IndianSteel ASSOCIATION

Trends & Outlook of the Indian Steel Industry

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Trends

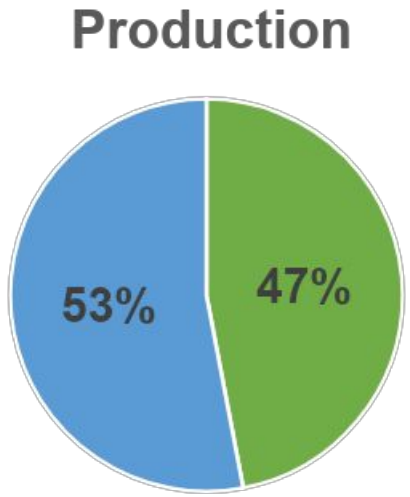
Snapshot of the Indian Iron & Steel Sector

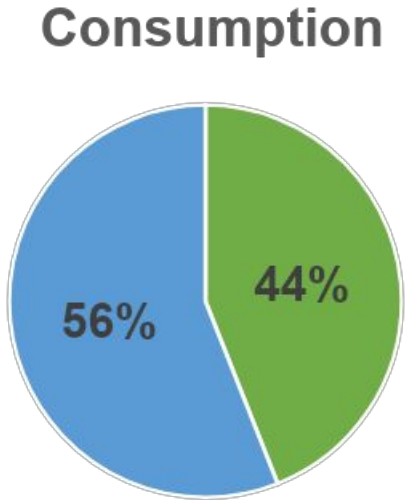
- India's Installed crude steel making capacity in 2021-22 was 154 million tons (mt).
- India is the 2nd largest producer of steel, producing 120.29 million tons of crude steel in 2021-22.
- Crude Steel Production grew at a CAGR of 4.2% in the last five years ending 2021-22.
- The share of the private sector in total production was 81%.
- Finished Steel production in 2021-22 was 113.6 mt growing at a CAGR of 4.4% in the last 5 years.
- India is also the 2nd largest consumer of steel, consuming 105.75 mt of finished steel in 2021-22.
- Consumption grew at a CAGR of 4.7% in the last five years ending 2021-22.
- India is the largest producer of Sponge Iron (DRI) & among top 3 Pig Iron producers in the world.

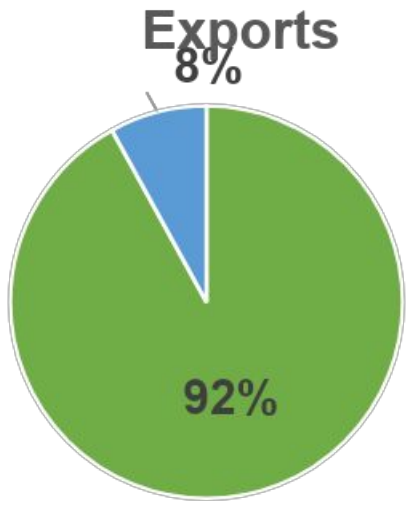
Snapshot of the Indian Iron & Steel Sector

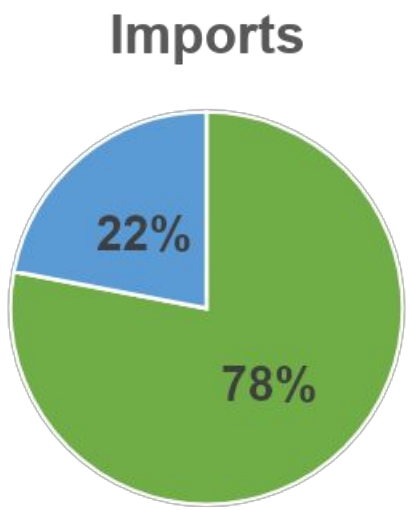
- India exported 13.5 mt of finished steel in 2021-22, Vietnam being the largest export market.
- Exports started increasing substantially only since 2018-19. In the last 5 years, exports have grown at a CAGR of 10.4%.
- India imported 4.7 mt of finished steel in 2021-22, South Korea being the largest exporter to India.
- Imports recorded a decline of 8.4% in CAGR terms during the last five years ending 2021-22.
- Volume wise, Non-alloy HR Coil/Strip is the item most exported or imported.
- India has significant iron ore reserves and also has a sizeable pellet making industry.
- However, India lacks adequate good quality coking coal, which it largely imports from Australia.

Share of Flats and Longs – 2021-22









Non Flat Products (Longs)

Flat Products

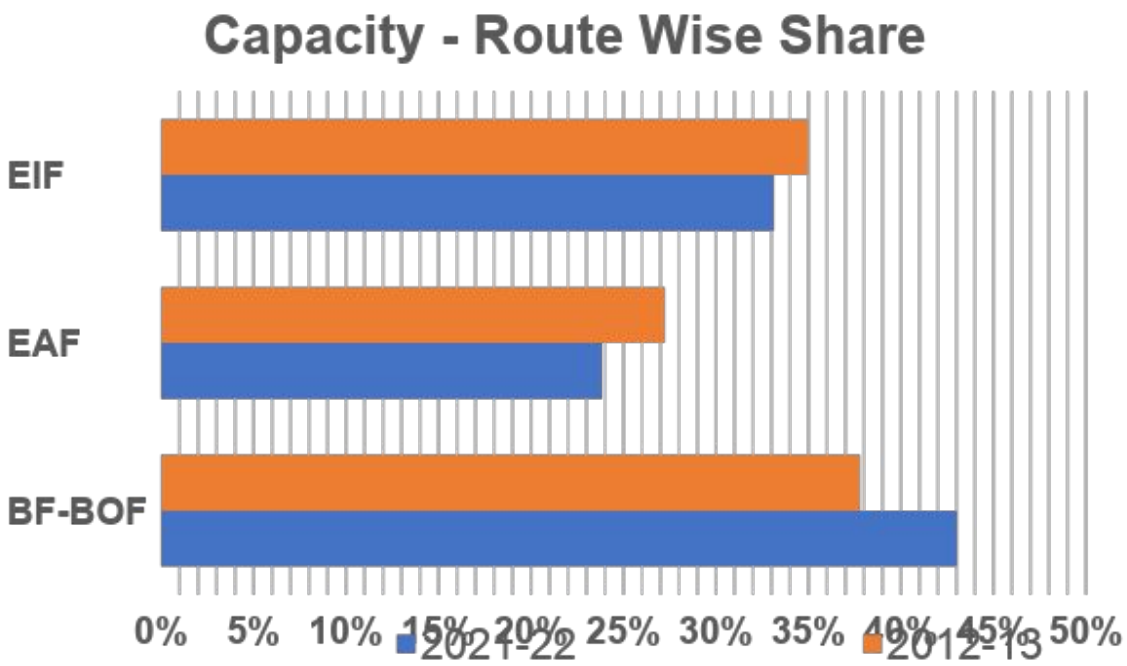
Route Wise Scenario

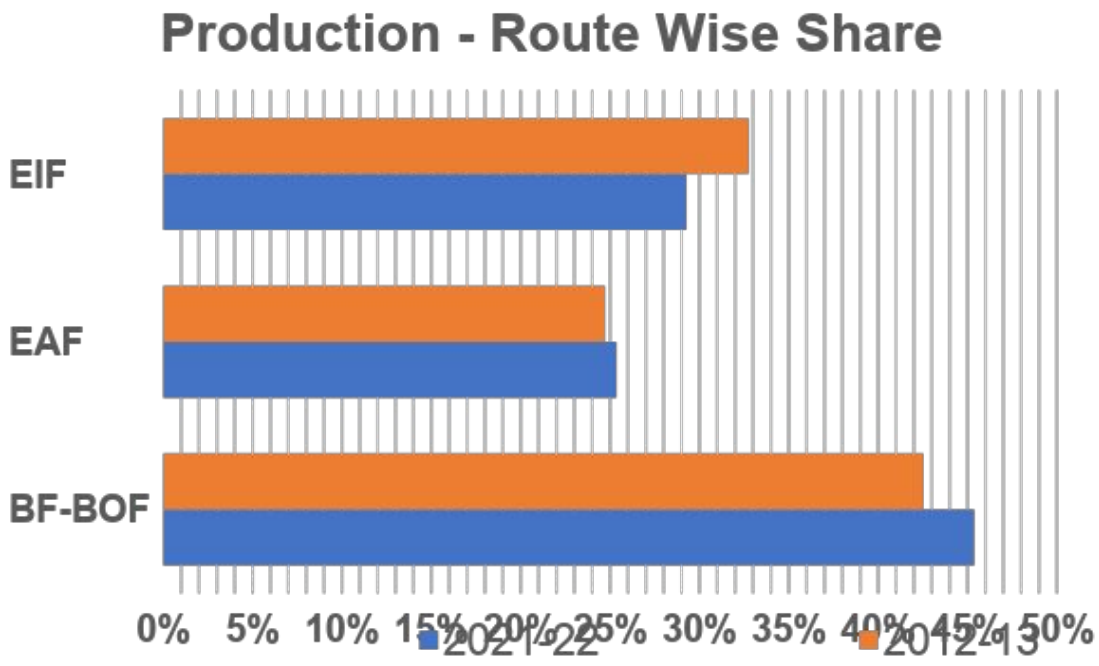
- Steel is produced in India through all 3 routes – Basic Oxygen Furnace, Electric Arc Furnace & Electric Induction Furnace.
- Large integrated steel producers have mainly adopted the BF-BOF route, using coking coal.
- The smaller producers utilize sponge iron, melted scrap & thermal coal, producing steel using the Electrical route.
- Moreover, there are more than 1,000 re-rollers spread all across the country.

As of 2021-22

Production Routes	Crude Steel Capacity (million tons)	No. of Units producing Crude Steel
Blast Furnace - Basic Oxygen Furnace	**66.295**	**18**
Electric Arc Furnace	**36.728**	**36**
Electric Induction Furnace	**51.040**	**847**

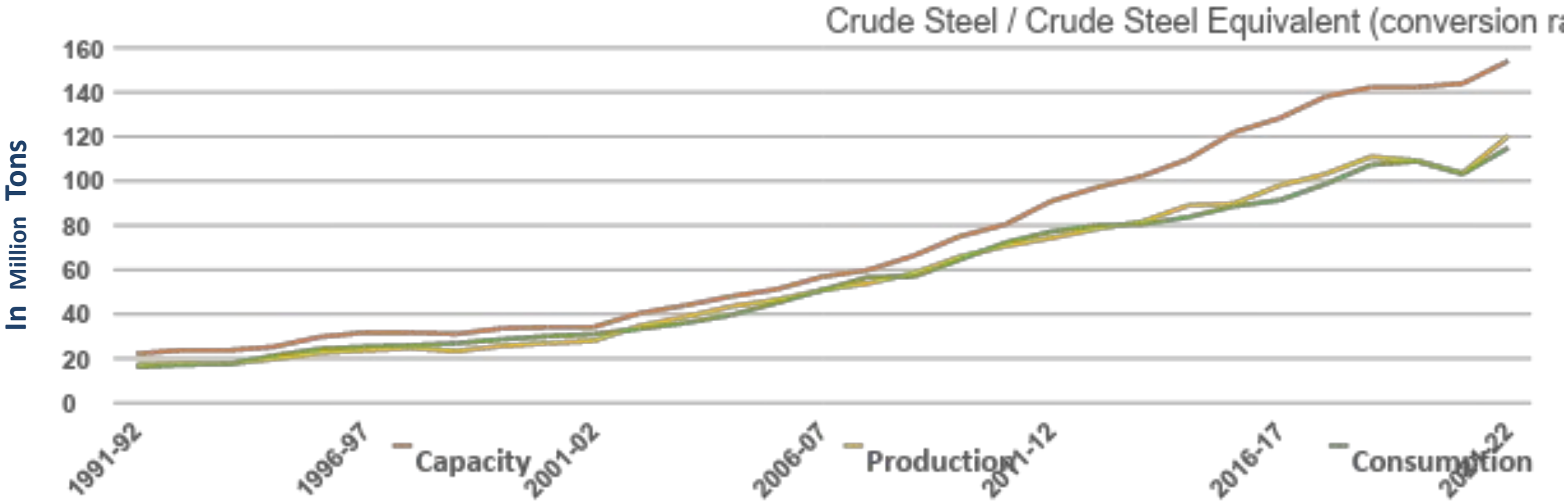
Route Wise Trends in last 10 Years





- The BF-BOF route, largely adopted by the larger Integrated Steel Producers have been the main growth driver in the last 10 years, be it capacity addition or production.
- Likewise, the current expansion plans are also mostly through the BF-BOF route.

Capacity, Production & Consumption – Last 30 Years



	Capacity Growth	Production Growth	Consumption Growth
CAGR – Last 30 Years	6.68%	6.71%	6.76%

- Capacity Addition, Production & Consumption have all grown hand in hand in the last 30 years.

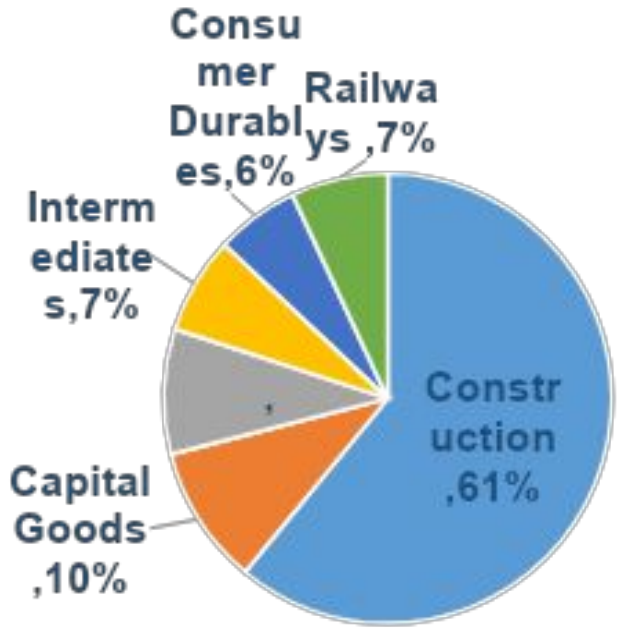
Imports and Exports - Last 15 Years

- In the first 10 years from 2006-07, India was a net importer of steel. Thereafter exports have shown a definitive increasing trend, especially in the last 3 years.
- Exports as a percentage of production have remained well below 10% & only in the last 2 years reached 11-12%. Domestic production therefore has largely catered to domestic demand.

Outlook

Identifying the Steel Using Sectors

- The outlook going forward depends on the trends in steel using sectors. SWIP (Steel Weighted Industrial Production index) methodology is used to forecast steel outlook. It is a bottoms up approach. So, the first step is to identify the key steel consuming sub-sectors. These are construction, capital goods, automobiles, consumer durables, intermediate goods and railways.



- Construction, which includes both infrastructure & real estate remain the biggest component of domestic demand at 61% of total steel demand, followed by the capital goods sector at 10% and the automotive sector at 9%.

Growth Assumptions of Steel Using Sectors and their Contribution

Sectors	Short to Medium Term	Long Term
Construction	• Higher capex to drive momentum in infrastructure spending, especially in national highways, railways, water infrastructure & affordable housing • Over 80 billion USD to be spend on urban infrastructure over the next 5 years • Urban Housing picks up momentum in medium term	• Completion of infrastructure projects & in urban housing, leads to a slowdown in the 2030s which will lead to a decline in the share by 1% in the 2030s & by 1.5% beyond that due to saturation in new projects thereafter.
Railways	• Strong capex allocation in Railways to support huge growth projections in coaches, wagons and locomotives. • Around 3.5 billion USD to be spend in railway station redevelopment program (400 stations identified)	• Localization of highspeed trains and component manufacturing in India will drive growth in next two decades
Automotive	• Passenger Vehicles to retain momentum supported by gradual improvement in semiconductor supply • Commercial Vehicles to pickup with higher spending in infrastructure and revival of mining sector	• Lower oil prices drive 2-Wheller growth • Rise in adoption of EVs beyond 2030 leads to decline in steel use & decline in the share of the Automotive sector.

Growth Assumptions of Steel Using Sectors and their Contribution

Sectors	Short to Medium Term	Long Term
Capital Goods	• Infrastructure projects to support construction equipment • Mining activity is likely to recover due to raw material supply constraints in international market which will lead to growth in mining equipment. • Renewal energy projects to boost demand for electrical equipment.	• Reduction in import dependence drives growth and raises the share of the Capital Good sector in the decade of 2030s and 2040s
Intermediaries	• Sustained demand from construction & manufacturing leads to demand for drums & barrels and fabrication. • However, any disruption in exports will limit growth in component manufacturing.	• Higher focus on Make in India will drive growth and raise the share of the Intermediaries sector in the decade of 2030s and 2040s
Consumer Durables	• Revival in private consumption in both rural & urban areas will lead to sustained growth • Production Linked Incentive (PLI) scheme will boost domestic manufacturing substituting imports. Nearly 1 billion USD committed.	• Faster urbanization and growth in urban consumption after 2025 and especially in the 2030s leads to rise in share of consumption driven steel consuming sectors.

Growth Assumptions of Steel Using Sectors and their Contribution

Steel Using Sectors	Sectoral Growth (CAGR over pervious period)			
	2021-25	2025-30	2030-40	2040-50
Construction	4.6%	5.6%	5.1%	3.2%
Railways	6.5%	7.3%	5.6%	3.4%
Automotive	7.1%	6.4%	5.2%	3.6%
Consumer Durables	7.1%	6.3%	5.2%	3.0%
Capital Goods	4.0%	5.5%	5.4%	4.5%
Intermediates	4.6%	5.6%	5.1%	3.2%
SWIP	**5.1%**	**5.9%**	**5.2%**	**3.4%**

Last decade assumed to be pessimistic due to environmental concerns resulting in lower steel intensity and growth saturation in consuming industries with economic development

Steel Using Sectors	Sectoral Share (%) in Total Domestic Demand				
	2021	2025	2030	2040	2050
Construction	61.0%	61.0%	60.0%	58.5%	57.0%
Railways	7.0%	7.0%	7.5%	7.5%	7.8%
Automotive	9.0%	9.0%	9.25%	9.00%	8.5%
Consumer Durables	6.0%	6.0%	6.3%	6.8%	7.3%
Capital Goods	10.0%	10.0%	10.0%	10.75%	11.50%
Intermediates	7.0%	7.0%	7.0%	7.50%	8.0%
Total Steel	**100%**	**100%**	**100%**	**100%**	**100%**

Steel Demand Outlook

Steel Using Sectors	ASU or Domestic Steel Demand in Million Tons			
	2025	2030	2040	2050
Construction	76	101	165	225
Railways	9	13	23	32
Automotive	12	17	28	40
Consumer Durables	8	11	19	25
Capital Goods	12	16	27	42
Intermediates	9	12	19	26
SWIP	**127**	**170**	**281**	**390**

- **Domestic Steel Demand in India is likely to peak beyond 2050.**

Steel Capacity and Production Outlook

All Figures in Million Tons

Year	2030	2050	Assumptions
Crude Steel Capacity	**250**	**500**	Capacity to increase to 250 million tons by 2030 and double thereafter in the next 20 years
Crude Steel Production	**212**	**460**	Capacity Utilization of 85% by 2030 and 92% by 2050
Finished Steel Production	**195**	**425**	Conversion Ratio of Crude Steel to Finished Steel at 0.92
Net Exports	**23**	**35**	Net Exports @ 12% by 2030 which declines to 8% by 2050
Domestic Demand	**172**	**390**	**Residual Domestic Demand Similar to Forecasted**

- **If Domestic Steel Demand is sluggish than forecasted, capacity utilization will come down.**

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