations.

## Japan

Inflation in Japan, which has traditionally remained below 1%, jumped to 2.5% in 2022 and 3.3% in 2023 due to a sharp increase in food prices and expensive imports because of weakening of yen. Going forward, inflation is expected to ease a bit but remain at 2-2.4% over the next 5 years due to high expectations of wage increments and depreciated yen.

## UK

Inflation jumped sharply to 9.1% in 2022, before easing to 7.3% in 2023. Going forward, inflation is expected to ease to the pre-pandemic levels and reach 2% in 2030. This, because of steep fall in oil and gas prices and softening in core price and service price pressures.

## China

Consumer price inflation eased from 2.5% in 2020 to 0.9% in 2021 due to the government's effective action to bolster production of daily necessities and smoothen the sharp fluctuation in commodity prices. In 2022, however, inflation increased to 2% because of increase in pork prices. In 2023, inflation slipped again to 0.2% owing to weak domestic demand in the wake of a higher unemployment rate, slower income growth and the real estate market downturn. Going forward, inflation is expected to rise to 2% in medium to long term to reach near-optimum levels because of moderation in the demand-supply gap.

## India

India's consumer price inflation rate fluctuated between 4.80% in 2019 and 6.7% in 2022, inflation rose sharply in 2020 (6.2%) and peaked in 2022 (6.7%), primarily due to global supply chain disruptions, pandemic-induced uncertainties, and surging commodity prices. However, post-2023, inflation began to decline steadily, reaching 5.4% in 2023 and is projected to stabilize at 4.0% by 2030. This decline reflects India's improved fiscal policies, structural reforms, and effective monetary measures by the Reserve Bank of India (RBI). Stabilization is also attributed to easing global uncertainties and better management of supply chain dynamics. The projections for 2024 onwards indicate a return to moderate inflation levels, balancing economic growth with price stability.

**Emerging and developing Asia**

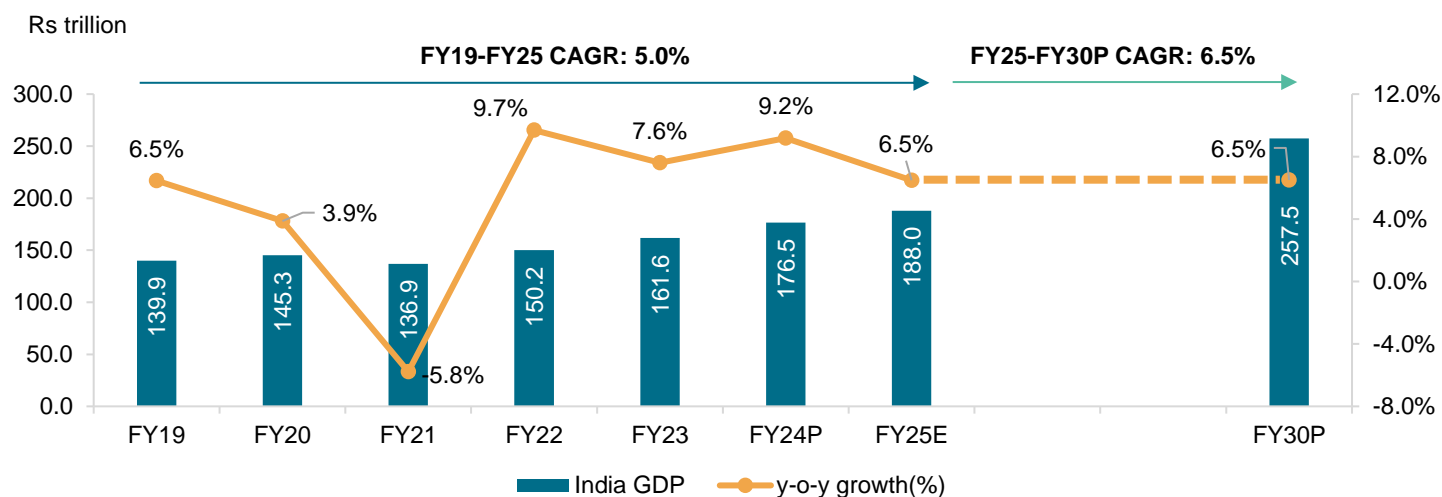
Inflation in emerging Asia is projected to converge with advanced economies, at 2.0% in 2024 and 1.7% in 2025. Timely monetary tightening and price controls have contributed to this moderation. Energy prices have played a significant role in shaping inflation trends, with countries experiencing lower energy price inflation also seeing lower overall CPI inflation. The inflation outlook is expected to stabilize at around 2.7-2.8% by 2029.

## Indian macroeconomic overview

### GDP trend and composition by sectors

India's economy has demonstrated remarkable resilience, with its GDP increasing to Rs 188 trillion in fiscal 2025, representing a six-year compound annual growth rate (CAGR) of 5% between fiscal 2019 and 2025. Notably, India is the fastest-growing economy among the G20 countries in fiscal 2024 and fiscal 2025, and is projected to maintain this position until 2030, driven by rising incomes, infrastructure development, favorable consumption trends, a younger population, and rapid urbanization. After a pandemic-induced contraction of 5.8% in fiscal 2021, India's GDP rebounded strongly, growing 9.7% and 7.6% year-on-year in fiscals 2022 and 2023, respectively, fuelled by pent-up demand in sectors such as manufacturing and construction, positioning the country for sustained economic growth in the coming years.

#### Real GDP trend (at constant 2011-2012 prices)



For FY24P, P: Provisional; while for FY30P, P: Projected; E: Estimated, FY: Fiscal year

Source: Central Statistical Office (CSO), Crisil Intelligence

In fiscal 2024, India's GDP is estimated to have grown 9.2% year-on-year<sup>5</sup> owing to strong output from the services and manufacturing sectors and robust infrastructure spending. In fiscal 2025, GDP growth moderated to 6.5% due to rising borrowing costs, geopolitical tensions, and fiscal consolidation, leading to lower capital expenditure (capex) by the government, despite support from the demand side on account of above-normal monsoon and easing inflation.

#### Yearly demand-side real GDP growth (%)<sup>6</sup>

At constant 2011-2012 prices	FY19	FY20	FY21	FY22	FY23	FY24P	FY25E
Private consumption	7.1%	5.2%	-5.3%	11.7%	7.5%	5.6%	7.6%
Government consumption	6.7%	3.9%	-0.8%	0.0%	4.3%	8.1%	3.8%
Gross fixed capital formation	11.2%	1.1%	-7.1%	17.5%	8.4%	8.8%	6.1%
Exports	11.9%	-3.4%	-7.0%	29.6%	10.3%	2.2%	7.1%

<sup>5</sup> Notably, there could be another growth revision for fiscal 2024

<sup>6</sup> Statistics from second advance estimates of gross domestic product 2024-25

At constant 2011-2012 prices	FY19	FY20	FY21	FY22	FY23	FY24P	FY25E
Imports	8.8%	-0.8%	-12.6%	22.1%	8.9%	13.8%	-1.1%

Source: Crisil Intelligence, Central Statistical Office (CSO)

E: Estimated; FY: Fiscal year P: Provisional

India's economic growth in fiscal 2024 has been pushed largely by private sector investments, which rose 9% year-on-year. Several government schemes, such as Make in India and Atmanirbhar Bharat to make India a manufacturing, hub have supported private sector investments in existing and new-age sectors.

However, investment growth has slowed significantly in fiscal 2025, due to a deceleration in government capex and sluggish private investments. As a result, gross fixed capital formation is expected to moderate to 6.1% year-on-year from 8.8% in the previous fiscal. We anticipate a notable shift in consumption patterns, with government expenditure expected to moderate to 3.8% in the current fiscal from 8.1% in the previous year. Conversely, private consumption is projected to grow 7.6% year-on-year from 5.6% in the previous fiscal.

### On-year supply-side gross value added by economic activity

At basic prices	FY19	FY20	FY21	FY22	FY23	FY24E	FY25P
Agriculture and allied	2.1%	6.2%	4.0%	4.6%	4.7%	1.4%	4.6%
Industry*	3.1%	-0.5%	-6.3%	8.3%	7.2%	6.1%	4.5%
Manufacturing	5.4%	-3.0%	3.1%	10.0%	-2.2%	9.9%	4.3%
Construction	6.5%	1.6%	-4.6%	19.9%	9.4%	9.9%	8.6%
Services^	7.2%	6.4%	-8.4%	9.2%	10.0%	7.6%	7.3%

\* Industry includes mining and quarrying, electricity, gas, water supply and other utilities

^ Services related to trade, hotels, transport, communication, broadcasting, finance, real estate, public administration, defence and professional and others

E: Estimated; FY: Fiscal year

Source: Crisil Intelligence, CSO

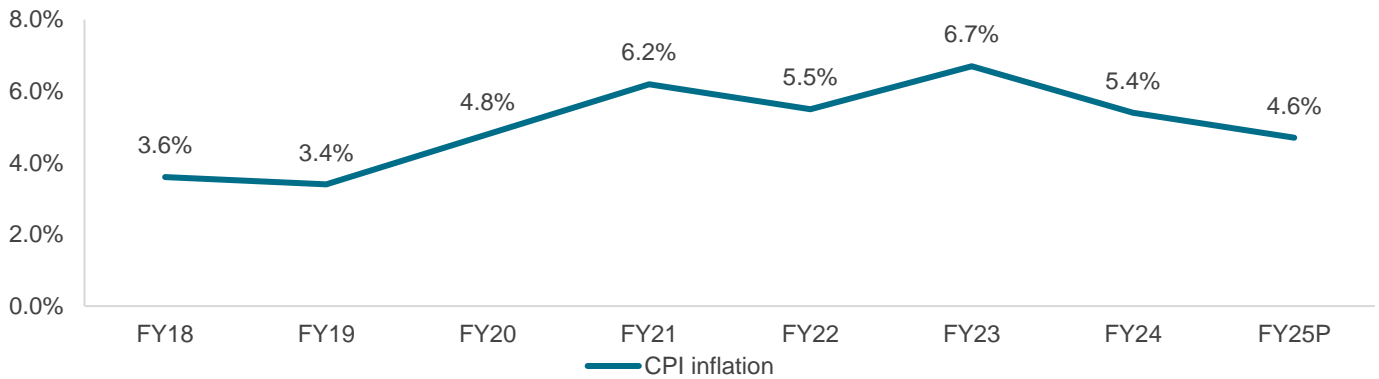
On the supply side, India's GDP is estimated to have grown in fiscal 2024 owing to strong growth in construction, manufacturing, and services sectors, which benefitted from robust capital investments from the private sector.

## Performance of key macroeconomic indicators

### Consumer Price Index inflation trend

India's average Consumer Price Index (CPI) inflation rate remained ~4.70% between fiscals 2018 and 2022. However, in fiscal 2023, it increased to 6.70%, mainly led by surging food prices before moderating slightly to an average of 5.4% in fiscal 2024. Although core and fuel inflation numbers have remained low, the food inflation has been keeping CPI inflation above the Reserve Bank of India's medium-level target rate of 4%. For instance, according to the CPI figures for March 2024, food inflation stood at 8.5%, primarily due to strong accelerations in inflation in foodgrains, meat and fish and slower pace of deflation in edible oils during the month.

In fiscal 2025, the CPI inflation is expected to moderate further to 4.7% on an average, on the back of an expected dip in food inflation, aided by a favourable monsoon and high base effect.

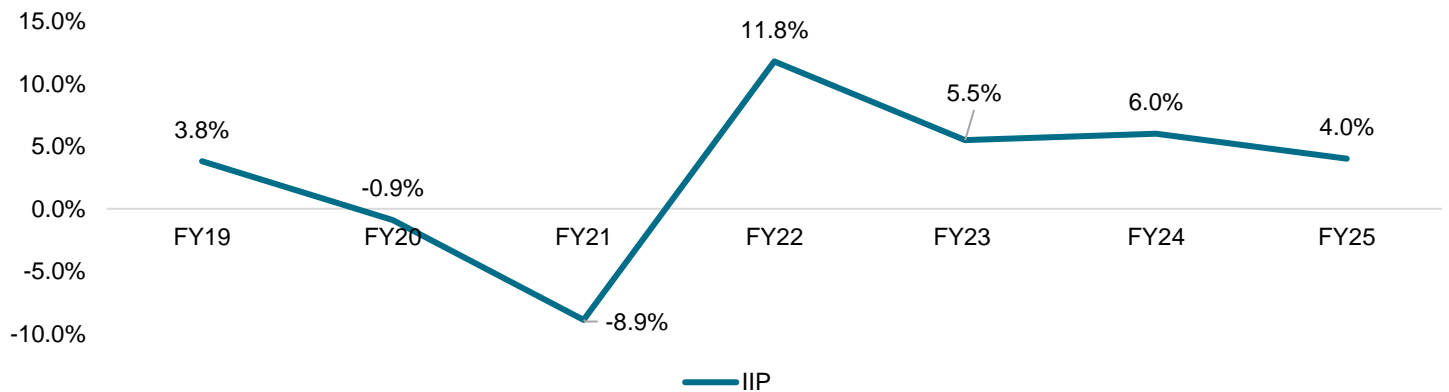


Source: National Statistical Office (NSO), Ministry of Industry and Commerce, Crisil Intelligence

P: Projected

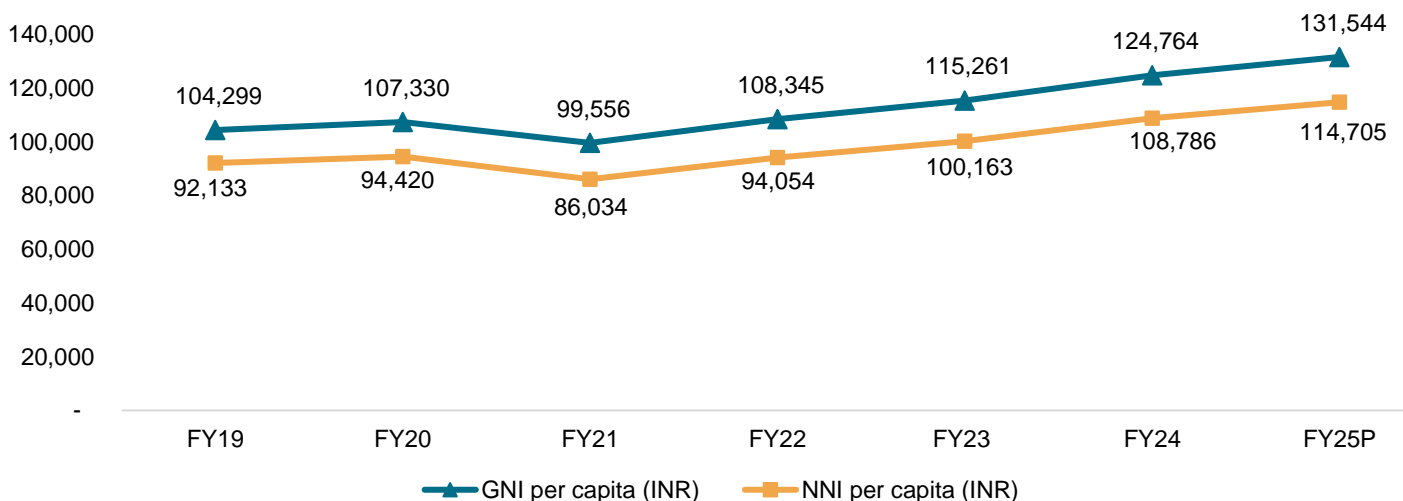
### Index of Industrial Production growth trend

India's Index of Industrial Production (IIP) averaged 2.8% between fiscals 2019 and 2024 before surging to 4.0% in fiscal 2025. The uptick in the index was mainly led by strong pick-up in the manufacturing of electrical equipment and basic metals. Further, an uptick in consumer durables sector aided the IIP growth.



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

### Per capita GDP and income growth trend



Source: NSO, Ministry of Industry and Commerce, Ministry of Statistics and Programme Implementation, Crisil Intelligence

\*: Provisional estimates by NSO

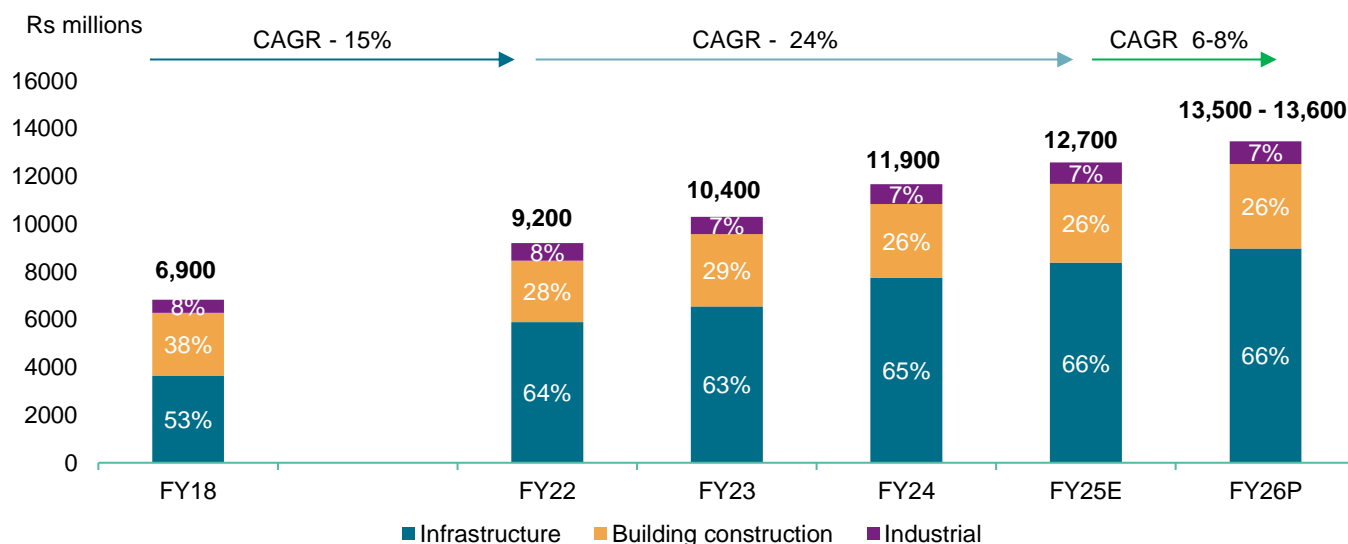
A country's gross national income (GNI) is derived at by adding receipts from overseas to the GDP and subtracting the payments made overseas in the form of wages, salaries and property income. Net national income (NNI) is obtained by subtracting asset depreciation from GNI. The growth trend in both GNI per capita and NNI per capita has largely been positive except for fiscal 2021, when they declined 7% and 9%, respectively on-year. The decline was primarily due to dip in GDP during the fiscal. However, in fiscal 2022, GNI per capita and NNI per capita grew ~9% each on-year, owing to recovery of demand, labour market and consumer sentiments. The growth largely remained rangebound with both the indicators increasing 6-9% on-year in fiscals 2023, 2024 and 2025, on account of economic stabilisation and a positive growth outlook.

## Construction investment outlook in key infrastructure segments

The construction sector is projected to grow at 6-8% CAGR between fiscals 2026 to 2030, with a major contribution from the infrastructure segment, coupled with the increasing pace of progress of schemes such as the National Infrastructure Pipeline (NIP), the National Monetisation Pipeline (NMP) and PM Gati shakti initiatives.

Construction capex is estimated to have risen 13% on-year to Rs 12,000 million in fiscal 2024 led by a visible increase in central and state budget allocations to meet the infra development target outlined in the NIP.

### Construction investment review and outlook





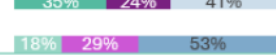
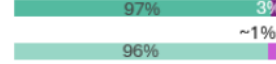



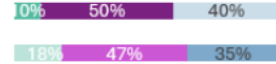

Source: CRISIL MI&A Research

The overall investment is expected to increase 6-8% to Rs 13,500- 13,600 million in fiscal 2026 compared with the levels over fiscal 2025. The share of infrastructure projects is expected to increase to 66% over the next five years from ~53% in fiscal 2018, as investments in infrastructure are expected to grow faster than that in other segments due to the government's focus on the NIP, NMP and the PM Gati shakti initiatives. The central government's focus on roads, urban infrastructure and railways will also boost infrastructure investments.

Construction investments are projected to grow at a 6-8% CAGR over fiscals 2026 to 2030, led by the infrastructure segment over the medium to long term as the building construction and industrial sectors record sedate growth rates.

Roads and railways dominated by public funds will lead growth in the infrastructure segment. The key infrastructure sub-sectors will see healthy growth over the medium term, led by the government's infrastructure push and the NIP.

**Key infrastructure sub-sectors**

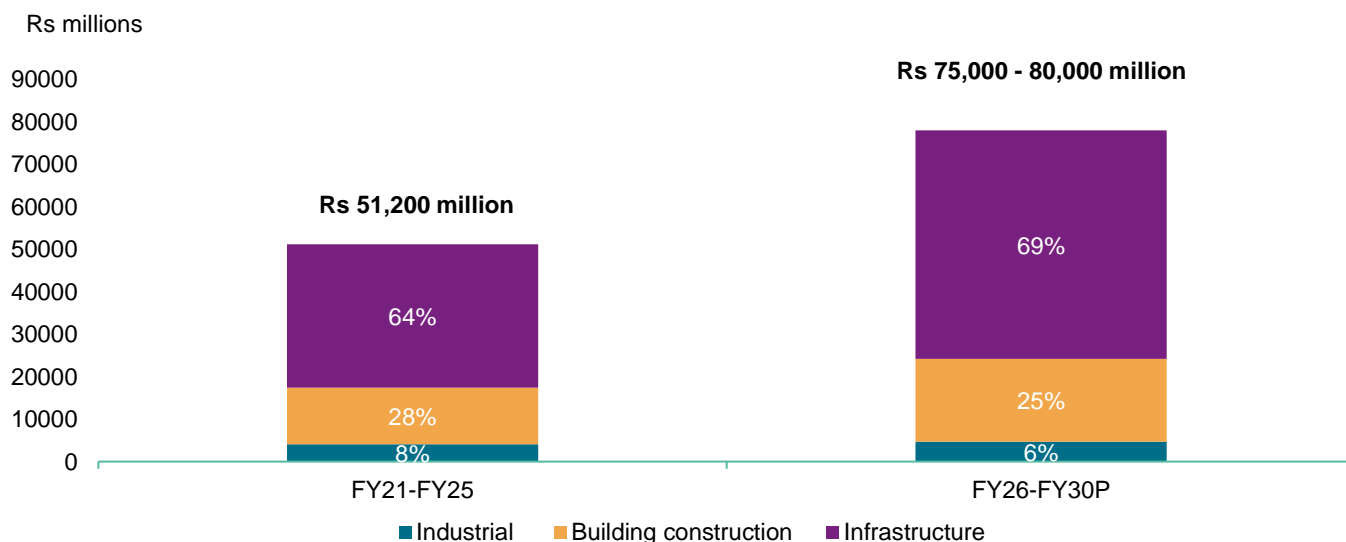
	Sector	FY21-FY25 CAGR	FY25E Rs lakh crore	FY26P % y-o-y	FY26-30P/ FY21-25	Estimated source of funds (FY25E-30P)
	Roads	13%	4.1	5-7%	1.8x	
	Power	17%	0.5	13-15%	1.4x	
	Railways	14%	1.2	0-2%	1.3x	
	Urban infra	30%	1.4	4-6%	1.6x	
	Irrigation	6%	0.9	8-10%	1.3x	
	Other infra	16%	0.4	6-8%	1.0x	
	<b>Total Infrastructure</b>	<b>15%</b>	<b>8.5</b>	<b>6-8%</b>	<b>1.6x</b>	

Source: CRISIL MI&A Research

Construction investments are projected to rise ~52% over fiscals 2026-30 compared with those over fiscals 2021-25 with investments in infrastructure expected to rise 1.6 times and building construction and industrial segments lagging at 40% and 30%, respectively, over the same period.

Investments in building construction are expected to grow 4-6% in fiscal 2025 mainly led by urban affordable housing, which currently constitutes ~25% of the incremental urban addition and is expected to slowdown in the coming fiscals as the government approaches its targets.

**Construction spending (at current prices)**



Note: P: Projected

Source: CRISIL MI&A Research

Investments in the sector are expected to rise to Rs 75,000-80,00 million over fiscals 2026-30 from Rs 51,200 million over fiscals 2021-25.

## Key budget'2025 & 2026 announcements for construction and infrastructure segments

A record Rs 11.21 trillion has been allocated for infrastructure in union budget 2026, representing 3.1% of GDP and signalling the Government's commitment to long term development across vital sectors including urban development, transport, and power.

### Announcements for Building & Urban Development

1. **SWAMIH Fund-2:** INR 150 billion allocated to fast-track the completion of 100,000 dwelling units through blended finance.
2. **National Framework for GCCs:** A national framework will be developed to guide states in promoting Global Capability Centers in emerging tier-2 cities. It will include 16 measures aimed at enhancing talent availability, infrastructure, building by law reforms, and fostering industry collaboration.
3. **National Centers of Excellence for Skilling:** Five National Centers of Excellence for skill development will be established with global expertise and partnerships, equipping the youth with the necessary skills for 'Make for India, Make for the World' manufacturing.
4. **Expansion of Capacity in IIT:** Infrastructure will be expanded in the five IITs established after 2014, adding capacity for 6,500 additional students.
5. **Urban Challenge Fund:** INR 1 trillion will be allocated to implement proposals for 'Cities as Growth Hubs,' 'Creative Redevelopment of Cities,' and 'Water & Sanitation.'
6. **Tourism for Employment-Led Growth:** The government will focus on developing the top 50 tourist destinations in partnership with states. Hotels in these destinations will be added to the Harmonized Infrastructure List. Performance-linked incentives for states will promote employment-led growth, alongside improved ease of travel and connectivity to these destinations. The budget allocated Rs 25.41 billion for infrastructure upgrades, skilling programs, and travel facilitation.

### Impact on the Building & Construction Sector

The Union Budget emphasizes urban renewal and affordable housing, catalysing large-scale redevelopment in metro and Tier-2 cities. The Urban Challenge Fund will foster integrated residential, commercial, and transit-oriented development. Simultaneously, SWAMIH Fund-2 will accelerate the completion of stalled mid-income and affordable housing projects, reigniting developer interest and reducing the residential real estate backlog.

The expansion of IITs and the establishment of new skill centers will drive demand for institutional buildings, research facilities, and student housing, transforming nearby areas into construction hubs.

Additionally, the inclusion of hotels in the top 50 tourist destinations under the Harmonized Infrastructure List will allow hospitality developers to secure long-term financing at lower interest rates. With the government's increased focus on tourism, hotel construction, especially in heritage cities, tourist hotspots, and medical tourism destinations, will rise.

The Union Budget 2025's focus on urban renewal, affordable housing, and infrastructure development will significantly benefit the welding industry, as these projects will drive demand for welded components in construction. The large-scale redevelopment in metro and Tier-2 cities, fueled by the Urban Challenge Fund and SWAMIH Fund-2, will require extensive use of welding for the fabrication of steel structures, frames, and reinforcement in residential, commercial, and transit-oriented developments. Additionally, the growth in institutional buildings, research facilities, and student housing

from IIT expansions will also create increased demand for welding services in structural steel and piping. The tourism sector's development, especially in heritage cities and medical tourism destinations, will spur hotel construction, further boosting the need for welded infrastructure components in these projects.

## Announcements for the Infrastructure Sector

- 1. Support to States for Infrastructure:** The government will provide INR 1.5 Lakh Crore in 50-year interest-free loans to states for capital expenditure. States will also receive incentives for implementing reforms.
- 2. Public-Private Partnership in Infrastructure:** Infrastructure ministries will develop a 3-year pipeline of Public-Private Partnership (PPP) projects. States are encouraged to follow suit and can seek support from the India Infrastructure Project Development Fund (IPDF).
- 3. Jal Jeevan Mission (JJM):** The JJM initiative will be extended until 2028 to ensure 100% coverage of clean drinking water across the country. It will receive a significantly enhanced outlay to accelerate its implementation.
- 4. UDAN Scheme:** Building on the success of the UDAN scheme, which has connected 88 airports and launched 619 operational routes, the government will introduce an upgraded version. This will add 120 new destinations and serve 40 million passengers over the next decade.
- 5. Infrastructure Development in Bihar:** The government plans to develop greenfield airports and provide financial support for the Western Koshi Canal ERM Projects to address Bihar's future infrastructure needs.
- 6. Bilateral Investment Treaties (BITs):** Following the Interim Budget 2024, India signed BITs with two countries to boost foreign investment. To further these efforts, the government will revamp the BIT framework, making it more investor-friendly to align with the 'First Develop India' vision.
- 7. Asset Monetization Plan 2025-30:** Building on the success of the 2021 Asset Monetization Plan, the government will launch a new INR 10 Lakh Crore asset monetization plan for 2025-30. Regulatory and fiscal measures will be refined to maximize capital reinvestment into new infrastructure projects.

## Impact on the Building & Construction Sector

- One of the major highlights of this budget is the allocation of INR 1.5 Lakh Crore in interest-free loans to states, aimed at stimulating infrastructure projects regionally. This funding will support a wide range of initiatives, including highways, metro systems, airports, and water supply infrastructure. By providing states with greater financial flexibility, the government is decentralizing infrastructure development, ensuring that growth reaches not just metro cities but also emerging industrial and urban centers.
- The development of a 3-year pipeline of PPP projects will encourage private sector participation in large-scale infrastructure initiatives, making these projects more viable by leveraging both public and private sector resources. Additionally, the government's INR 10 Lakh Crore Asset Monetization Plan for 2025-30 will unlock funds from existing infrastructure assets, enabling the construction of new expressways, smart logistics zones, and urban transit corridors.
- The Jal Jeevan Mission's extension until 2028, with an increased outlay of INR 67,000 Crore, will significantly drive construction activity, particularly in water supply projects across rural and urban areas, contributing to a large-scale uplift in infrastructure.
- The revamped UDAN scheme will enhance regional air connectivity, prompting the construction of new airport terminals and aviation infrastructure. This, in turn, will stimulate real estate development and commercial activity around airport zones. Moreover, greenfield airport projects, like those planned for Bihar, will create multi-modal transport hubs and catalyze surrounding real estate and commercial developments.

Overall, these initiatives are set to transform the infrastructure landscape by improving regional connectivity, enhancing public-private collaborations, and driving growth in key sectors such as water, housing, transportation, and tourism.

The Union Budget's infrastructure initiatives and the associated financial allocations will significantly impact the welding industry, directly and indirectly, in several ways:

## 1. Increased Demand for Infrastructure Projects

**Roads, Airports, Metro Systems:** With substantial funds allocated to highways, metro systems, and airport development (such as in the UDAN scheme and Bihar's greenfield airports), there will be a surge in demand for welding services used in the construction of steel structures, pipelines, and other critical components. The welding industry will see growth in demand for its services and products, including structural welding, pipeline welding, and fabrication for construction.

**Water Supply Projects (Jal Jeevan Mission):** The extension and funding of the Jal Jeevan Mission for rural and urban water supply projects will drive the need for welding in the fabrication of water pipes, water treatment plants, and other infrastructure, supporting the industry's growth.

- 2. Public-Private Partnerships (PPP) and Private Sector Involvement:** The development of a 3-year pipeline of Public-Private Partnership (PPP) projects, including large-scale infrastructure initiatives, will increase the need for welding materials and services in public and private construction projects. These partnerships, combining the resources of both sectors, will open new avenues for welding contractors and fabricators to get involved in large-scale projects.
- 3. Asset Monetization and Smart Infrastructure:** The government's Asset Monetization Plan will unlock existing infrastructure assets for redevelopment and modernization, including the construction of smart cities, expressways, and logistics zones. The welding industry will benefit from the demand for welding-related services in the construction of new roads, bridges, and transportation hubs. Smart infrastructure development will also require advanced welding technologies and materials.
- 4. Industrial Growth from Regional Development:** With the allocation of INR 1.5 Lakh Crore in interest-free loans for state infrastructure development, regional growth will be accelerated, including in industrial hubs and urban areas. This will increase the demand for welded structures and products used in factories, warehouses, and industrial facilities. The expansion of industrial zones will create a consistent demand for the welding industry, especially for the manufacturing of steel frames, equipment, and machinery.
- 5. Bilateral Investment Treaties (BITs) and Foreign Investments:** The revamping of Bilateral Investment Treaties (BITs) will encourage foreign investments in Indian infrastructure projects. This will lead to the adoption of international standards and technologies, including advanced welding techniques. The influx of global companies in infrastructure development may also provide opportunities for the local welding industry to partner with foreign companies, leading to enhanced technological expertise and growth.
- 6. Increased Manufacturing Activity:** The emphasis on skill development and industrial growth (such as the National Centers of Excellence for Skilling) will create a more skilled workforce. This will not only help in the growth of the manufacturing sector, including the fabrication of welded products, but also lead to better quality and efficiency in welding operations, thus enhancing the overall competitiveness of the industry.
- 7. Tourism and Hospitality Sector Growth:** The government's focus on tourism infrastructure, including the development of hotels and transport facilities in top tourist destinations, will increase the need for welding in construction activities. Projects related to building and upgrading hotels, resorts, and transportation infrastructure will require significant welding input for steel structures, frames, and piping.

- 8. Technological Advancement and AI Integration:** The creation of Centers of Excellence in AI, particularly for the education sector, may indirectly lead to advancements in automated welding technologies, which will benefit the welding industry by improving efficiency, precision, and safety in welding operations. As the industry adapts to AI and automation, it could see a boost in both domestic and international demand for high-quality welded products.

Overall, the initiatives and budget outlays from the Union Budget 2025 will create a ripple effect in the welding industry, generating demand across multiple sectors, enhancing technological advancements, and providing growth opportunities in both infrastructure development and manufacturing.

# Overview of Welding Raw Material & Consumables Industry

## Overview of the welding industry

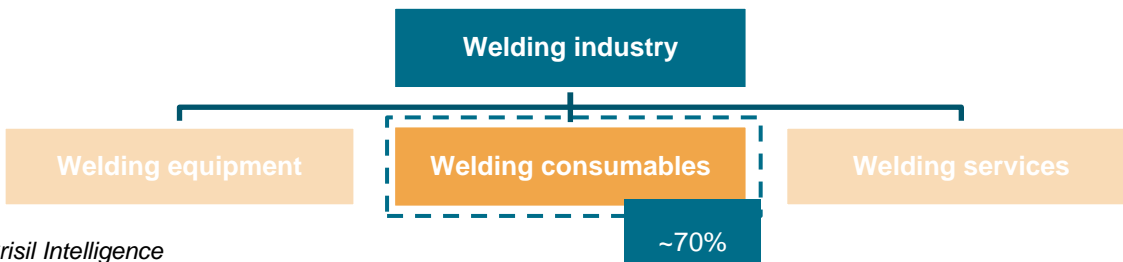
Welding is the process of bonding two or more materials, typically metals or thermoplastics, through coalescence. This is often done by melting the workpieces and adding a filler material to form a strong joint upon cooling. The welding industry plays a crucial role in various sectors, including construction, automotive, aerospace, shipbuilding, energy, and manufacturing.

The Indian welding industry is experiencing robust growth, driven by infrastructure development, particularly in transportation, energy and housing. Additionally, technological advancements, coupled with government initiatives such as the Make in India campaign, are fostering innovation and increasing the adoption of modern welding techniques. Despite challenges, such as the need for skilled labour and safety concerns, the industry is poised for significant expansion, driven by the increasing complexity and scale of projects across the country.

### Segmentation of industry based on product type

Based on product type, the market is segmented into equipment, consumables and services.

#### Segments of the welding industry



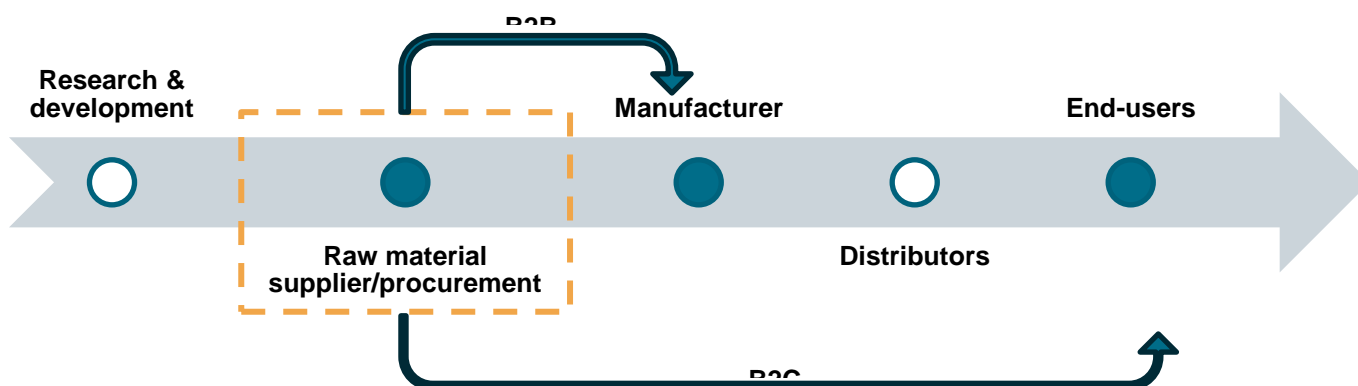
Source: Crisil Intelligence

1. **Welding equipment:** This includes various types of welding machines, such as arc welding, resistance welding, gas welding, and more advanced technologies such as laser welding and robotic welding systems. Arc welding equipment holds a significant share due to its versatility and wide application across industries.
2. **Welding consumables:** These include welding rods, wires, electrodes, and fluxes. Consumables are critical, as they directly impact the quality of the weld. Welding consumables account for ~70% of the entire welding industry.
3. **Welding services:** Contractual welding services for construction, repair, and maintenance are an essential part of the industry, especially in infrastructure projects.

## An overview of the welding raw material & consumables segment

Welding raw material & consumables are the materials that fill the gap between metals, necessitated by the welding process. These materials ensure a strong bond between the parent metals, contributing to the overall quality and durability of the weld.

## Value chain of the welding raw material & consumables segment



Source: Crisil Intelligence

The value chain of welding raw material & consumables involves several key players, each contributing to overall process of delivering products to end users.

### 1. Research & development

- Role: Innovation in welding technology and consumables, focusing on improving performance, efficiency and environmental sustainability.
- Activity: Conducting material studies, developing new welding rods, wires, and fluxes, and testing for quality and compliance with industry standards.

### 2. Raw material supplier

- Role: Provide the necessary raw materials for manufacturing welding consumables.
- Materials: Common materials include filler metal powder, fluxes and wires (such as steel and aluminium) and alloys. Such materials are purchased by manufacturers for further processing. Materials such as wires and fluxes can also be directly used by end users in different types of welding.
- Impact: Quality and cost of raw materials directly affect the final product's performance and price.

### 3. Manufacturer

- Role: Transform raw materials into finished welding consumables, such as electrodes, flux cored wires, and fluxes
- Processes: Melting, shaping, coating, and packaging
- Quality control: Ensures products meet industry specifications and safety standards

### 4. Distributor

- Role: Act as intermediaries between manufacturers and end users
- Functions: Logistics, warehousing, and marketing of welding consumables. Distributors often provide additional services such as technical support and training
- Importance: They help ensure timely delivery and availability of products in various markets

### 5. End users

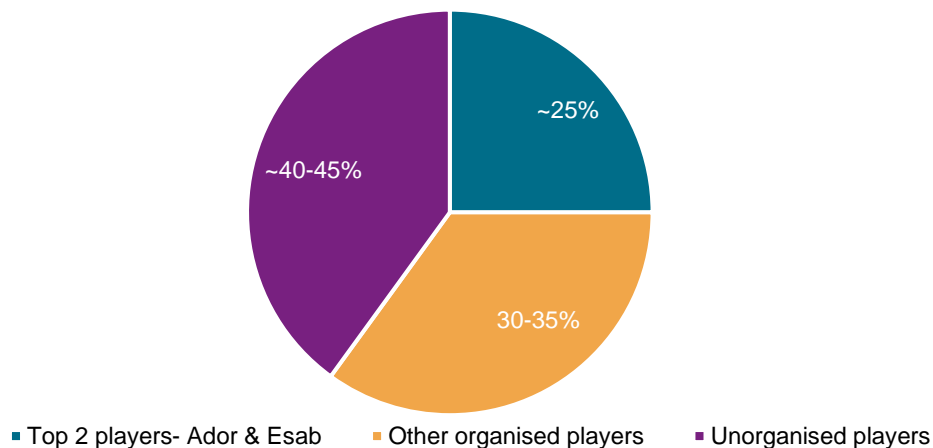
- Role: End users are mostly those that provide welding services and utilise welding consumables in various industries, such as construction, automotive, aerospace, and manufacturing
- Feedback loop: Provide insights and feedback to manufacturers and R&D teams regarding product performance and needs, driving further innovation

### Key characteristics of welding raw material & consumables industry

- **Industry structure:** The welding raw material & consumables market is highly competitive, with approximately 55-60% of the market being organised. This segment is dominated by around 20 to 22 major players, including ESAB, ADOR, EWAC, Lincoln Electric, Lincoln India, Bohler, D&H, Honavar Electrodes, Diffusion Engineers, GEE Ltd. and Mailam India, among others. These companies possess a strong market presence with established legacies, supported by robust financial resources, technical expertise, marketing strategies and dedicated research and development departments focused on product innovation.

The rest 40-45% of the market is unorganised and fragmented with small size players generally catering to last mile end users who do not require very high-quality products and mostly prefers low priced products. Such players usually do not go for third party approvals for quality control and assurances.

### Top players share in overall welding raw material & consumables market (volume basis)



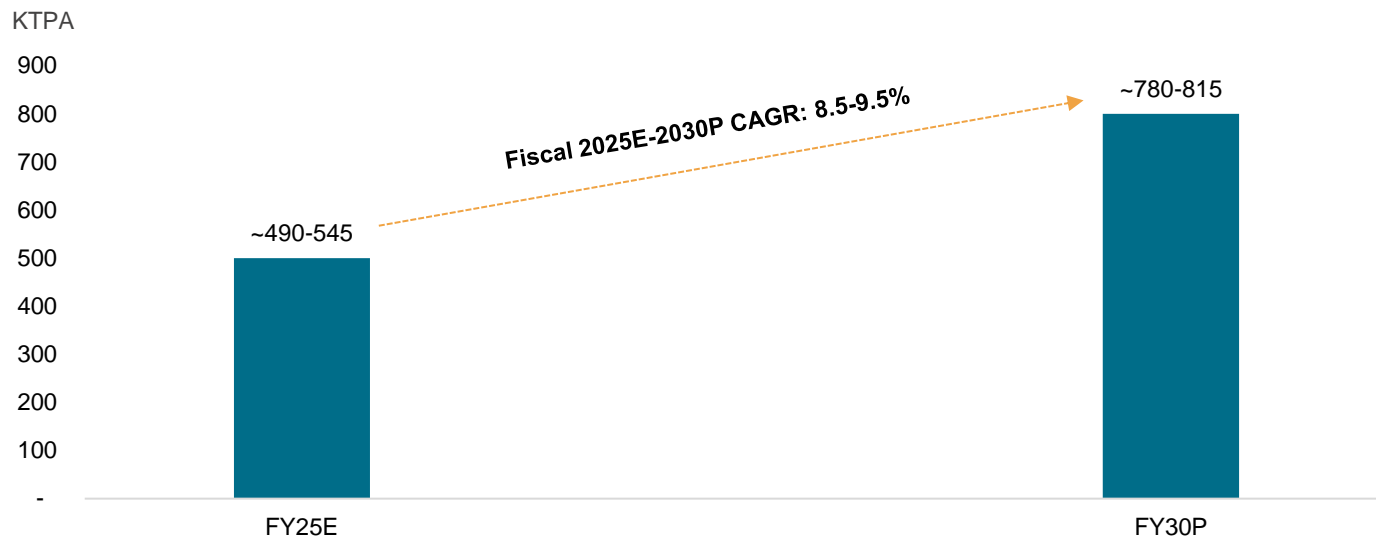
Source: Crisil Intelligence

Ador and ESAB are the two biggest players in the welding raw material & consumables industry having a pan India level presence with manufacturing plants in almost all the big cities. Since these players have footprints and supply in every part of the country, they exercise good power on overall volumes as well as prices of the welding consumables products, making it difficult for any new player to compete with their profits and margin levels.

- **Improved quality and wider product portfolios:** Companies are improving the quality and performance of their products, developing new welding consumables for specialised applications, and enhance the environmental sustainability of their offerings. Major players such as Esab and Ador are expanding their product portfolios to cater to a wide range of welding needs. Such big players are venturing into high value-added products and services. Furthermore, they are implementing stringent quality control processes to ensure their welding consumables meet industry standards and specifications.
- **Inclusion of sustainable and eco-friendly products:** The leading players are developing environmentally friendly consumables with reduced emissions and waste. This aligns with global sustainability goals and appeals to

environmentally conscious customers. Welding consumables manufacturers are also providing comprehensive customer support and training programs.

### Welding raw material & consumables market review and outlook



*E: estimated; P: provisional*

Source: Crisil Intelligence

The welding raw material & consumables market in India is estimated at ~490-545 KTPA in fiscal 2025, which is further projected to grow at a CAGR of 8.5-9.5% over fiscals 2025-2030 to ~780-815 KTPA.

The rising demand for improved infrastructure has led to significant investments in the development of roads, bridges, ports, and airports. This investment is a major driver of growth in the welding raw material & consumables sector, as welding plays a crucial role in providing strong and reliable connections for structural components in construction. Additionally, the expansion of industries, such as heavy engineering, energy, oil and gas, shipbuilding, railways, power, transportation, and automotive, also fuels growth in the welding raw material & consumables market, particularly due to the construction and maintenance of plants in these sectors.

As India strives to become a global manufacturing hub, the growth of the manufacturing sector will further boost the welding raw material & consumables industry. Government initiatives such as the National Infrastructure Pipeline, which plans to invest about Rs 111 lakh crore in infrastructure from fiscal 2020 to 2025 across heavy engineering, roads, urban infrastructure, and railways, along with industrial reforms such as 'Make in India' and 'Amenabar Bharat', will also support the expansion of the welding raw material & consumables sector.

### Industry applications

The Indian welding raw material & consumables industry is a critical component of the country's manufacturing and infrastructure sectors, playing a pivotal role in the nation's economic development. As India undergoes rapid industrialisation and urbanisation, the demand for products has surged, making it a key contributor to below mentioned industries.

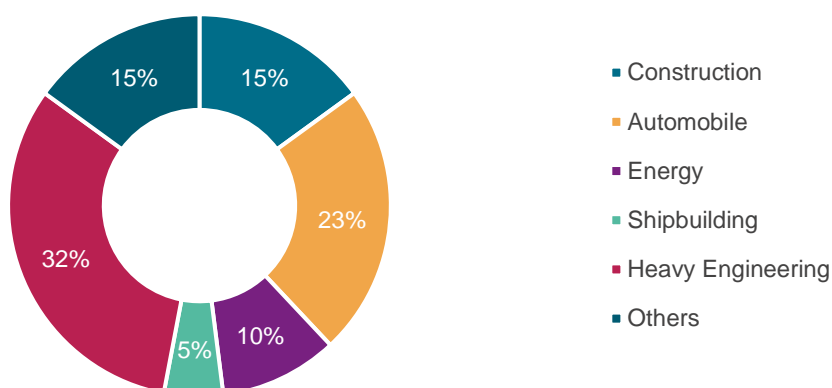
## Key end-use industry applications of welding raw material & consumables

SN.	Sectors	Applications
1.	<b>Construction and Infrastructure</b>	<ul style="list-style-type: none"> <li>• <b>Buildings:</b> Used in constructing residential, commercial, and industrial buildings, including structural frameworks, beams, columns, and roofing</li> <li>• <b>Bridges:</b> Used in assembling and maintaining steel bridges, ensuring strong, durable joints in structural components.</li> <li>• <b>Railways:</b> Used in the construction and repair of railway tracks, train cars, and other railway infrastructure</li> <li>• <b>Pipelines:</b> Essential for the construction of pipelines that transport oil, gas, and water, ensuring leak-proof joints and long-lasting infrastructure</li> </ul>
2.	<b>Automotive Industry</b>	<ul style="list-style-type: none"> <li>• <b>Vehicle manufacturing:</b> Welding is a fundamental process in the automotive industry, used in assembling car bodies, frames, and various components like exhaust systems and fuel tanks</li> <li>• <b>Repair and maintenance:</b> Crucial for repairing damaged parts and maintaining vehicles, including bodywork and engine repairs</li> </ul>
3.	<b>Aerospace industry</b>	<ul style="list-style-type: none"> <li>• <b>Aircraft manufacturing:</b> Used in the fabrication of aircraft frames, fuselages, engine components, and landing gear, where precision and strength are critical</li> <li>• <b>Spacecraft and satellites:</b> The aerospace industry relies on advanced welding techniques to construct spacecraft, satellites, and rockets, often using specialised materials and processes</li> </ul>
4.	<b>Shipbuilding and marine industry</b>	<ul style="list-style-type: none"> <li>• <b>Ship construction:</b> Integral to building ships, submarines, and offshore structures, involving the assembly of hulls, decks, and superstructures</li> <li>• <b>Marine repairs:</b> Used for the maintenance and repair of ships, ensuring the structural integrity of vessels over time</li> </ul>
5.	<b>Energy sector</b>	<ul style="list-style-type: none"> <li>• <b>Oil and gas:</b> Crucial in the construction and maintenance of oil rigs, refineries, and pipelines, where high-strength joints are required to withstand harsh conditions</li> <li>• <b>Power generation:</b> In thermal, nuclear, and renewable energy plants, welding is used to fabricate and maintain boilers, turbines, reactors, and other critical components</li> <li>• <b>Solar panels:</b> In the construction of solar panel frames and supports.</li> <li>• <b>Wind turbines:</b> In manufacturing and assembling wind turbines, particularly in constructing towers, nacelles, and blades</li> </ul>
6.	<b>Manufacturing</b>	<ul style="list-style-type: none"> <li>• <b>Machinery and equipment:</b> Used to assemble and fabricate industrial machinery, agricultural equipment, and heavy machinery, ensuring the durability and functionality of the equipment.</li> <li>• <b>Consumer goods:</b> Welding processes are employed in the production of various consumer goods, such as appliances, furniture, and tools.</li> </ul>
7.	<b>Defence and military</b>	<ul style="list-style-type: none"> <li>• <b>Military vehicles:</b> Production and repair of tanks, armoured vehicles, and other military equipment.</li> <li>• <b>Naval ships:</b> The construction of naval vessels, including warships and submarines, heavily relies on welding for assembling robust and resilient structures</li> <li>• <b>Weapons systems:</b> In manufacturing of various weapons systems and defence infrastructure</li> </ul>
8.	<b>Mining and mineral processing</b>	<ul style="list-style-type: none"> <li>• <b>Mining equipment:</b> Manufacture and repair of mining equipment, such as drilling rigs, conveyor systems, and crushers</li> <li>• <b>Processing plants:</b> In mineral processing, welding is used in constructing and maintaining processing plants, where it ensures the integrity of high-stress components</li> </ul>

SN.	Sectors	Applications
9.	Art and design	<ul style="list-style-type: none"> <li>• <b>Sculpture and metal art:</b> Welding is used in creating metal sculptures, artistic installations, and decorative pieces</li> <li>• <b>Architectural design:</b> Welding is employed in architectural projects for custom metalwork, such as railings, gates and bespoke structures</li> </ul>
10.	Electronics and electrical	<ul style="list-style-type: none"> <li>• <b>Electronics manufacturing:</b> Precision welding techniques are used in manufacturing electronic components, connectors and circuit boards</li> <li>• <b>Electrical equipment:</b> Welding is employed in assembling and maintaining electrical equipment, including transformers and switchgear</li> </ul>

Source: Crisil Intelligence

## Industry-wise share of the welding raw material & consumables market in India



Source: Crisil Intelligence

Welding raw material & consumables industry stood around Rs 58-60 billion in fiscal 2025. Due to the rise in demand for improved infrastructure, a lot of investment is happening in infrastructure development, such as construction of roads, bridges, ports and airports. This investment in infrastructure is one of the key growth drivers for the welding raw material & consumables sector – welding is indispensable in the construction industry, as it provides strong and reliable joining solutions for structural components.

## Key Drivers

1. **Government initiatives:** Initiatives such as Make in India and Skill India are boosting domestic manufacturing and infrastructure development and driving demand for welding activities and welding raw material & consumables.
2. **Rapid urbanisation and infrastructure development:** The rapid urbanisation and need for modern infrastructure are fuelling increased construction activities, leading to a significant demand for welding raw material & consumables. Urbanisation, characterised by the migration of people from rural to urban areas, necessitates the creation of new housing and public utilities. Construction heavily relies on metal frameworks, which require welding at various stages, demanding high-quality consumables. In addition, large infrastructure projects such as railways, airports, and dams have long life cycles and ongoing maintenance needs, making the durability of these projects closely linked to the quality of welding. This has prompted contractors and governments to invest in premium welding consumables to ensure longevity and safety.

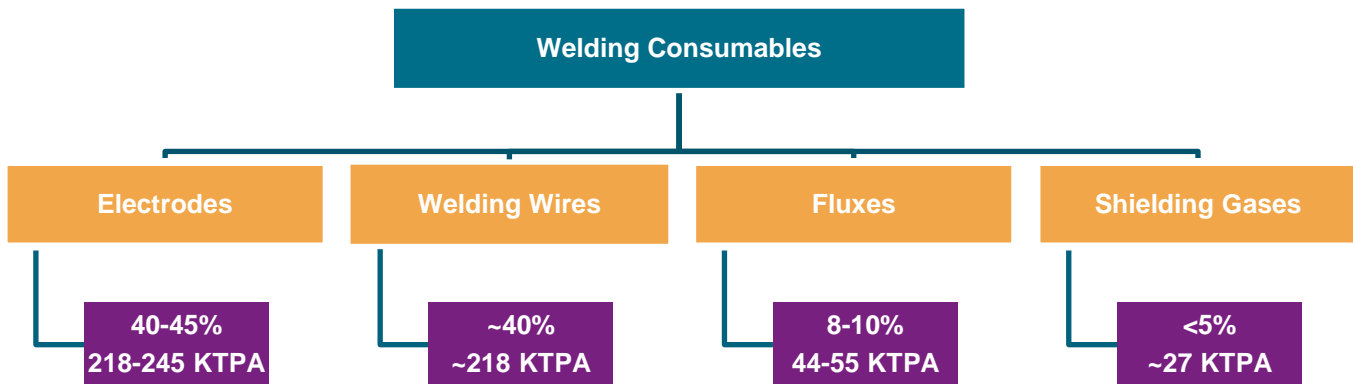
3. **Automotive sector growth:** The expansion of the automotive industry in India, including the push towards electric vehicles, requires advanced welding technologies and consumables. Lightweight and strong metals are now in demand for vehicle frames to improve fuel efficiency, and these materials often require specialised welding consumables.
4. **Advancements in ship building industry:** Like the automotive sector, ship building is a metal-intensive industry, hinged critically on the welding process for production and repairs. With the expansion of global trade and demand for more energy-efficient and environmentally friendly vessels, there is an increasing need for advanced ships. These vessels, constructed from specialised alloys to endure harsh maritime conditions, depend on high-quality welding consumables to maintain their integrity and durability.
5. **Energy sector expansion:** The growing demand for energy, both conventional and renewable, necessitates the construction of new power plants and the expansion of existing facilities, leading to increased demand for welding consumables.

## Technology trends in welding raw material & consumables industry

1. **Advanced materials:** Development of consumables with improved properties such as higher strength, better corrosion resistance, and compatibility with advanced materials (for example, aluminium, high-strength steel)
2. **Automation-compatible consumables:** With the rise of automation and robotics in welding, there is increasing demand for consumables designed for use with automated systems, offering consistent performance and higher productivity
3. **Sustainability:** Growing emphasis on eco-friendly welding processes has led to the development of low-fume consumables and recyclable packaging

This industry includes various types of filler materials, such as welding rods, wires, fluxes, electrodes, and gases, which are essential for joining metals. Here's an overview of the welding raw material & consumables industry:

**Welding consumable types and their respective share**

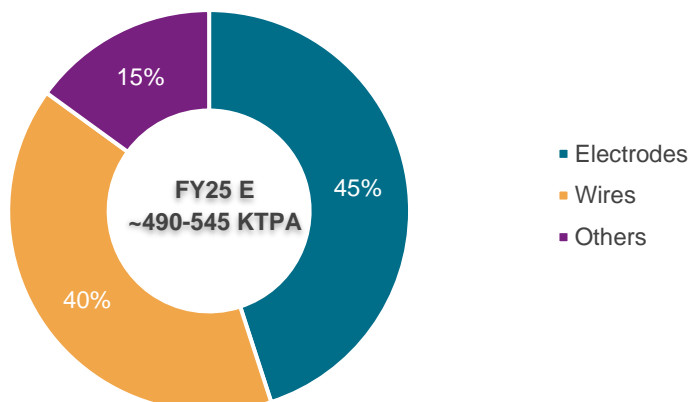


*Note: % represents the respective share of different types of welding consumables*

*Source: Crisil Intelligence*

- 1. Electrodes:** Electrodes accounts for 40-45% of the welding industry. In the welding circuit, welding electrodes serve the purpose of conducting electrical current to the workpiece. At times, electrodes also act as filler metal, such as in manual arc welding and gas metal arc welding in the form of consumable electrodes. There are three key types of electrodes—bar electrodes, light-coated electrodes, and shielded arc electrodes. These are the most widely used consumables and come in two main types — stick electrodes (manual metal arc welding) and wire electrodes (used in gas metal arc welding and submerged arc welding). Stick electrodes are commonly used for welding steel and iron, while wire electrodes are used in automated and high-speed welding applications
- 2. Welding wires:** Filler wires accounts for ~40% of the welding industry and are primarily used to secure strong joints between two metals, as these wires melt and flow in the middle of the two metals and form a joint. It includes solid wires, flux-cored wires, and submerged arc welding (SAW) wires. Solid wires are often used in gas metal arc welding (GMAW), while flux-cored wires are used in flux-cored arc welding (FCAW)
- 3. Fluxes:** Accounting for almost 8-10%, these are materials used in various welding processes to prevent oxidation, remove impurities, and improve the flow of molten metal. Apart from preventing oxidation of the molten weld metal, it is also used to provide additional heat during welding operation and improve the quality of high strength welds. Fluxes are crucial in processes such as submerged arc welding and flux-cored arc welding
- 4. Shielding gases:** Used in processes such as gas metal arc welding (GMAW) and gas tungsten arc welding (GTAW), shielding gases such as argon, helium, carbon dioxide, and gas mixtures protect the weld area from atmospheric contamination. They form less than 5% of the welding consumables industry.

**Welding consumables industry shift from electrode to wires**



Welding Consumable type	Fiscal 2000	Fiscal 2017	Fiscal 2025	Fiscal 2030
Electrodes	65-70%	55-57%	~45%	↔ Range bounded
Wires	25-30%	33-35%	~40%	↑ Increase
Others	5-7%	~10%	~15%	↑ Increase

E: Estimated

Note: Others includes SAW fluxes and shielding gasses

Source: Crisil Intelligence

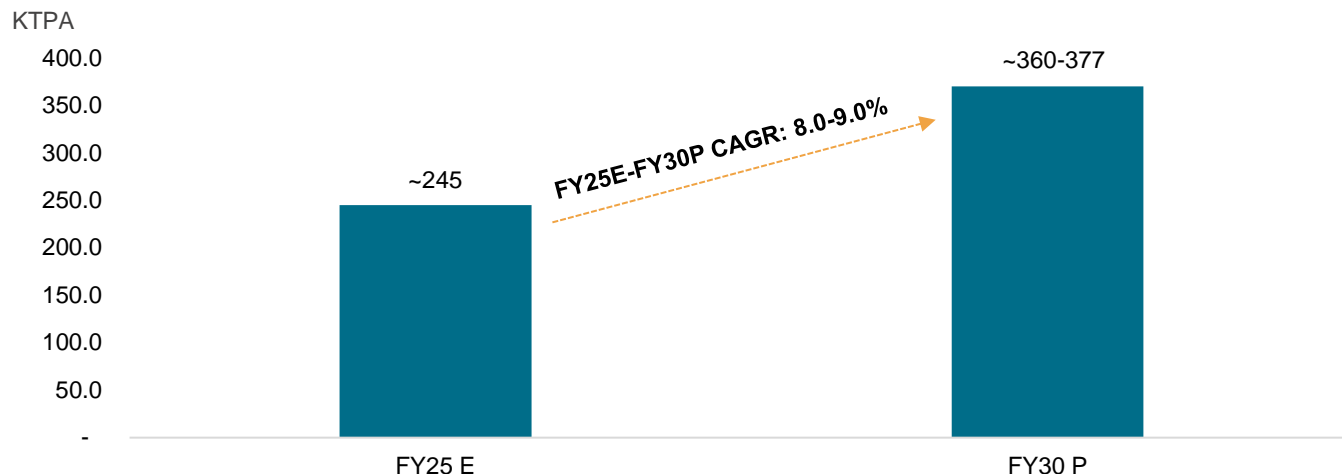
Companies in the welding consumables industry are increasingly moving from electrodes to wires. At present, the market share is approximately ~45% for electrodes and 40% for wires. This represents a notable shift from five to seven years ago, when the share was ~55% for electrodes and ~35% for wires, and 25 years ago, when it ranged between 65-70% for electrodes and 25-30% for wires.

This trend towards solid and flux-cored wires is primarily driven by their superior production efficiency, which allows for faster welding speeds and higher deposition rates. In addition, wires produce cleaner welds with less spatter and require less post-weld cleanup. As manufacturing processes evolve and demand for versatile and high-quality welding solutions increases, the popularity of wires and fluxes continues to grow, reflecting the industry's broader shift towards more efficient technologies.

## Overview of welding electrodes

Welding electrodes are a critical component in many welding processes, serving as a medium to conduct current and facilitate the welding of materials. They are essential in joining metals, ensuring strong and durable welds. The choice of electrode depends on the welding method, the materials being welded, and the desired characteristics of the weld.

## Welding electrodes review and outlook



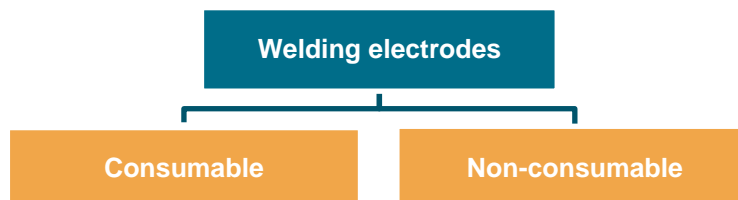
*E: Estimated; P: Projected*

*Source: Crisil Intelligence*

In fiscal 2024, welding electrode is estimated at ~45% (245 KTPA) of the welding consumables. It is projected to log a CAGR of 8.0-9.0% over fiscals 2025-2030 to reach ~360-377 in fiscal 2030.

Welding electrodes can be broadly classified into two main categories — consumable and non-consumable.

### Types of welding electrodes



*Source: Crisil Intelligence*

1. **Consumable electrodes:** These electrodes melt and become part of the weld.

- **Shielded Metal Arc Welding (SMAW) Electrodes:** Also known as stick electrodes, these are coated with flux, which helps in stabilising the arc and protecting the weld from atmospheric contamination. Common types include:
  - E6010: Known for deep penetration and use in pipe welding.
  - E6013: Used for general-purpose welding, offering smooth welds.
  - E7018: Low-hydrogen electrodes, known for strong, high-quality welds.
- **Gas Metal Arc Welding (GMAW) or MIG welding wires:** These electrodes are in the wire form and are continuously fed through a welding gun. They are often used with shielding gases to protect the weld.
  - ER70S-6: A commonly used MIG wire, ideal for welding mild and carbon steel.
- **Flux-Cored Arc Welding (FCAW) electrodes:** These are tubular wires filled with flux, offering good penetration and high deposition rates, suitable for heavy-duty welding.

- E71T-1: A flux-cored wire used for welding carbon steels, providing excellent mechanical properties.
2. **Non-consumable electrodes:** These electrodes do not melt and become part of the weld. Instead, they provide the arc for welding while a separate filler material may be used.
- **Tungsten electrodes (GTAW/TIG welding):** Tungsten electrodes are used in TIG welding, known for their high melting point and excellent arc stability.
    - Thoriated tungsten (2% thoriated): Offers good arc stability and is commonly used for welding steel and stainless steel
    - Ceriated Tungsten (2% ceriated): Provides better arc starts and is suitable for welding both steel and non-ferrous metals such as aluminium
    - Lanthanated tungsten: Offers a balance between arc starting and longevity, suitable for various materials.

## Composition and coatings

- **Core material:** The core of the electrode is typically made of a metal compatible with the materials being welded such as mild steel, stainless steel, aluminium, or special alloys.
- **Coatings:** Consumable electrodes, especially SMAW electrodes, are coated with flux. The flux serves multiple purposes, such as stabilising the arc, protecting the weld pool from oxidation, and adding alloying elements to the weld. The type of coating varies:
  - **Cellulosic coating:** Produces a deep penetrating arc, suitable for vertical and overhead welding
  - **Rutile coating:** Provides a smooth arc and is easy to use, producing aesthetically pleasing welds
  - **Basic or low-hydrogen coating:** Reduces hydrogen content in the weld, preventing cracking, and is ideal for high-strength steels

One of the most prevalent types of consumable electrodes includes stick electrodes.

## Stick electrode welding

Stick welding, also known as Shielded Metal Arc Welding (SMAW), uses a consumable electrode coated in flux to lay the weld. The electrode is commonly referred to as a 'stick' and is essential in creating a stable arc between the metal being welded and the electrode itself. Here are the main types of stick welding electrodes:

p	Key applications
E6010	Commonly used in pipeline welding, shipbuilding, and in situations where strong, deep welds are required
E6011	Suitable for welding on dirty or rusty surfaces, in maintenance and repair work, and for general purpose welding
E6012	They are often used in applications where there are fit-up issues or when welding thin metals. Commonly used in light sheet metal work and where low spatter is desired
E6013	Commonly used in general fabrication, home projects, and light-duty welding, including automotive work
E7014	Ideal for welding heavy sheet metal, structural steel, and general fabrication work.
E7018	Commonly used in structural steel welding, bridge construction, pressure vessels, and applications requiring high-strength welds
E7024	Ideal for welding thick plates, heavy structural work, and when speed and deposition are important

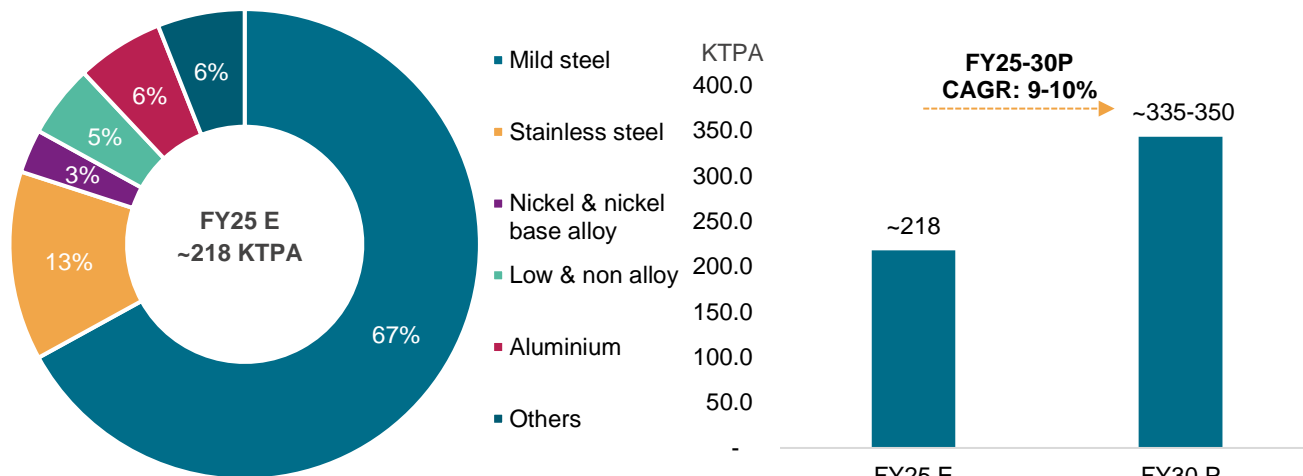
Source: Crisil Intelligence

## Overview of welding wires

Welding wire, which are used to join materials together by welding them, is a special type of wire. The welding wire functions as a filler metal that melts during welding, mixing with the base material to form a strong bond. During fiscal 2025, welding electrodes accounted for ~40% (218 KTPA) of welding consumables by volume.

Welding wire is available in various materials, such as steel, stainless steel, aluminium and alloys. The material used in the welding wire depends on the metal to be welded.

### Overall share of welding wires by metal/material type in India (Fiscal 2025)



E: Estimated; P: Projected

Source: Crisil Intelligence

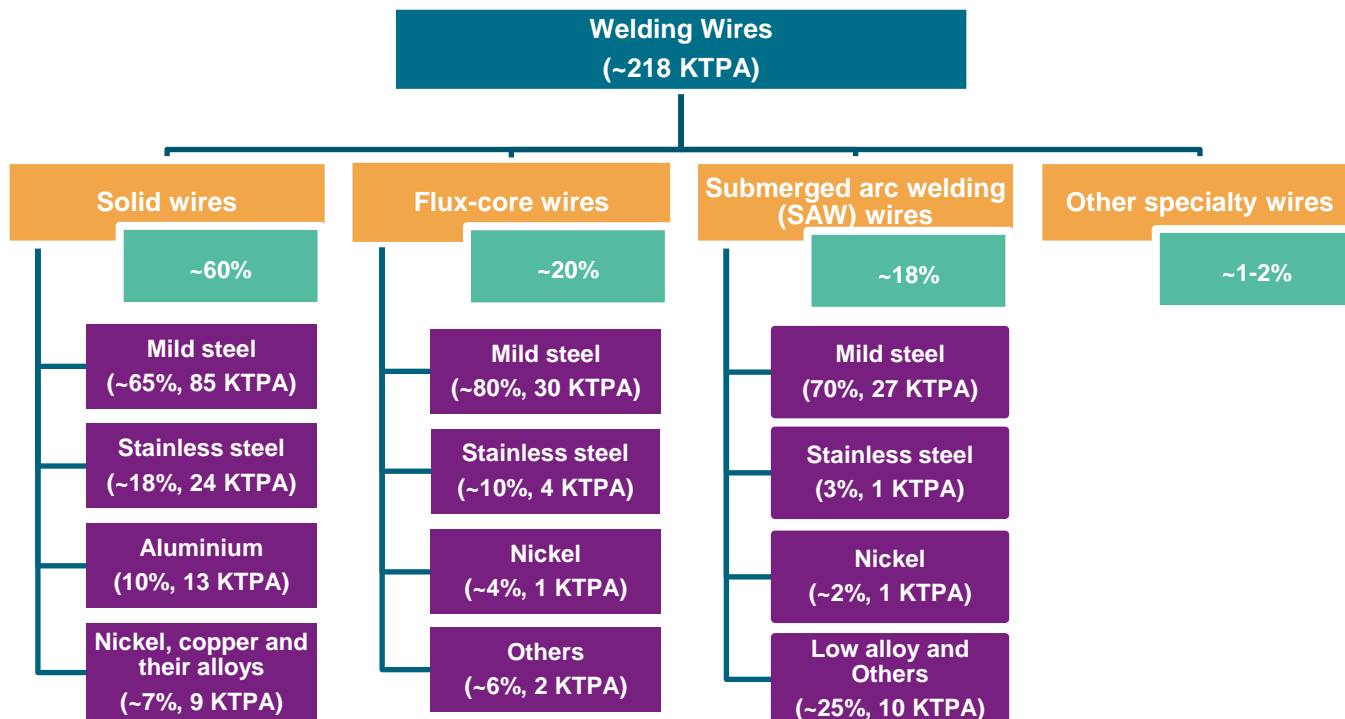
Mild steel accounts for the largest share of the wires used for welding, at ~67% (~146 KTPA), followed by stainless steel at 13% (~28 KTPA). Steel wires make 80% of the total market demand for welding consumable wires due to their cost-effectiveness, versatility and strong mechanical properties, which make them the most preferred choice for a wide range of welding applications.

The remaining 20% include aluminium wires, low and non-alloy wires, nickel and other speciality wires. Nickel and nickel-based alloy wires, which account for ~3% (~7 KTPA) of the total welding wires, are extensively used in the oil and gas sectors for work undertaken under severe conditions, such as that involving corrosion, extreme temperatures and high pressure.

During fiscal 2025, welding wires demand is estimated at 218 KTPA. It is expected to grow at 9.0-10.0% CAGR over fiscals 2025-2030 to reach ~335-350 KTPA. The demand for welding wires is estimated to be driven by increased demand for welding wires from end-use sectors such as construction and infrastructure, automobile, power, etc. and significant technology advancements. Additionally, the growing emphasis on safety and quality has contributed to an increased need for welding wires.

In addition to the varied materials of the wire, welding wire is also available in different diameters and lengths. Some welding wires contain flux, a substance that prevents oxidation in the melting zone and stabilises the welding arc. Choosing the right welding wire is important for the quality and strength of the weld. Various types of welding wires are as follows:

**Types of welding wires and their respective share (fiscal 2025)**



Source: Crisil Intelligence

**1. Solid wires**

Solid wires are the most used type of welding wire in India, especially in gas metal arc welding (GMAW), also known as MIG welding. They are widely employed in industries due to their versatility, ease of use and ability to produce high-quality welds, accounting for ~60% (131 KTPA) of the Indian welding wire market. Solid wires are used in automotive assembly, general fabrication, shipbuilding, and other industrial applications where clean, strong welds are required.

Different types of solid wires are as follows:

- Mild steel wire:** This is the most commonly used solid wire, accounting for ~65% of the solid wires category, it is made from low carbon steel and is typically copper coated to prevent oxidation and improve electrical conductivity.
- Applications:** Used in general fabrication, automotive manufacturing, construction, and light-to-medium industrial applications where high strength and toughness are not critical.
- Stainless steel wires:** Designed for welding stainless steel materials, these wires provide excellent corrosion resistance and are often used with a shielding gas mixture to improve weld quality. These wires account for ~18% of the total solid wires.
- Applications:** Used in industries where corrosion resistance is essential, such as food and beverages, chemical processing, petrochemical, and marine applications.
- Aluminium wires:** These are lightweight wires used for welding aluminium and aluminium alloys. They account for 10% of the solid wires categories. Their excellent corrosion resistance makes them ideal for specific applications.
- Applications:** Used in automotive, aerospace and marine industries, as well as in the fabrication of aluminium structures and components.

7. **Nickel and nickel alloy wires:** Designed to weld nickel metal and nickel alloys, these wires are known for high resistance to chemicals, heat and corrosion. They account for ~7% of the solid wires category.
8. **Applications:** Used in industries that require high corrosion resistance and thermal stability, such as chemical processing, aerospace and power generation (especially in nuclear plants).
9. **Copper and copper alloy wires:** Designed to weld copper metal and copper alloys, these provide excellent electrical conductivity and corrosion resistance.
10. **Applications:** Used in electrical and electronics industries for welding pipes and fittings, and in applications requiring good thermal and electrical conductivity.

## 2. Flux-cored wires

Flux-cored wires are a type of welding raw material & consumable used in flux-cored arc welding (FCAW), a process that is similar to MIG welding but uses a tubular wire filled with flux instead of a solid wire. The flux within the wire provides shielding from the atmosphere, stabilises the arc, and can add alloying elements to the weld pool. These account for ~20% (44 KTPA) of the Indian welding wire market.

Flux-cored wires can be broadly categorised into two main types based on the shielding method they require:

Wire type	Self-shielded flux-cored wires (FCAW-S)	Gas-shielded flux-cored wire (FCAW-G)
<b>Brief</b>	Self-shielded flux-cored wires do not require an external shielding gas because the flux within the wire produces enough shielding gas to protect the weld from atmospheric contamination.	Gas-shielded flux-cored wires require an external shielding gas (usually carbon dioxide or a mix of argon and carbon dioxide) to protect the weld from the atmosphere. The flux inside the wire assists in stabilising the arc and adding alloying elements.
<b>Key characteristics</b>	They have higher deposition rates compared with stick electrodes and are suitable for welding thicker materials and creating strong welds in a single pass. These wires often produce more spatter and require slag removal.	They produce cleaner welds with less spatter compared with self-shielded wires and are suitable for both thin and thick materials. They also require a shielding gas setup, making it less portable for fieldwork.
<b>Application</b>	Ideal for outdoor welding, construction and shipbuilding, and in environments where wind may disrupt the shielding gas when using gas-shielded methods.	Used in structural steel fabrication, manufacturing and industries requiring high-quality welds with good mechanical properties.

The material used for flux-cored wires mostly includes mild steel (~80%, 30 KTPA), stainless steel (~10%, 4 KTPA) and nickel (~4%, 1 KTPA).

## 3. Submerged arc welding (SAW) wires

Submerged arc welding wire is an essential component of the submerged arc welding process, known for its high efficiency, quality and suitability for thick materials. SAW wires account for ~18% (39 KTPA) of the welding wires and are mostly made of mild steel, constituting ~70% (27 KTPA) of overall SAW wires.

The process's ability to provide high deposition rates, minimal spatter and excellent weld properties makes it a preferred choice in below industries:

- **Structural steel fabrication:** Used for welding large steel structures, such as bridges, buildings and industrial facilities, where high deposition rates and strong welds are required

- Shipbuilding: Extensively used in shipbuilding for welding large steel plates and sections, benefiting from the process's ability to handle thick materials and produce high-quality welds
- Heavy equipment manufacturing: Employed in the manufacturing of heavy machinery and equipment, where the process's efficiency and weld quality are critical
- Pipeline construction: Used in pipeline welding for its ability to produce strong, reliable welds on thick pipeline sections
- Pressure vessels: Applied in the fabrication of pressure vessels and tanks, where high-quality, defect-free welds are essential for safety and performance

#### 4. Other specialty wires

This category includes a variety of other welding wires, used for specific applications. Although they constitute a smaller share of the market (~<5%), their demand is growing due to the increasing use of specialised materials and advanced welding techniques in sectors such as automotive, aerospace and high-end manufacturing.

These are mostly used in applications requiring high corrosion resistance, such as food processing, chemical processing and marine industries, as well as in welding non-ferrous metals and alloys.

**Some of the major categories of wires sold in Ferro Metal & Wire raw material industry are:**

Wire type	Description
<b>Nickel base alloy wires</b>	
Nickel wire 99%	Excellent corrosion resistance and high strength, commonly used for welding and repairing components in harsh environments
Ferro nickel wire 55%	Provides enhanced mechanical properties and improves corrosion resistance; often used in the production of nickel alloys and stainless steels
Nickel copper wire (ERNiCu-3)	Offers outstanding corrosion resistance and weldability; primarily used for joining copper-nickel alloys in marine applications
Nickel chrome wire (ERNiCr-3)	Characterised by high-temperature strength and oxidation resistance; ideal for welding heat-resistant alloys and components exposed to extreme conditions
<b>Stainless steel wires</b>	
304L	Low-carbon stainless steel wire offering excellent corrosion resistance and weldability; commonly used for welding food processing and chemical equipment
ER308L	Specifically designed for welding 304 and 304L stainless steels; provides superior strength and corrosion resistance; ideal for general-purpose applications
ER309L	Used for dissimilar metal welding; offers good strength and resistance to cracking, making it suitable for joining stainless steels to carbon steels
ER310	Known for its high chromium and nickel content; provides excellent high-temperature strength and oxidation resistance; often used in applications exposed to extreme conditions
316L	Low-carbon stainless steel wire that offers outstanding corrosion resistance, particularly in chloride environments; ideal for marine and chemical processing applications
<b>Low and non-alloy steel wires</b>	
ER70S-2	Contains manganese and silicon for deoxidising properties, making it suitable for welding mild steels in general fabrication and structural applications
ER70S-6	Enhanced with additional manganese and silicon; offers improved weldability and tensile strength; ideal for welding thicker sections and heavy fabrication
ER80S-B2	Specifically formulated with higher manganese and silicon content; designed for welding high-strength low-alloy steels, ensuring excellent toughness and ductility

Wire type	Description
ER90S-B3	Contains increased alloying elements for improved strength and toughness; suitable for welding high-strength steel applications in industries such as pressure vessels and heavy machinery

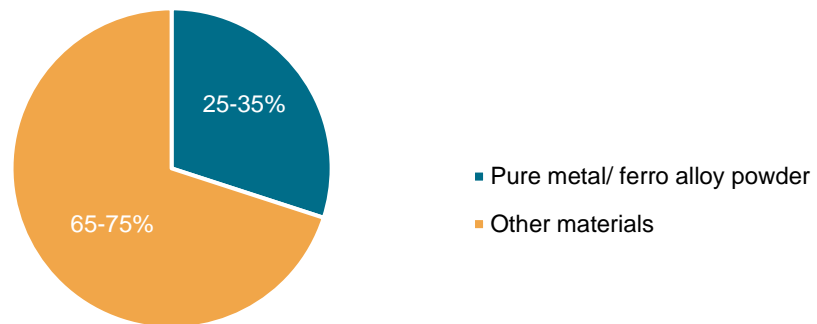
Source: Premier Industrial Corporation Ltd., Crisil Intelligence

## Overview of welding fluxes/SAW fluxes

Welding fluxes are materials used to protect the weld pool from atmospheric contamination, assist in the formation of a stable arc, and help clean the base material during the welding process. They are crucial for achieving high-quality welds, particularly in processes like SAW, FCAW and certain types of brazing.

Fluxes are made from a combination of metal Powder and minerals.

### Composition of different materials used for making fluxes which are used directly during SAW process:



Source: Crisil Intelligence

The composition of different metals and minerals used in saw fluxes depends on the application for which it is being used or the metal to be welded. It also varies from company to company.

In general, almost 25-35% of SAW fluxes are made of pure metal or ferro alloy Powder while the remaining 65-75% is made of other minerals and materials.

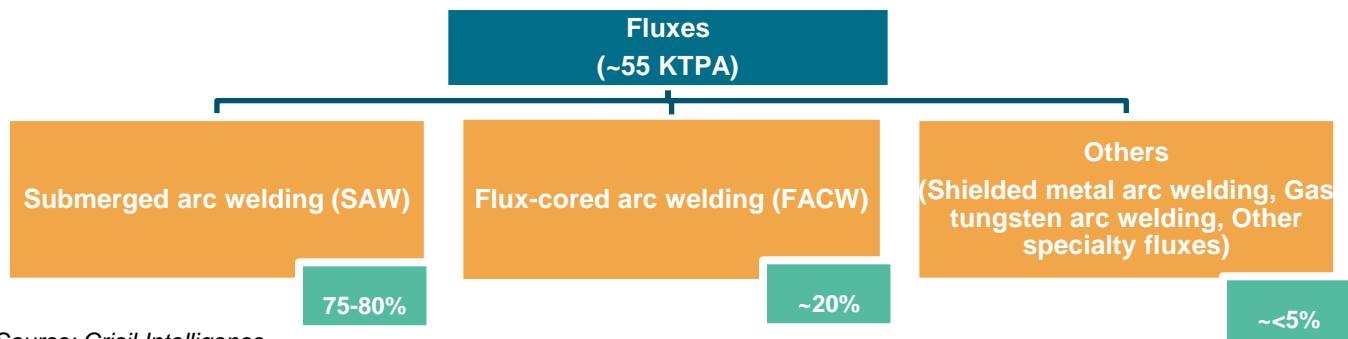
Other minerals mostly include heavy minerals sand like rutile/calcined rutile (~10-15%), zircon (~15-20%), quartz and silica sands or mica sands (~35%). It may contain minerals such as dolomite, fluorspar, etc. and some portions of chemicals such as potassium titanate, boron carbide, graphite, etc. It also includes a binder (2-5%) which provides adhesion and non-settling properties.

Such fluxes are used for pre-engineered buildings, steel girders and for fabrication.

Welding fluxes are materials used to protect the weld pool from atmospheric contamination, assist in the formation of a stable arc, and help in cleaning the base material during the welding process. They are crucial for achieving high-quality welds, particularly in processes like Submerged Arc Welding (SAW), Flux-Cored Arc Welding (FCAW) and certain types of brazing.

Fluxes are made from a combination of metal Powder and minerals.

### Demand of fluxes for various welding processes and their respective share



Source: Crisil Intelligence

1. **Submerged arc welding (SAW) fluxes:** The process involves granular fluxes, which cover the weld pool.

- Types:
  - **Basic fluxes:** Rich in calcium fluoride ( $\text{CaF}_2$ ) and calcium carbonate ( $\text{CaCO}_3$ ), the fluxes are used to produce high-quality welds with good impact strength
  - **Neutral fluxes:** Balanced composition containing a mix of basic and acidic materials. These are suitable for general applications and various types of steel
  - **Acidic fluxes:** Contain acidic oxides, such as silica ( $\text{SiO}_2$ ). They are less commonly used, but suitable for specific applications requiring weld characteristics

- Applications: Heavy industrial applications, such as shipbuilding, pipeline welding and structural fabrication

2. **Flux-cored arc welding (FCAW) fluxes:** The process involves fluxes incorporated within the core of flux-cored welding wires, providing shielding and other benefits.

- Types:
  - **Self-shielded flux-cored wires:** Contain flux that generates its own shielding gas, eliminating the need for an external gas supply
  - **Gas-shielded flux-cored wires:** Require an external shielding gas, in addition to the flux within the wire. The type offers improved weld quality and reduced spatter

- Applications: Versatile welding applications, including construction, automotive and heavy equipment

3. **Others:** Other categories include fluxes used in Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW) and other specialty fluxes. The share of such fluxes is less than 5% of overall Fluxes used directly in the welding processes.

Various types of shielding gas used in the welding industry are as follows:

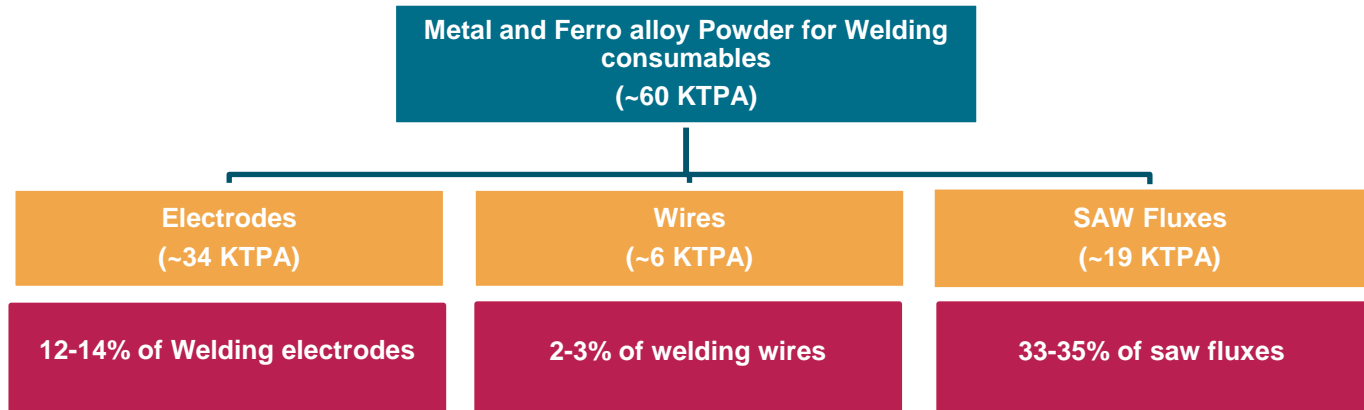
Other fluxes	Major Powder used as fluxes and their applications
<p><b>Shielded Metal Arc Welding (SMAW) Fluxes</b></p>	<p>In SMAW, the flux is contained in the coating of the electrodes. The flux Powder used in the coating typically include:</p> <ul style="list-style-type: none"> <li>• Cellulose (wood flour): Provides shielding gases and helps in arc stabilisation</li> <li>• Silica (SiO<sub>2</sub>): Provides deoxidation and contributes to slag formation</li> <li>• Calcium Carbonate (CaCO<sub>3</sub>): Acts as a fluxing agent to form slag</li> <li>• Titanium Dioxide (TiO<sub>2</sub>): Enhances arc stability and weld quality</li> <li>• Iron Powder: In some electrodes, iron powder is added to increase deposition rates and improve arc stability</li> <li>• Calcium Fluoride (CaF<sub>2</sub>): Improves flux fluidity and weld quality</li> </ul>
<p><b>Gas Tungsten Arc Welding (GTAW) Fluxes</b></p>	<p>While GTAW (TIG welding) typically eschews flux Powder in favour of inert gases for shielding, there are certain niche applications where specific Powder like Boron Nitride (BN) and Aluminium Fluoride (AlF<sub>3</sub>) might be utilised.</p> <ul style="list-style-type: none"> <li>• Boron Nitride (BN): Used in some specialised fluxes for its high thermal conductivity and lubrication properties</li> <li>• Aluminium Fluoride (AlF<sub>3</sub>): Occasionally used in special applications to improve weld quality</li> </ul>
<p><b>Other Specialty fluxes</b></p>	<p>Specialty fluxes are designed for specific applications and may contain a variety of unique Powder tailored to requirements</p> <ul style="list-style-type: none"> <li>• Boron Carbide (B<sub>4</sub>C): Used in fluxes for high-performance alloys and specialised welding applications for its hardness and wear resistance</li> <li>• Rare Earth Oxides: These might be used in high-performance fluxes to enhance specific properties such as high-temperature stability or corrosion resistance</li> </ul>

Source: *Crisil Intelligence*

## Overview of metal and ferro alloy Powder used as raw material for welding consumables

Metal and ferro alloy Powder play a critical role in enhancing the performance and quality of various welding processes in the welding consumables industry. These Powder are integral components in several products, including electrodes, wires and fluxes, each serving a unique purpose in welding applications.

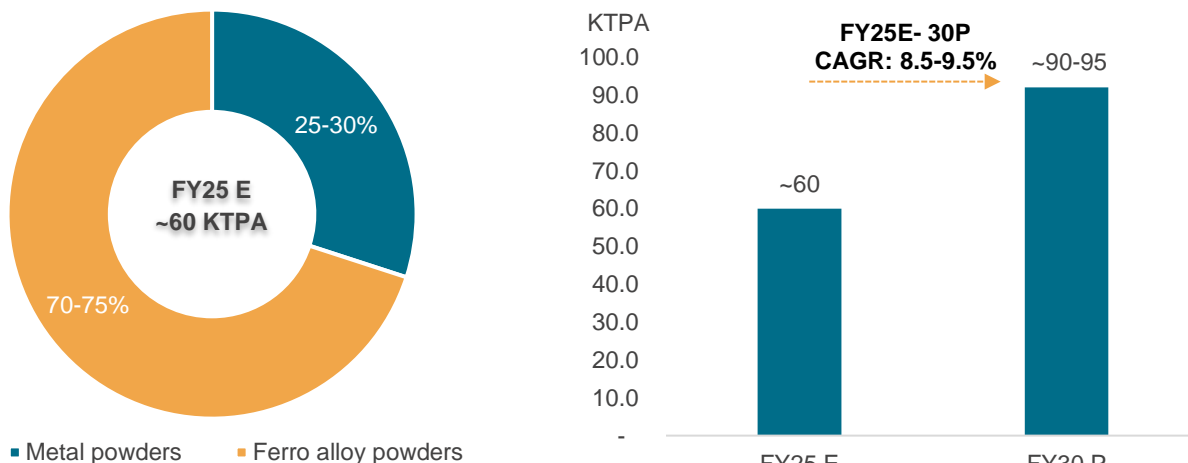
**Demand of metal and ferro alloy Powder by welding consumable types in fiscal 2025**



Source: Crisil Intelligence

- Electrodes:** The flux coating on the electrode stick is composed of metal and ferro alloy Powder that serve multiple functions. These Powder not only aid in stabilising the arc during welding but also protect the molten weld pool from atmospheric contamination. The demand for metal and ferro alloy Powder used for the flux coating in electrodes stood at ~34 KTPA in fiscal 2025. Common ferro alloys included ferromanganese and ferrosilicon Powder.
- Welding wires:** Filler wires, such as flux-cored wires, contain a core filled with these Powder, allowing for a self-shielding effect that eliminates the need for external shielding gases. In fiscal 2025, almost 6 KTPA of demand for metal and ferro alloy Powder was generated to manufacture such flux cored wires.
- SAW fluxes:** Metal and ferro alloy Powder are directly used in the SAW process. They offer several benefits such as additional heat during welding operations and improved quality of high strength welds. Fluxes are crucial in processes such as SAW and FCAW. The manufacturing of SAW fluxes generated a direct demand of ~19 KTPA of metal and ferro alloy Powder in fiscal 2025.

**Overall share of metal and ferro alloy Powder used in India's welding consumables industry in fiscal 2025**



E: Estimated; P: Projected

Source: Crisil Intelligence

Of the total demand for Powder, ferro alloy is estimated to account for the largest share at ~70-75% (~42-45 KTPA). Pure metal Powder, such as nickel, magnesium and chromium, constituted the remaining 25-30% (~15-18 KTPA).

Under the pure metal powder category, nickel powder is the most extensively used, whereas under the ferro alloy powder category, ferro manganese powder is the most commonly used in the welding consumables industry, with a share of ~20%. Other common types of ferro alloy Powder include ferro chromium Powder, which is mostly used for hard surfacing.

In fiscal 2025, the demand for metal and ferro alloy Powder stood at 60 KTPA. This demand is expected to increase at a CAGR of 8.5-9.5% over fiscals 2025-2030 to reach 90-95 KTPA. Demand for such Powder is directly linked to that of the overall welding consumables – electrodes and SAW fluxes.

During fiscal 2025 Premier Industrial Corporation Ltd. contributed ~8% (~4.9 KTPA) of the overall domestic demand for metal and ferro alloy powder generated in the welding raw material & consumables industry.

**Some of the major category of Metal and ferro alloy Powder which are additives to flux coatings/fillers along their respective properties are as below:**

Powder type	Description
<b>Metal Powder</b>	
Nickel	Used to enhance corrosion resistance and improve the toughness of welding alloys in high-performance applications
Chromium	Serves as an alloying agent to increase hardness and oxidation resistance in stainless steel welds
Manganese	Effective deoxidizers and de sulphurizer of weld pool, imparts strength & adds toughness to the weld
Tungsten	Utilised in producing tungsten electrodes for TIG welding, providing high-temperature stability and a clean arc
Iron	Commonly used in flux-cored wires to improve weld metal properties, reduce porosity and improves deposition efficiency of welding consumables
<b>Ferro alloy Powder</b>	
Medium carbon ferro manganese	Enhances the strength and wear resistance of steel welds while deoxidising the weld pool, it provides the same action as manganese but at a lower cost
Medium carbon ferro chrome	At a lower concentration level, it Improves hardness and strengthens the weld metal whereas at a high concentration level, it improves corrosion resistance in weld metals
Ferro silicon	Plays several crucial roles in welding electrodes, including deoxidization, alloying, controlled cooling, fluxing, and arc stability, all of which contribute to the quality and performance of the welded joints. It improves the fluidity of weld metals and ensures refurbishment of weld microstructure
Ferro silicon manganese	Helps in improving toughness and reducing carbon content in steel welds, gives a combined type of effect of manganese and silicon but at a lower cost
Ferro tungsten	Used to produce high-performance welding electrodes to improve their performance in terms of arc stability, heat and corrosion resistance. Because of its high melting point, ferrotungsten is a robust alloy with applications in aerospace and making of tungsten-containing steel

Source: Ka Premier Industrial Corporation Ltd., Crisil Intelligence

Ferro Alloy & Metal industry also deals in various mineral and chemical Powder used in welding raw material consumables, such as:

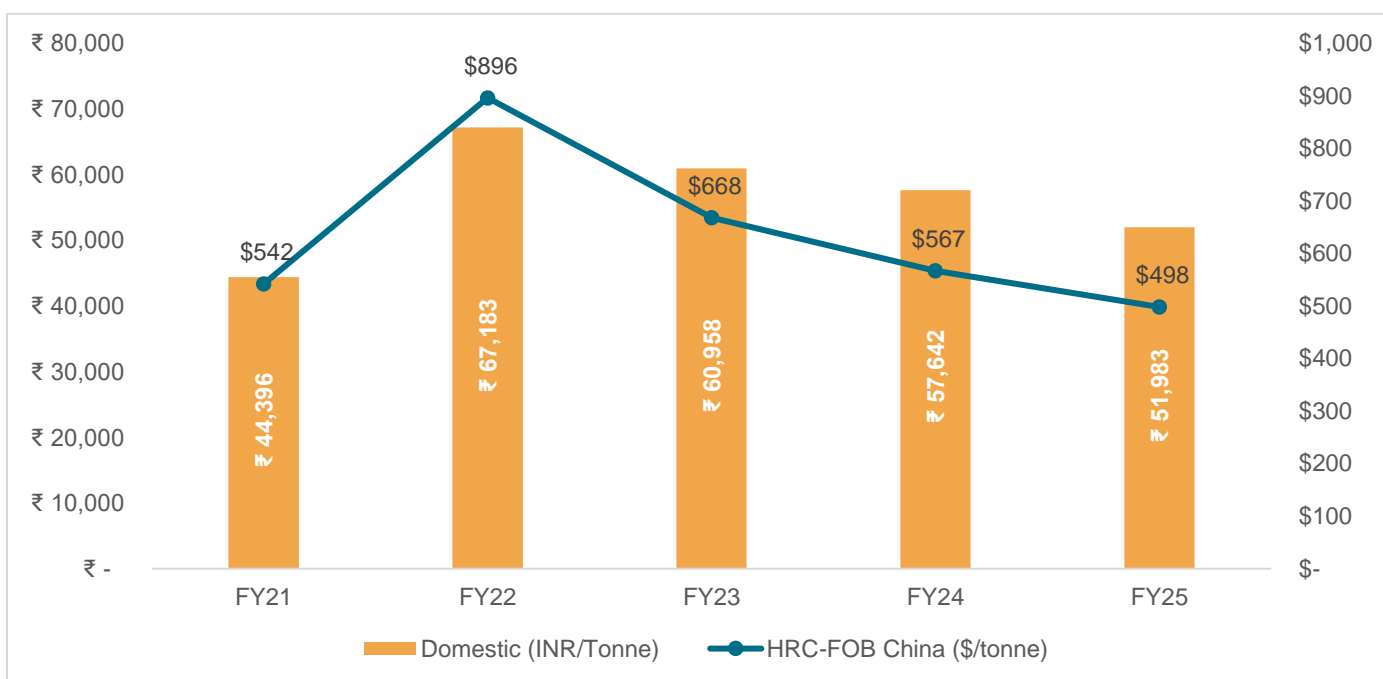
Powder type	Description
<b>Chemical Powder</b>	

Powder type	Description
Potassium titanate	Used as a fluxing agent to improve arc stability of the weld pool in various welding processes and forms the slag for weld pool protection
Boron carbide	Act as a hardening agent to improve weld metal microstructure for superior wear resistance
Graphite	Acts as a lubricant for flux emissions and for carbon input to weld metal, improving arc stability and reducing spatter
Cellulose	Used as a filler in fluxes and for generating shielding gas to protect the weld pool
Barium carbonate	Provides protection to weld pool via shielding gas formation and formation of slag cover over the weld metal, which helps to protect the weld from contamination
Mineral Powder	
Fluorspar	Act as a major fluxing agent for basic coated electrodes, providing the fluidity to slag cover of the weld pool
Rutile sand (natural calcined)	Acts as a key arc stabilizer and slag former for rutile based welding electrodes
Mica	It is an arc stabiliser and slag former used as a dielectric insulator in electrodes and as a filler in flux coating, improving thermal stability and reduce spatter
Dead burnt magnesite	Used as a fluxing agent to enhance slag formation, improve arc stability and protect weld from oxidation and contamination

Source: Premier Industrial Corporation Ltd., Crisil Intelligence

## Raw material price review

### HRC price trend (Domestic & Global)



Note: Domestic prices are pan-India average selling prices (excluding duties)

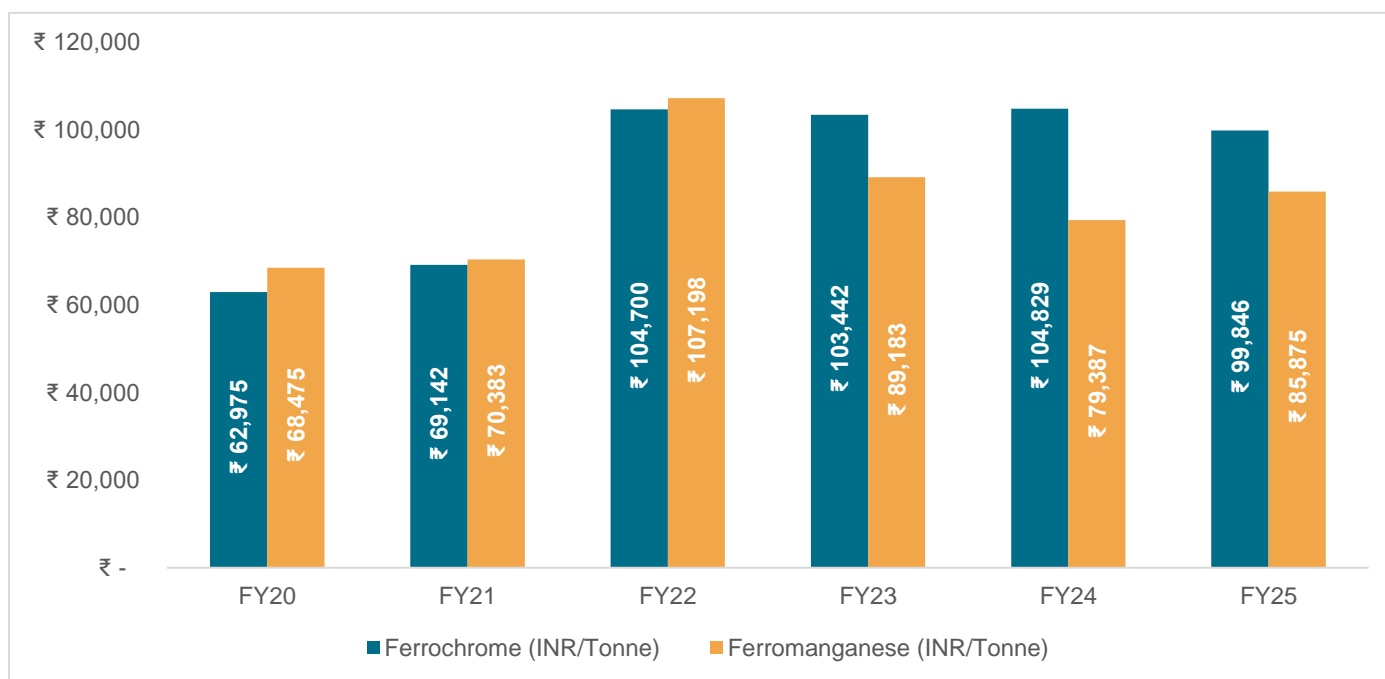
Source: Crisil Intelligence, Industry

In 2014 the Indian steel market experienced a decline in demand, leading to a surplus in supply, which prompted domestic steel producers to reduce prices. As a result, the cost of Hot Rolled Coil (HRC), a benchmark steel product, decreased to approximately Rs 36,000 per tonne, down from Rs 38,000 per tonne as of September last year.

In fiscal 2025, the flat steel sector witnessed a correction in prices, driven by cheaper imports and a competitive global market. Prices declined by 10% year-over-year, with the average price of flat steel standing at Rs 51,983 per tonne. Globally, prices also corrected by approximately 12% year-over-year, averaging around \$498 per tonne. Although potential production cuts in China may provide some support, weak steel demand is likely to maintain downward pressure on global prices.

However, the Indian government's imposition of a safeguard duty is expected to provide a cushion for domestic prices. Looking ahead to fiscal 2026, HRC prices are anticipated to increase by 2.5-4.5%, following a 10% decline in fiscal 2025. This upward trend is expected to be driven by the recent announcement of a 12% provisional safeguard duty on certain non-alloy and alloy flat steel products, which will help mitigate the impact of cheaper imports and support domestic prices. Overall, the Indian steel industry is poised for a moderate recovery in fiscal 2026, driven by government support and a potential uptick in demand.

### Domestic Ferroalloy Price Trend



Source: Crisil Intelligence, Industry

The manganese alloy market experienced a decline in prices during the first half of FY24, primarily driven by the weakness and volatility in global carbon steel markets. The average alloy price for H1FY24 stood at Rs 82,525 per tonne, representing a 10.4% year-over-year decrease, largely attributed to the high base prices in FY23.

In the second half of FY24, the market witnessed a mixed trend, with prices dropping during October-November 2023 due to subdued demand for specialty steel. However, prices rebounded during December 2023-February 2024, driven by supply constraints. The average price for H2FY24 was Rs 79,837 per tonne, marking an 11% decline, in line with global price trends. The global price correction can be attributed to the sluggish carbon steel market.

The ferrochrome market exhibited mixed trends in FY24, largely influenced by its dependence on export markets, which account for 50-55% of India's alloy production. During H1FY24, chrome alloy prices declined sequentially due to weak export demand and lower input costs, particularly coking coal. However, prices began to rise from May 2023 to September 2023, driven by improvements in Chinese chrome alloy prices and increased export demand.

In H2FY24, ferrochrome prices followed a downward trajectory during October-November 2023, primarily due to weak Chinese market prices and reduced demand in the Indian stainless steel sector. Nevertheless, prices started to increase again during December 2023-February 2024, driven by rising chrome ore costs and healthy demand for stainless steel, amidst limited supply due to production cuts by some players. The average cost for H2FY24 stood at Rs 104,829 per tonne, representing a 1.3% year-over-year increase. The rise in prices was partially mitigated by the decline in power and coking coal costs. Overall, the ferrochrome market demonstrated resilience, driven by the interplay of global demand, supply dynamics, and input costs.

### Impact of US Tariffs

The U.S. Commerce Department on Sept 24th announced that it has opened a new national security investigations into the import of personal protective equipment, medical items, robotics and industrial machinery. The robotics probe includes machine tools for cutting, welding, and handling workpieces, autoclaves and industrial ovens. Laser and water-cutting tools and machinery are also included. When tariffs are imposed on imported metals such as steel and aluminum—two key materials used in welding—the immediate effect is a rise in material prices. In addition to raising material costs, tariffs can disrupt global supply chains. Many welding companies operate in a tightly connected international network, sourcing materials or components from abroad while exporting finished goods. While currently tariffs are not directly affecting consumables it is a key monitorable.

## Overview of shielding gases

Shielding gases are used in various welding processes to protect the weld pool from atmospheric contamination, which can cause defects such as porosity, oxidation and weld bead irregularities. The choice of shielding gas can significantly affect the weld's quality, appearance and mechanical properties.

The types of shielding gas used in the welding industry are:

Type and share (%)	Applications
<b>Argon (40-50%)</b>	<ul style="list-style-type: none"> <li>• Metal inert gas (MIG) welding</li> <li>• Tungsten inert gas (TIG) welding</li> <li>• Aluminium, stainless steel and non-ferrous metals</li> </ul>
<b>Carbon dioxide (CO<sub>2</sub>) (30-40%)</b>	<ul style="list-style-type: none"> <li>• MIG welding (especially for steel and low-alloy steels)</li> <li>• Heavy equipment and structural steel welding</li> </ul>
<b>Argon-CO<sub>2</sub> mixtures (10-15%)</b>	<ul style="list-style-type: none"> <li>• MIG welding of steel, stainless steel and aluminium</li> </ul>
<b>Argon-oxygen mixtures*</b>	<ul style="list-style-type: none"> <li>• MIG welding of stainless steel</li> </ul>
<b>Helium (5-10%)</b>	<ul style="list-style-type: none"> <li>• TIG welding of aluminium, stainless steel and high-strength alloys</li> <li>• MIG welding for higher deposition rates</li> </ul>
<b>Hydrogen*</b>	<ul style="list-style-type: none"> <li>• MIG welding of high-strength low-alloy steels and stainless steels</li> <li>• GTAW of reactive metals</li> </ul>
<b>Nitrogen*</b>	<ul style="list-style-type: none"> <li>• Stainless steel welding, particularly in some controlled environments</li> </ul>

*Note: Other gases, including argon-oxygen mixtures, hydrogen and nitrogen account for ~5-10%*

*Source: Crisil Intelligence*

Shielding gases account for less than 5% share (<25 KTPA) in the welding consumables market. The usage of shielding gases in the welding process is relatively new, compared with traditional welding consumables such as electrodes and wires. However, the role of shielding gases cannot be downplayed. The choice of shielding gas can have a significant impact on the overall cost of a welding operation, extending beyond just protecting the weld. It can influence labour costs as the amount of spatter generated impacts the time spent on post-weld cleaning. Furthermore, the shielding gas used can impact the efficiency of the filler metal, with optimal gas selection enabling welders to achieve the desired weld width and depth while minimising the risk of burn-through. Additionally, the right shielding gas can also play a crucial role in maintaining weld aesthetics, particularly when working with sensitive material, such as stainless steel, by preventing discolouration.

## Company profile: Premier Industrial Corporation Ltd.

PICL has been incorporated in the year 2007 pursuant to conversion of partnership firm M/s. Premier Industrial Corporation (Partnership firm) . PICL is engaged in the business of manufacturing of specialized ferro alloys, metals, and welding raw material consumables. PICL operates out of five manufacturing facilities, of which four are located in Maharashtra and one in Tamil Nadu. PICL operates both, in domestic and international markets.

### Competition benchmarking

#### Operational benchmarking

The table below presents a comparison between PICL and its peers, which manufactures and provide a comparable product mix for the purpose of operational benchmarking.

#### Company-wise product mix and capacities

SN.	Company Name	Product mix			Capacity (MT)	Production (MT)
		Powder	Wires	Electrodes		
1	JLC Electromet Pvt. Ltd.				2,765	NA
2	Ador Welding Ltd				1,07,800	NA
3	Team Ferro Alloys				12,000	12,000
4	Diffusion Engineers Ltd.				2,220	1,533
5	Jamshedpur Cholorochem Pvt Ltd.				3,600	NA
6	MW Wiretec Pvt. Ltd.				4,800	NA
7	Indiano Chrome Pvt. Ltd.				12,000	NA
8	Jayesh Industries Ltd.				NA	NA
9	Esab India Ltd				NA	NA
10	Premier Industrial Corporation Ltd.				27,897	13,058

Note: Capacity and production figures are taken as per latest available data on company websites/public domains

Players like Ador and Esab also manufactures a large variety of welding equipment and provides welding services as well

NA: Not available

Source: Industry, Crisil Intelligence

PICL is among the few players who operates in both powder as well as wires categories of welding raw material consumables industry.

Below tables represent the product portfolio of all the peers and categories of Powder and wires they are catering to.

SN	Company Name	Powder			
		Metal	Ferro Alloy	Chemicals	Minerals
1	JLC Electromet		Nickel chrome iron alloys, copper nickel low resistance alloys, copper magnesium nickel alloys		

SN	Company Name	Powder			
		Metal	Ferro Alloy	Chemicals	Minerals
2	Ador Welding Ltd	Saw Fluxes, Strip Cladding Flux, Brazing Fluxes			
3	Team Ferro		Ferro Manganese, ferro titanium, ferro chrome, ferro vanadium, Molybdenum, Silico Manganese,		
4	Diffusion Engineers		Ferro chrome, ferro silicon, ferro molybdenum etc used for manufacturing flux cored wires		
5	Jamshedpur Cholorochem		Low Carbon ferro chrome, ferro chrome silica		
6	MW Wiretec	Saw Fluxes			
7	Indiano Chrome		Ferro chrome, ferro Aluminium, titanium chromium, ferro chrome nitrogen, ferro chrome phosphorous		
8	Jayesh Industries	Nickel, Chromium, Manganese, Tungsten Carbide, Iron, Aluminium, Molybdenum, Cobalt, Silicon, Copper	Ferro chrome, ferro silicon, ferro molybdenum, ferro tungsten, ferro titanium, Carbon ferro chrome	Titanium di oxide, potassium titanate, boron, graphite, cellulose, barium carbonate, potassium cryolite	Rutile, Mica, Potash feldspar
9	Esab India Ltd	Saw Flux			
10	PICL	Nickel, Chromium, Manganese, Tungsten Carbide, Iron, Aluminium, Molybdenum, Cobalt, Silicon, Copper	Carbon ferro manganese, Carbon ferro chrome, Carbon ferro chrome nitrogen, ferro silicon, ferro molybdenum, ferro tungsten, ferro titanium	Titanium di oxide, potassium titanate, boron, graphite, cellulose, barium carbonate, potassium cryolite	Fluorspar, Rutile, Calcite, Mica, Potash feldspar, dead burnt magnesite

*Note: The above list is non-exhaustive and includes only major products offerings, Players like Ador and Esab also manufactures a large variety of welding equipment and provides welding services as well*

*Source: Industry, Crisil Intelligence*

SN	Company Name	Wires		Others
		Nickel Based	Low and non-alloy	
1	JLC Electromet	Nickel, nickel manganese, nickel copper	Nickel iron- borated and oxidized, nickel-iron clad wires, nickel chromium, nickel chrome silica manganese etc	Thermal sprays, Thermocouple alloys,

SN	Company Name	Wires		Others
		Nickel Based	Low and non-alloy	
2	Ador Welding Ltd	Nickel alloys	C-Mn steel, Stainless steel, Copper alloys, Duplex Stainless steel, Cobalt alloy, Aluminium alloys, Low alloy steel	Electrodes of C-Mn Steel, Cellulosic, Low Alloy Steel, Stainless Steel, Cast Iron, Nickle and Nickle Alloy, and Welding equipment's etc
3	Team Ferro			
4	Diffusion Engineers		High carbon and chrome, Chromium molybdenum, carbon chromium boron and niobium wire, chromium nickel stainless steel used for manufacturing flux cored wires	Electrodes of steel, carbon steel, manganese, vanadium etc.; Thermal spray Powder, wear plates, Welding equipment's etc.
5	Jamshedpur Cholorochem			
6	MW Wiretec		Alloy steel	Aluminium, Stainless steel, mild steel, flux cored
7	Indiano Chrome			
8	Jayesh Industries			Steel strips for flux cored wires
9	Esab India Ltd	Nickle alloy	Aluminium, Copper, Nickle alloy, Stainless steel, etc	Electrode of Nickle, Nickle Chromium, and Welding equipment's etc
10	PICL	Nickel wires, ferro nickel wires, nickel copper wires	High carbon and chrome, Chromium molybdenum, carbon chromium boron and niobium wire, chromium nickel stainless steel used for manufacturing flux cored wires	Stainless Steel wires

Note: The above list is non-exhaustive and includes only major products offerings, Players like Ador and Esab also manufactures a large variety of welding equipment and provides welding services as well

Source: Industry, Crisil Intelligence

PICL offers the widest range of metal and ferro alloy Powder as well as chemical and minerals-based Powder when compared with the product portfolio of its peers.

### Year wise Employee Attrition Rate (in %)

Industry Average	FY23	FY24	FY25
Permanent Employee	15%	13%	14%
Permanent Worker	5%	6%	4%

Note: Attrition rates have been calculated by taking an average of year wise attrition rates of Ador's and Esab's as mentioned in their annual reports

Source: Company financials, Crisil Intelligence

Industry attrition for welding consumables shows moderate variation across years. Permanent employee attrition has stayed in the 13–15% range, indicating a stable but competitive labour market. Permanent worker attrition remains low at 4–6%, suggesting stronger retention among shopfloor and operational staff.

## Financial benchmarking

To benchmark the performance of PICL against its competitors, we have compared the profitability, liquidity and leverage across the peer set. The peer set includes companies with operational capabilities in the comparable range of PICL along with similar product offerings.

Peer set companies included for financial benchmarking are- JLC Electromet Pvt. Ltd., Team Ferro Alloys, Diffusion Engineers Ltd., Jamshedpur Chlorochem Pvt. Ltd., MW Wiretec Pvt. Ltd., Indiano Chrome Pvt. Ltd., Jayesh Industries Ltd., Ador Welding Ltd, and Esab India Ltd.

### Comparison of revenues (in Rs Mn)

Year	FY23	FY24	FY25
<b>PICL</b>	3707.5	3396.9	4765.3
<b>Diffusion Engineers Ltd</b>	2,417.2	2,571.3	3,139.6
<b>Indiano Chrome Pvt Ltd</b>	1,817.9	1,542.9	-
<b>Jamshedpur Chlorochem</b>	1,118.9	1,111.3	-
<b>Jayesh Industries Ltd</b>	905.1	1,047.8	-
<b>Jlc Electromet Pvt Ltd</b>	5,984.6	6,133.2	-
<b>MW Wiretec Pvt Ltd</b>	1,046.2	1,176.5	-
<b>Team Ferro-Alloys</b>	5,686.8	7,093.0	-
<b>Ador Welding Ltd</b>	7,711.5	8,787.2	11,120.2
<b>Esab India Ltd</b>	10,855.1	12,387.8	13,664.6

*Note: Fiscal 2025 data is only available for PICL and Diffusion Engineers and is not reflected for other companies.*

*Source: Company financials, Crisil Intelligence*

Over fiscals 2020-2025, PICL is one of the fastest growing players in the welding raw material consumables industry with a revenues compounded annual growth rate (CAGR) of 20%, outpacing its peers like Diffusion Engineers, which had a CAGR of 16%. This strong growth trajectory is evident in PICL's revenue, which rose from Rs 1,877.5 million in fiscal 2020 to Rs 3,394.9 million in fiscal 2024 and Rs 4,766.9 million in fiscal 2025. Notably, PICL's revenue was comparable to the peers' average CAGR between fiscal 2023 and 2025 while peers grew at 15.4% PICL had a revenue growth of 13.4%.

Among its peers, Ador Welding Ltd and Esab India Ltd have demonstrated impressive revenue growth, with CAGRs of 20.1% and 12.2%, respectively, from fiscal 2023 to fiscal 2024. These companies have consistently reported strong revenue growth, driven by their diversified product portfolios and robust market presence.

### Comparison of EBITDA (in Rs Mn.)

Year	FY23	FY24	FY25
<b>PICL</b>	323.2	499.8	800.6
<b>Diffusion Engineers Ltd</b>	260	315	428

Indiano Chrome Pvt Ltd	240	172	-
Jamshedpur Chlorochem	159	59	-
Jayesh Industries Ltd	123	107	-
Jlc Electromet Pvt Ltd	1268	857	-
MW Wiretec Pvt Ltd	48	50	-
Team Ferro-Alloys	250	281	-
Ador Welding Ltd	920.7	970.3	1,126.6
Esab India Ltd	1,877.9	2,306.5	2,486.9

Note: Fiscal 2025 data is only available for PICL and Diffusion Engineers and is not reflected for other companies.

Source: Company financials, Crisil Intelligence

PICL's EBITDA CAGR of 31.4% from FY20 to FY25 outpaces the average peer group CAGR of 18.0% and 19.4%. Notably, PICL's CAGR from FY23 to FY25 stands at 57.4%, significantly higher than the peer average. In comparison to individual peers, PICL's growth rate surpasses that of Diffusion Engineers Ltd, Ador Welding Ltd, and Esab India Ltd.

### Comparison of PAT (in Rs Mn.)

Year	FY23	FY24	FY25
PICL	126.7	335.7	512.3
Diffusion Engineers Ltd	168.2	234.0	337.5
Indiano Chrome Pvt Ltd	181.8	121.2	-
Jamshedpur Chlorochem	113.2	40.0	-
Jayesh Industries Ltd	72.4	59.9	-
Jlc Electromet Pvt Ltd	892.3	577.2	-
MW Wiretec Pvt Ltd	24.3	24.6	-
Team Ferro-Alloys	123.1	144.9	-
Ador Welding Ltd	592.9	631.9	434.6
Esab India Ltd	1,356.8	1,629.8	1,754.2

Note: The peer set do not include financials Team Ferro-alloys Pvt. Ltd. for fiscal 2024 due to unavailability of data.

Source: Company financials, Crisil Intelligence

PICL's PAT CAGR of 32.6% from FY20 to FY25 exceeds the average peer group CAGR of 13.7% and 19.6%. Notably, PICL's CAGR from FY23 to FY25 stands at 101.1%, significantly higher than the peer average. In comparison to individual peers, PICL's growth rate surpasses that of Diffusion Engineers Ltd, Ador Welding Ltd, and Esab India Ltd. PICL's PAT growth trajectory is among the highest in the peer group, with only a few companies, such as Diffusion Engineers Ltd, demonstrating comparable growth rates. PICL's is one of the fastest growing players in the welding consumables with a profit after tax (PAT) has consistently outperformed its peers, with a significant increase from Rs 125.0 million in fiscal 2020 to Rs 334.2 million in fiscal 2024 and Rs 512.3 million in fiscal 2025.

## Profitability parameters

### Comparison of operating profit margin (in %)

Year	FY23	FY24	FY25
------	------	------	------

<b>PICL</b>	8.7	14.7	16.8
<b>Peer set</b>	13.2	12.4	14.7

Peer set - JLC Electromet Pvt. Ltd., Team Ferro Alloys, Diffusion Engineers Ltd., Jamshedpur Chlorochem Pvt. Ltd., MW Wiretec Pvt. Ltd., Indiano Chrome Pvt. Ltd., Jayesh Industries Ltd., Ador Welding Ltd, and Esab India Ltd.

Note: For fiscal 2025 only fiscal data for Diffusion Engineers is available

Source: Company financials, Crisil Intelligence

PICL's Operating Profit Margin (OPM) has shown a steady increase from 8.7% in FY23 to 16.8% in FY25. In comparison, the peer set's OPM has remained relatively stable, with a slight decline from 13.2% in FY23 to 12.4% in FY24, before increasing to 14.7% in FY25. Notably, PICL's OPM in FY25 is higher than the peer set average, indicating the company's ability to maintain its pricing power and control costs. Overall, PICL's improving OPM trend is a positive indicator of its operational performance.

### Comparison of net profit margin (in %)

Year	FY23	FY24	FY25
<b>PICL</b>	3.4	9.9	10.7
<b>Peer set</b>	8.8	8.4	9.2

Peer set - JLC Electromet Pvt. Ltd., Team Ferro Alloys, Diffusion Engineers Ltd., Jamshedpur Chlorochem Pvt. Ltd., MW Wiretec Pvt. Ltd., Indiano Chrome Pvt. Ltd., Jayesh Industries Ltd., Ador Welding Ltd, and Esab India Ltd.

Note: For fiscal 2025 only fiscal data for Diffusion Engineers is available

Source: Company financials, Crisil Intelligence

PICL's Net Profit Margin (NPM) has shown a significant increase from 3.4% in FY23 to 10.7% in FY25. In contrast, the peer set's NPM has remained relatively stable, ranging from 8.4% to 9.2% over the same period. Notably, PICL's NPM in FY25 is comparable to the peer set average, indicating the company's improving ability to convert operating profits into net profits. However, it is worth noting that PICL's NPM was lower than the peer set average in FY23, suggesting that the company has made significant progress in improving its profitability. Overall, PICL's increasing NPM trend is a positive indicator of its improving profitability and financial performance.

### Comparison of return on capital employed (in times)

Year	FY23	FY24	FY25
<b>PICL</b>	14.4	20.9	25.8
<b>Peer set</b>	31.9	28.2	27.3

Peer set - JLC Electromet Pvt. Ltd., Team Ferro Alloys, Diffusion Engineers Ltd., Jamshedpur Chlorochem Pvt. Ltd., MW Wiretec Pvt. Ltd., Indiano Chrome Pvt. Ltd., Jayesh Industries Ltd., Ador Welding Ltd, and Esab India Ltd.

Note: For fiscal 2025 only fiscal data for Diffusion Engineers is available

Source: Company financials, Crisil Intelligence

PICL's Return on Capital Employed (ROCE) has shown a steady increase from 14.4% in FY23 to 25.8% in FY25. However, the company's ROCE remains lower than the peer set average, which has ranged from 27.3% to 31.9% over the same period. The peer set's ROCE has declined slightly, from 31.9% in FY23 to 27.3% in FY25. Despite the increase, PICL's ROCE trails the peer set average, indicating that the company may have opportunities to improve its capital efficiency and asset utilization. Overall, while PICL's increasing ROCE trend is a positive indicator, the company still lags behind its peers in terms of capital efficiency and return on investment.

### Comparison of return on equity (in %)

Year	FY23	FY24	FY25
<b>PICL</b>	11.2	22.9	25.9
<b>Peer set</b>	27.6	24.2	21.3

*Peer set - JLC Electromet Pvt. Ltd., Team Ferro Alloys, Diffusion Engineers Ltd., Jamshedpur Chlorochem Pvt. Ltd., MW Wiretec Pvt. Ltd., Indiano Chrome Pvt. Ltd., Jayesh Industries Ltd., Ador Welding Ltd, and Esab India Ltd.*

*Note: For fiscal 2025 only fiscal data for Diffusion Engineers is available*

*Source: Company financials, Crisil Intelligence*

PICL's Return on Equity (ROE) has shown a significant increase from 11.2% in FY23 to 25.9% in FY25. However, the company's ROE remains lower than the peer set average, which has ranged from 21.3% to 27.6% over the same period. The peer set's ROE has declined, from 27.6% in FY23 to 21.3% in FY25. Despite the increase, PICL's ROE trails the peer set average, indicating that the company may have opportunities to improve its shareholder returns and equity utilization. It is notable that PICL's ROE has been increasing rapidly, narrowing the gap with the peer set average. Overall, while PICL's increasing ROE trend is a positive indicator, the company still lags behind its peers in terms of shareholder returns.

## Leverage parameters

### Comparison of interest coverage ratio (in times)

Year	FY23	FY24	FY25
<b>PICL</b>	4.5	6.6	9.1
<b>Peer set</b>	18.7	17.0	28.1

Peer set - JLC Electromet Pvt. Ltd., Team Ferro Alloys, Diffusion Engineers Ltd., Jamshedpur Chlorochem Pvt. Ltd., MW Wiretec Pvt. Ltd., Indiano Chrome Pvt. Ltd., Jayesh Industries Ltd., Ador Welding Ltd, and Esab India Ltd.

Note: For fiscal 2025 only fiscal data for Diffusion Engineers is available

Source: Company financials, Crisil Intelligence

PICL's interest coverage ratio has shown a steady increase from 4.5 in FY23 to 9.1 in FY25, indicating an improvement in the company's ability to meet its interest obligations. However, the company's interest coverage ratio remains significantly lower than the peer set average, which has ranged from 17.0 to 28.1 over the same period.

## About Crisil Intelligence (formerly Market Intelligence & Analytics)

Crisil Intelligence is a leading provider of research, consulting, risk solutions and advanced data analytics, serving clients across government, private and public enterprises. We leverage our expertise in data-driven insights and strong benchmarking capabilities to help clients navigate complex external ecosystems, identify opportunities and mitigate risks. By combining cutting-edge analytics, machine learning and AI capabilities with deep industry knowledge, we empower our clients to make informed decisions, drive business growth and build resilient capacities.

For more information, visit [Intelligence.Crisil.com](https://Intelligence.Crisil.com)

## About Crisil

Crisil is a global, insights-driven analytics company. Our extraordinary domain expertise and analytical rigour help clients make mission-critical decisions with confidence.

Large and highly respected firms partner with us for the most reliable opinions on risk in India, and for uncovering powerful insights and turning risks into opportunities globally. We are integral to multiplying their opportunities and success.

Headquartered in India, Crisil is majority owned by S&P Global.

Founded in 1987 as India's first credit rating agency, our expertise today extends across businesses: Crisil Ratings, Crisil Intelligence, Crisil Coalition Greenwich and Crisil Integral IQ.

Our globally diverse workforce operates in the Americas, Asia-Pacific, Europe, Australia and the Middle East, setting the standards by which industries are measured.

For more information, visit [www.Crisil.com](http://www.Crisil.com)

Connect with us: [LinkedIn](#) | [Twitter](#)

