

STEELING A MARCH

The Big Boys of steel are pushing the pedal to drive the future of mobility

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Steel was the most common raw material when Henry Ford's Model T first rolled off in 1908. More than a century later, it remains unchanged for the automotive industry.

The success of Ford's Model T, credited with "putting the world on wheels" was, in part, attributed to the use of the lightweight, high-strength steel frame. In the years that followed, the alloy has had a significant presence in automobiles.

The Indian automobile industry, the third largest in the world, is poised to take a leap. In the financial year 2023-24 (FY24), Indian carmakers touched a new high with 4.23 million passenger vehicles sales. According to industry estimates, it could touch 8 million by the end of this decade.

Riding on the growth of the industry are steel companies eyeing higher margins and prestige.

Badge of honour

Considering the rigorous approval process followed by carmakers, only a handful of steel companies have the capability to supply specialised grades of steel in India. Most of the demand is met by the players who make steel from scratch, like Tata Steel, JSW Steel, and ArcelorMittal Nippon Steel India (AM/NS India).

Then comes Posco and some long product producers.

Of the total 136 million tonnes (mt) steel consumption in India, a small chunk of 8-10 per cent is by auto and auto ancillary industries. However, in terms of quality, the segment supply ranks in the top quartile. It's also a high-margin business.

More than 60 per cent of the raw material in a vehicle is steel.

Gearing up

As automakers rev up to make good the 'India story', the Big Boys of steel are pushing the pedal to drive the future of mobility. From setting up cutting-edge facilities to cater to the domestic market and building capabilities of global standards, the action is building up.

Two of the global leaders in automotive steel, ArcelorMittal and Nippon Steel, have formed AM/NS India, pointed out Ranjan Dhar, director and vice-president, sales and marketing, AM/NS

India, adding that it is set to introduce "world-class products to the Indian market".

AM/NS India is in advanced stages of completing a 2 mt auto-focused cold rolling mill (CRM) in Gujarat's Hazira.

"This facility will be one of the most modern automotive steel complexes. The advanced steel solutions produced here will not only expand the automotive product line for the domestic market, but also support the efforts to export, establishing the country as a manufacturing hub," Dhar said.

World suppliers

Tata Steel and JSW Steel are beefing up for the domestic as well as the export market.

"We have more than one-third share of the automotive steel market and we will

continue to build this business with our portfolio of flat and long products," said Jayant Acharya, joint managing director and chief executive officer, JSW Steel.

The largest steelmaker by domestic capacity, JSW Steel, has also started building customers in the international market. "Last year, we supplied quantities to automakers in Europe and South-East Asia. That will improve further in addition to our domestic automotive sales," Acharya added.

In the domestic market, supplies to MG Motors are expected to increase, replacing imports in the new joint venture JSW MG.

Tata Steel's new CRM complex in



Kalinganagar (Odisha) is raring to commission continuous and galvanising lines – crucial processing systems for automotive grades of steel – in the next few quarters.

The 2.2 mt facility is largely auto-focused. "New cold rolling and galvanising lines are capable of producing steel at par with global specifications," Prabhat Kumar, vice-president, marketing and sales (flat products), Tata Steel, told Business Standard in a recent interaction. "While our focus will be primarily on the domestic automotive market, the capability exists to meet export requirements," he said.

Tata Steel Europe is helping build the global capabilities. In India's auto-grade steel market, Tata Steel's market share is close to 50 per cent.

Atmanirbhar, way before

Car and steel manufacturers had embarked on the localisation journey long before the word 'atmanirbhar' took centre stage.

"Auto companies stepped up on localisation in the last 15 years, with steel companies building capacities to produce specialised grades of steel. They continue to invest in these capacities with the tailwind from the auto sector," Rakesh Surana, partner, Deloitte India, said.

A Tata Motors spokesperson said the company has been driving localisation of imported flat steel. "With investments by domestic and international players in India, the import has reduced from 10 to nearly 5 per cent over the last five to six years."

Vinod Sahay, president and chief purchase officer, auto and farm sector, Mahindra and

Mahindra Limited, said the company's first priority was to source steel from the Indian steel mills.

"More than 95 per cent of the steel we use today, across all grades, is made in India. We only import certain grades of steels, which are either not produced here, or the quantity is less than our requirement," Sahay said.

Niche segments rely on imported steel, which are mostly coated, press hardening steels (PHS), and grades whose availability is constrained locally.

Tata Motors notes that auto manufacturers are pushing engineering boundaries to reduce the weight of cars, while improving safety and customer experience. As most of the industry first grades or technology is developed internationally, it needs to continue to engage with international steel mills even as domestic producers improve localisation.

Carmakers want higher strength and lighter steel to reduce the body-in-white weight. It is a continuously evolving process. "That is why the tensile range has improved from 400 megapascals (MPa) to 1,200 and going forward can go to 1,500 MPa steels. That is the journey for the automotive industry," Tata Steel's Kumar said.

According to steel industry sources, some imports into the country happen as Japanese carmakers source certain quantities from the home market.

Partnerships

In the last decade and more, Indian companies

have forged partnerships with global leaders for technology, to sell a licensed product, and more.

In 2010, Japanese steel major JFE Steel picked up a 15 per cent equity stake in JSW Steel. "The strategic alliance and technology agreement enabled us to leapfrog the learning time for the higher end of automotive steel and electrical steel," JSW Steel's Acharya said.

Tata Steel signed a joint venture agreement with Nippon Steel in 2011. The joint venture included setting up of 0.6 mtpa continuous annealing line at Jamshedpur. As part of the agreement, Tata Steel was licensed to use Nippon's technology to produce and sell high-tensile steel to automakers in India.

AM/NS is a 60:40 joint venture between the world's second and fourth largest steelmakers – ArcelorMittal and Nippon Steel.

Vying for attention

Sourcing of auto-grade steel from India is bound to increase, experts note, as steel companies expand capacity. For carmakers, it means saving on logistics, currency charges, and a shorter lead time translating into better response to the market.

But there are other materials apart from steel, soliciting attention in the international market.

The auto sector operates across a spectrum of price points, Surana pointed out. "In the global market, different materials are vying for it. Aluminium is making inroads and carbon fibre has been used in certain high-end cars."

However, he added that the Indian auto sector will be largely dependent on steel.

DEMAND DIVISION

ON AN AVERAGE, **900KG** OF STEEL IS USED PER VEHICLE

Distribution of steel in a vehicle

40% is used in the body structure, panels, doors, and trunk closures

23% is in the drive train

12% is in the suspension

Remainder found in the wheels, tyres, fuel tank, steering, and braking systems

Source: World Steel Association