

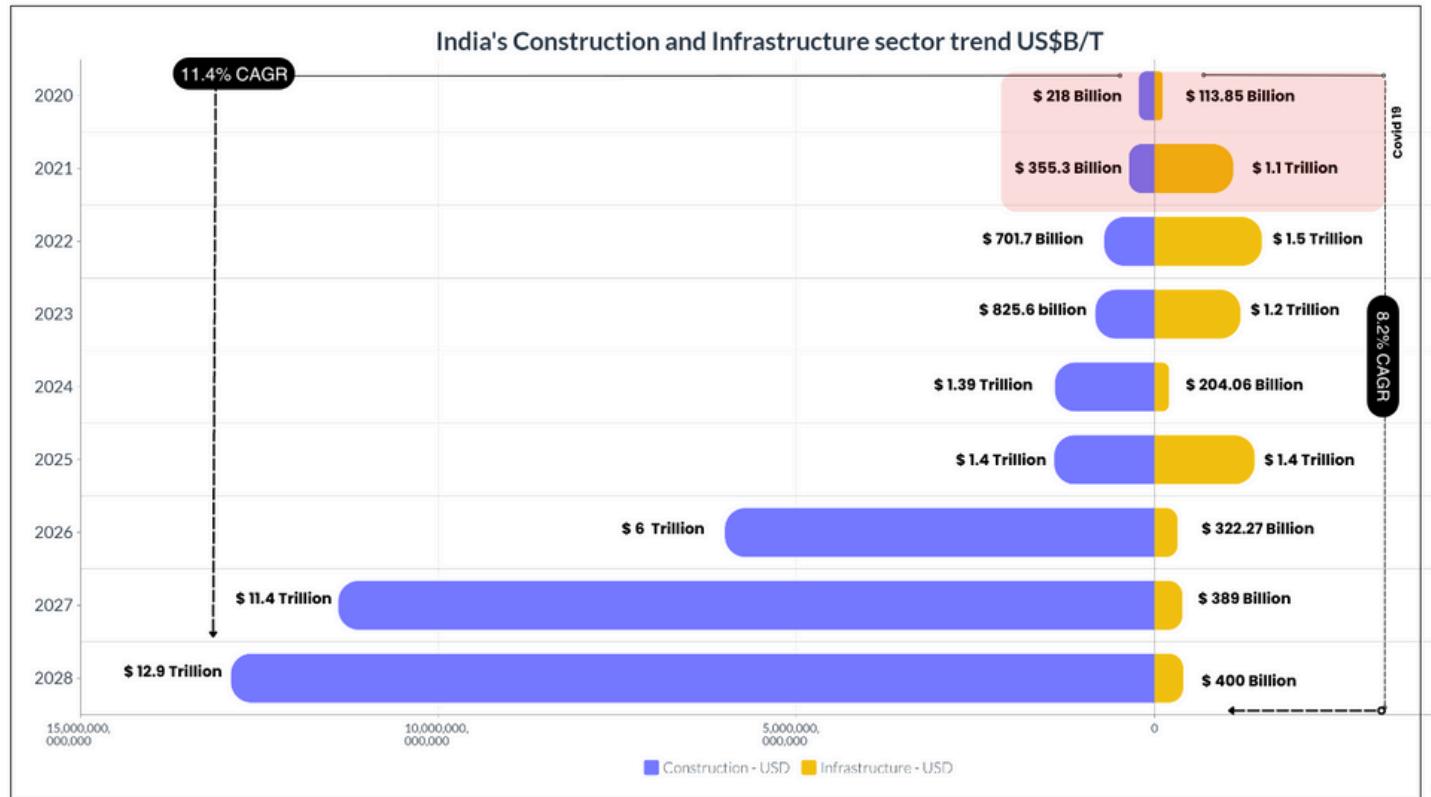
Opportunity assessment for Steel in Construction and Infrastructure.





India's Journey to Becoming the 3rd Largest Construction Market in the Next 3 Years.

The sector's contribution to India's GDP stands at approximately 8%, highlighting its significance in the country's economic landscape. Rising share of high-rise construction (even in Tier II and Tier III cities) and reduced column sizes for larger parking spaces etc. will increase steel demand, given higher intensity. Steel demand from the infrastructure sector including railways comprises of 25-30%, roads and highways, metros segment together account for 50-60% of steel demand from the infrastructure space.

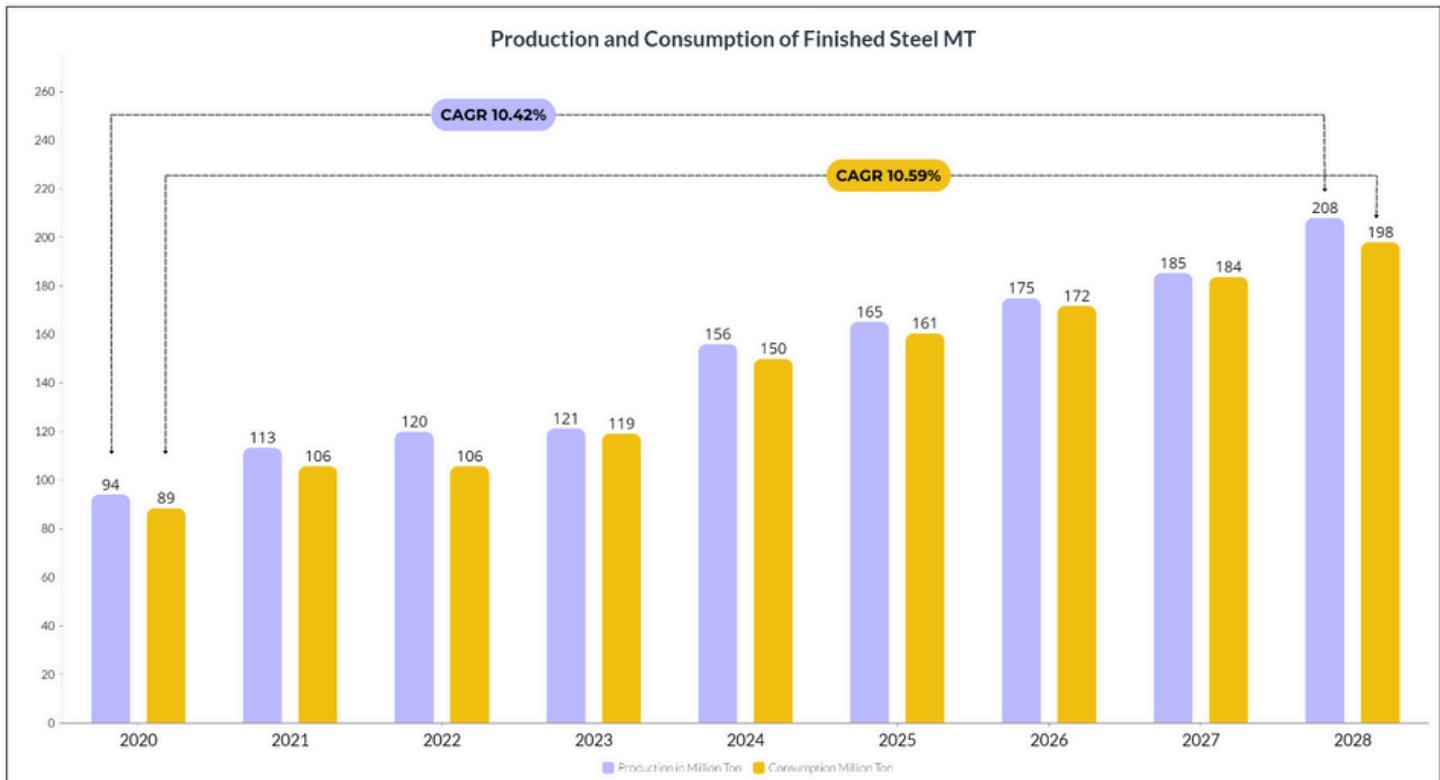




India's Steel Sector: Building the Future with Construction Boom

The sector's contribution to India's GDP stands at approximately 8%, highlighting its significance in the country's economic landscape. Moreover, the government's investments in infrastructure projects amount to billions of dollars annually, further fueling construction activity across the nation.

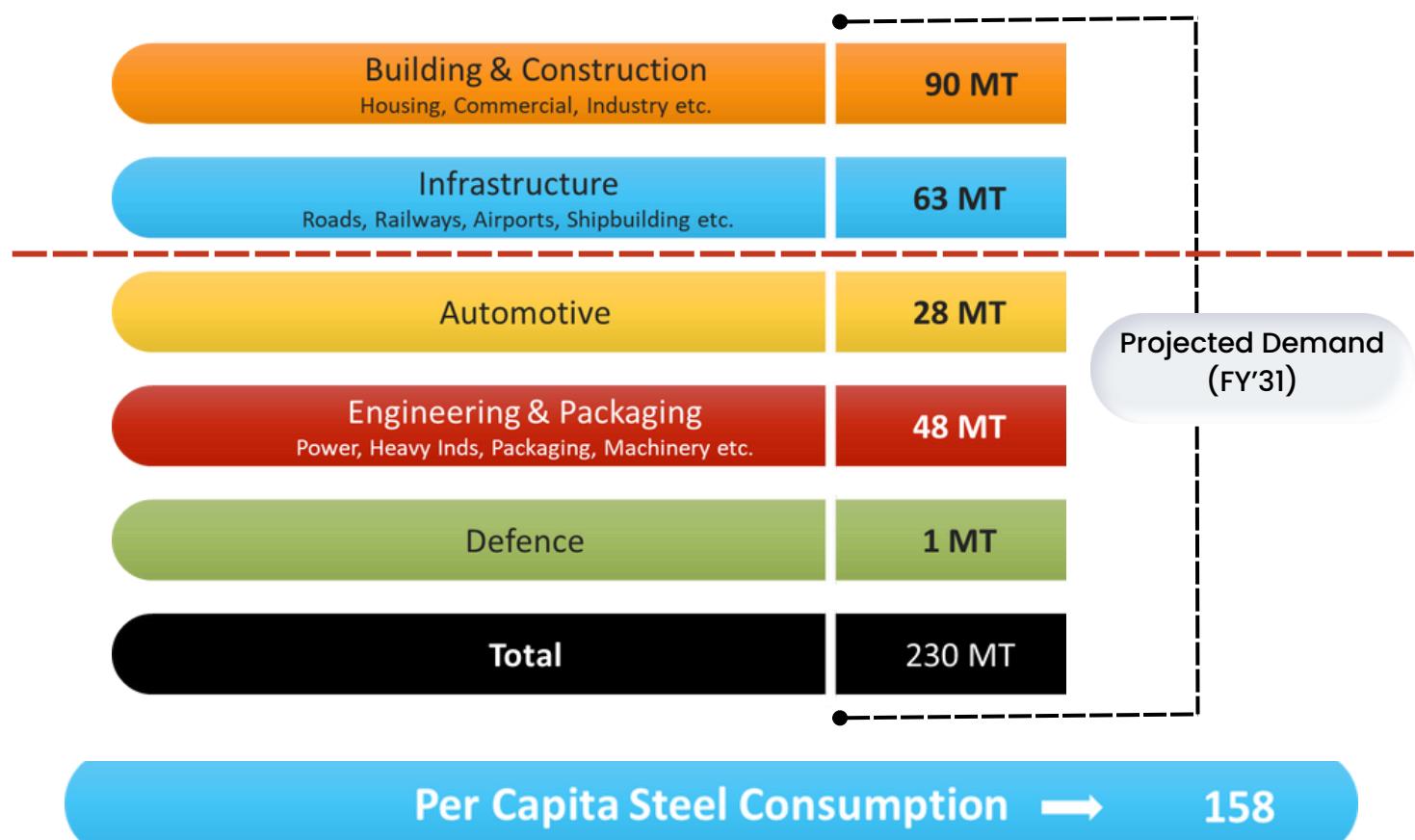
A growing population, urbanization, increasing pace of nuclearization along with concretization of kutcha houses under various central and state government-led programme will be key demand drivers for the segment.





Sector Wise Finished Steel Consumption Projection

The uptick is attributed to ongoing infrastructure projects, urban development initiatives, and investments in transportation networks. The construction boom and infrastructural expansions indicate a robust demand for steel, playing a pivotal role in the country's economic growth trajectory.

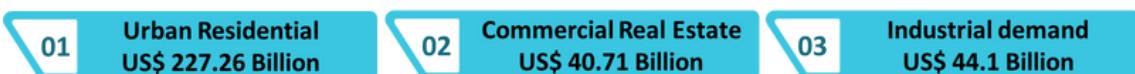




Drivers of Higher Steel Demand

Market size of India's construction industry was projected to grow at a (CAGR) of 6% from 2024 to 2033, expected to reach **\$1.4 trillion**.

Likewise, Infrastructure sector in India is expected to reach a market size of **\$204.06 billion** in 2024, with a (CAGR) of 9.57% to reach **\$322.27 billion by 2029**.



- Government focus on infrastructure and construction drives the demand for steel.

Budget provision of **Rs.77,223 Crores for Ministry of Drinking water and Sanitation**: 28.6% higher than last year's provision.

Capital Outlay of **2.41 Lakh Crore for Ministry of Railways**: 48.6% higher than Budgeted provision of 1.62 Lakh Crores made in last year.

Capital Outlay of **2.7 Lakh Crores for Ministry of Road transport & Highways**: 24.6% higher than BE of 2022-23

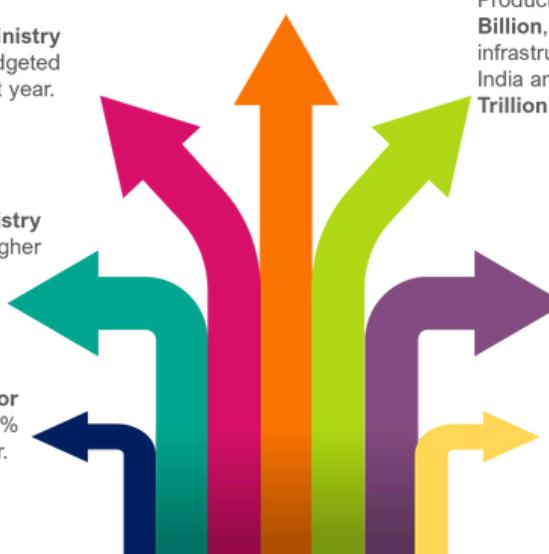
Production Linked Incentive (PLI) Schemes **US\$ 500 Billion**, NIP (National Infrastructure Pipeline) fueling infrastructure development **US\$1.5 Trillion**, Make in India and PM Gati Shakti National Master Plan **US\$1.2 Trillion** etc.

Proposals for

- Setting up of digital public infrastructure for Agriculture
- Setting up of multiple warehousing facilities through co-operative societies at village level
- Setting up of public library at Panchayat & ward level
- Proposal for setting up of **157 Nursing colleges**.

Setting up **500 waste plants** under Gobardhan scheme and setting up of inter-state transmission system for evacuation and grid integration of 13 GW renewable energy from Ladakh

Budget provision of **Rs.79590 Crores for Pradhan Mantri Awash Yojana**: 65.8% higher than Budget provision of last year.





Infrastructure and Construction have taken a lead role due to government spending on infrastructure.

High Rise Buildings – Residential Buildings & Commercial Buildings. Inclusion of information and emphasis about these 3 types of structural steels i.e., “Fire resistant Steel – IS 15103”, “Seismic resistant structural – IS 15962” & “Weather resistant structural – IS 11587” in “General Construction in Steel – IS 800” and NBC

Affordable Housing – Greater emphasis by GOI for LGSFS in PMAY will help build a viable ecosystem in housing sector.

Road Bridges – Developed Set of design and drawings for smaller bridges by MORTH similar to RCC. Developing Skilled workforce for structural fabrication in pockets across the country with a capability of handling 300 to 500 T per month

(in Rs. Lakh Crores)			
Year	Total Govt. Expenditure	Govt Capital Expenditure	% Share of Capital Expenditure
2019 - 20	26.86	3.38	12.6
2020 - 21	30.42	4.12	13.5
2021 - 22	34.83	5.54	15.9
2022 - 23 RE	41.87	7.28	17.4
2023 - 24 BE	45.03	10.01	22.2
2024 - 25 BE	47.90	11.02	24.90



Gross Value Added (GVA) in Construction and Growth in steel consumption

A strong co-relation between Growth in GVA Construction vis-a-vis growth in steel consumption.

- **Increasing Steel Consumption –**

Steel consumption in India showed a consistent increase from 94.9 million tons in 2020–21 to 125.7 million tons projected for 2024–25. This steady rise highlights the growing demand for steel, likely driven by increased infrastructure and construction activities.

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- **Increasing Steel Intensity with GVA Construction –**

The steel intensity, measured as the ratio of steel consumption to GVA construction, showed an upward trend from 0.7 in 2020–21 to 2.0 in 2024–25.

Financial Year	GVA Construction %	Steel Consumption Million tons	Growth in Steel Consumption %	Steel Intensity with GVA Construction
2019 - 20	1.2	100.2	1.5	1.3
2020 - 21	-7.3	94.9	-5.3	0.7
2021 - 22	11.5	105.8	11.4	1.0
2022 - 23 P	7.0	117.8	11.3	1.6
2023 - 24 P	7.12	120	11.7	1.8
2024 - 25 P	8.00	125.7	12.0	2.0



India's Steel Industry Thrives with Robust Exports and Strategic Imports in 2024

Export Surge Propels India's Steel Sector Globally, While Strategic Imports Sustain Domestic Infrastructure Growth. Record-breaking Export Performance Meets Strategic Imports, Fueling Growth in Construction and Infrastructure Sectors.

Import

\$3.38 Billion

2023 - 2024

Export

\$2.76 Billion

2023 - 2024

Monthly Import Values (in USD Million)

- January 2024: \$200 million
- February 2024: \$180 million
- March 2024: \$220 million
- April 2024: \$240 million
- May 2024: \$260 million

Key Import Products:

- Flat Products
- Long Products
- Special Steels

Primary Import Destinations:

- China
- Japan
- South Korea

Monthly Export Values (in USD Million)

- January 2024: \$830 million
- February 2024: \$800 million
- March 2024: \$850 million
- April 2024: \$880 million
- May 2024: \$900 million

Key Export Products:

- TMT Bars
- Structural Steel
- Wire Rods

Primary Export Destinations:

- USA
- European Union countries
- Asian countries



Trends and drivers for Steel Type used in Construction and Infrastructure.



Product



Growth Drivers



Product trends



Key players

TMT Bars
/Rebars/Rou
nds

Large-scale Government Initiatives, Expansion of Transportation Projects, Rapid urbanization, Development of SEZs and industrial corridors, increase in Public and Private Investment, Improve Consumer Spending, Government measures to curb low-quality steel imports.

Higher grades TMT bars such as Fe 500, Fe 550, and Fe 600, Seismic-resistant bars, Corrosion-resistant TMT bars, Epoxy-Coated and Galvanized Bars.

- Tata Steel
- JSW Steel
- SAIL

Structural Steel

Major government projects such as Smart Cities Mission, Bharatmala, Sagarmala., Construction of new power plants and upgrading existing ones, Increasing use of prefabrication and modular construction, Expansion of metro rail networks, flyovers, and bridges.

Use of weathering steel, Increasing use of galvanized and epoxy-coated steel, Demand of pre-engineered buildings, Integration of Building Information Modeling (BIM), Exploration of 3D printing technologies, adoption of steel-concrete composite structures.

- AM/NS India
- Welspun Corp Ltd
- Essar Steel

Pipes

Jal Jeevan Mission, Swachh Bharat Mission, Micro-Irrigation Systems, Oil and Gas Pipeline Infrastructure, Solar and Wind Energy Projects, Wastewater Treatment.

High-strength steel alloys API X70 and X80 grades, High-Strength Low-Alloy Steel Pipes, Fusion-Bonded Epoxy Coating Pipes, Electric Resistance Welded Pipes, Submerged Arc Welded Pipes.

- Surya Roshni Limited
- Man Industries
- Apollo Pipes Limited

Plates and Sheets

Increase in infrastructure projects, Rapid Urbanization, Urban Renewal Projects, Growth in Real Estate Sector, Increase in Utilities Infrastructure, Oil and Gas Infrastructure.

Increasing use of high-strength steel plates and HSLA, Corrosion-Resistant Coated plates and sheets, Adoption of advanced fabrication technique and Plasma Cutting.

- Electrotherm India
- RINL
- Bhushan Steel



Key Applications of End-User Consumption in Construction and Infrastructure.



Industry



Growth Drivers



Industry trends



Key players

Residential Construction

Rapid Population Growth and Urbanization, Affordable Housing Schemes, Urban Renewal Programs, Low Interest Rates and High Government Subsidies, Increased consumer spending due to rising income levels, Increasing consumer aspirations for better living, Simplification in Real Estate Regulation.

Government Initiatives for promoting the construction, Public-Private Partnerships, Growth in the luxury housing segment, Rising demand for smart home, Transit-Oriented Development, Ease of Approvals, Flexible Financing Options, Post-Pandemic Design Changes like home offices, larger balconies, open spaces etc.

- DLF Limited
- Lodha Group
- Godrej Properties

Commercial Construction

Steady GDP Expansion, Increased Foreign Direct Investment, Expansion of the e-commerce sector, Increasing demand for flexible workspaces, Growing consumer spending, Increasing focus on experience-centric retail spaces, Boosts demand for hotels, resorts, and serviced apartments.

Increasing focus on sustainable construction practices, Growing adoption of green building certifications like LEED and IGBC, Use of Building Information Modeling, Shift towards experiential retail spaces, E-Commerce Boom, Increasing need for cold storage and temperature-controlled warehouses, Growth in luxury and boutique hotel construction, Development of business hotels and convention centers.

- Larsen & Toubro
- Embassy Group
- K Raheja Corp

Infrastructure Projects

Large-scale government Initiatives and Policies, Rapid Urbanization, Development of industrial corridors, High flow of FDI's, Expansion of Transportation Infrastructure Development and Energy Sector, High demand of Port Modernization and Airport Development.

Expansion in Digital Infra. such as 5G Deployment and Data Centers, Expansion of Renewable Energy Projects, Focus on Transit-Oriented Development, Highway Expansion and Railway Modernization, Enhance port capacity and establishment of coastal economic zones, New new airports development, Growing Infrastructure Investment Trusts (InvITs).

- Larsen & Toubro
- GMR Infrastructure
- JMC Projects



Trend and drivers of steel in Geographical Segmentation.



Region



States



Growth Drivers



Trend

North India	<ul style="list-style-type: none"> • Delhi NCR • Punjab and Haryana • Uttar Pradesh 	Metro rail expansions projects, Smart city initiatives, Development of highways and expressways, High industrial growth in Gurugram.	Increased Use of Pre-Engineered Buildings, Demand for High-Strength Steel like TMT, Metro Rail Projects and expansion, Demand for Steel Reinforcement in Roads and Highways, Water and Sewage.
	<ul style="list-style-type: none"> • Maharashtra • Gujarat • Rajasthan 	Delhi-Mumbai Industrial Corridor, Mumbai-Bengaluru Industrial Corridor, Booming real estate, Mumbai-Ahmedabad High-Speed Rail Corridor (Bullet Train project), Gujarat International Finance Tech-City (GIFT City), Gujarat Maritime Board (GMB) ports, and Special Economic Zones (SEZs).	Vertical Urbanization and High-Rise Construction like demand of Skyscrapers and Towers, Infrastructure Modernization, Greenfield Developments, Light Gauge Steel Framing, Waterfront Development.
South India	<ul style="list-style-type: none"> • Tamil Nadu • Karnataka • Andhra Pradesh • Kerala 	Roads and Highways Development, Airport expansions, Port modernization, Boom in Commercial and Industrial Projects due to IT parks, SEZs, and technology clusters.	Vertical Urbanization, Ongoing and planned metro rail expansions, Hosts major automotive manufacturing hubs, Residential and Commercial Developments.
East India	<ul style="list-style-type: none"> • West Bengal • Odisha • Jharkhand • Bihar 	Steel-intensive Industries drive demand for industrial steel structures, Mining Infrastructure, Port Development and Maritime Infrastructure.	Ongoing Kolkata-Mumbai Industrial Corridor (KMIC) and the Eastern Dedicated Freight Corridor (EDFC) requires steel for industrial parks, logistics hubs., Port Development and Maritime Infrastructure, Mining Infrastructure.
Central India	<ul style="list-style-type: none"> • Madhya Pradesh • Chhattisgarh 	Roads, Highway and Rail Tracks Projects, East-West Corridor, Supportive policies, incentives, and infrastructure investments by state governments.	Ongoing Kolkata-Mumbai Industrial Corridor (KMIC) and the Eastern Dedicated Freight Corridor (EDFC) requires steel for industrial parks, logistics hubs., Port Development and Maritime Infrastructure, Mining Infrastructure.



Trends and dynamics for Bar and Rods used in Construction and Infrastructure.



Product



Product Dynamics



Product trends



Consumption

Round Bars

- Diameter Ranges : 10mm to over 20mm.
- Uses : Reinforcement in concrete, framing, structural support, foundation work, and production of pipelines.

Hot-Rolled Steel Round Bars, Cold-Rolled Steel Round Bars, Forged Steel Round Bars

- Construction – 27.3 Million Ton
 - Infrastructure – 13 Million Ton
- Key Players –**
- Shashwat Stainless Inc
 - Manan Steels
 - Timex Metals

Square Bar

- Diameter Ranges : 20mm to over 50mm.
- Uses : Building frameworks, bridges, tunnels, and large infrastructure projects.

Stainless Steel Square Bars, Cold-Rolled Square Bars, Hot-Rolled Square Bars

- Construction – 5.85 Million Ton
 - Infrastructure – 1.95 Million Ton
- Key Players –**
- Shree Ji Steel
 - Kalika Steel
 - JSW Steel

TMT Bar

- Diameter Ranges : 6mm to over 12mm and above.
- Uses : Fe-500 are used for residential, Fe-500D and Fe-550 are used for Commercial, and Fe-550 and Fe-600 are used for large-scale infrastructure projects.

Fe-415, Fe-500, Fe-500D, Fe-550, Fe-600, Earthquake-Resistant TMT Bars, Corrosion-Resistant TMT Bars, Standard TMT Bars

- Construction – 40.95 Million Ton
- Infrastructure – 13.81 Million Ton

Key Players –

- Electrosteel Steels
- Tata Tiscon
- JSW Neosteel

Wire Rods

- Diameter Ranges : 5.5mm to over 10mm.
- Uses : Reinforcement in concrete structures, fencing, and binding materials

Low-Carbon Wire Rods, Alloy Steel Wire Rods, Stainless Steel Wire Rods

- Construction – 9.75 Million Ton
- Infrastructure – 4.06 Million Ton

Key Players –

- Sunflag Iron
- Usha Martin
- Rathi Bars



"The steel industry in 2024 faces several gaps and challenges that can be transformed into opportunities for growth and innovation. These gaps are influenced by technological advancements, environmental concerns, market demands, and supply chain dynamics."



Key Gaps



Challenges



Opportunities

Sustainability and Environmental Impact

Meeting stringent environmental regulations and achieving carbon neutrality

Investing in green technologies such as
• Hydrogen-based steelmaking
• Carbon capture and storage (ccs)
Development and commercialization of low-carbon steel production.

Energy Efficiency

High energy consumption

Innovations in energy management and the use of AI and IoT for predictive maintenance and process optimization

Supply Chain Disruptions

Supply chain disruptions caused by geopolitical tensions, pandemics, and logistical challenges.

Diversifying supply sources, increasing local production, and employing advanced logistics solutions.

Other Opportunities : Develop advanced high-strength steels (AHSS), Promote use of modular and prefabricated construction techniques, Invest in green steel technologies and certification,



M&A in the Indian steel industry, driven by the need for increased capacity, technological upgrades, and expanded market presence.

These transactions highlight the dynamic nature of the Indian steel industry, with companies pursuing strategic acquisitions to access new markets, and achieve greater operational efficiencies.

Year	Investor/Acquirer	Target	Deal value (US\$)
2024	Jindal Steel	Monnet Ispat	\$1 Billion
2023	JSW Steel	Bhushan Power & Steel	\$2.7 Billion
2023	Tata Steel	Neelachal Ispat Nigam LTD	\$1.6 Billion
2023	AM/NS India	Essar Steel	\$2.4 Billion
2023	Vedanta	Electrosteel Steels	\$750 Million
2022	JSW Steel	Asian Colour Coated Ispat	\$643 Million
2021	JSW Steel	Welspun Maxsteel Ltd	\$140 Million
2021	ArcelorMittal	Uttam Galva Steels	\$235 Million
2021	Tata Steel	Steel Strips Wheels Ltd	\$420 Million
2020	Jindal Steel	Monnet Power Company	\$300 Million
2020	Sajjan Jindal led JSW Steel	Asian Colour Coated Ispat	\$267 Million
2020	Tata Steel	Usha Martin	\$600 Million

