

STEEL AS A CONSTRUCTION MATERIAL

BALANCING ACT

Between the global surplus and rising local demand, Indian steel makers play a balancing act by offering value to construction companies.

BY MITALEE KURDEKAR



With India on the brink of rapid urbanisation and infrastructure development, steel in all its versatility, will play a vital role during construction, whether it is a building, bridge, tunnel or any other infrastructure activity. Yet, things haven't exactly been rosy for Indian steel makers in the recent past.

GROWTH DESPITE THE GLUT

The last few years have shown a global and regional glut in supply from developed Asian economies such as the likes of China, Japan and South Korea. Cheaper imports from these

nations have forced local steel makers on the back foot.

Problems relating to technological obsolescence and the lack of R&D efforts to rectify these ills have resulted in a sub-optimal techno-economic performance within the industry. Small-sized plants with inefficient practices on shop floors and lack of automation make the production of steel almost \$100 per tonne costlier to those of developed economies. The silver lining though is the consistently growing demand for steel in India at around 8-10%, largely supported by growth in the automotive and construction sectors.

The challenge, however, has been to overcome the import glut from neighbouring countries. Since the Government an-



With infrastructure projects on the rise, there is a huge requirement for technologically advanced steel products.

nounced an anti-dumping duty on steel imports from six nations, cheaper imports from these countries into India have been curbed, greatly benefitting local players. Players have since been consolidated and forced to become adequately competitive by raising efficiency and productivity levels.

Considering that India would want to cement its place within the top club of steel manufacturers (India has already emerged as the third largest steel producer, globally), it is imperative that Indian steel industry overcome any challenges. These challenges are in the form of uneconomic production capacities, poor quality raw materials and low interest levels in metallurgical education in Indian academia. The industry is



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actively addressing the problem of poor techno-economics through its efforts of capacity consolidation by phasing out old/obsolete production facilities and adopting state-of-the-art technologies that are relevant to local needs. Globally, such technologies are easily available commercially, and they also focus on energy conservation and environmental protection as key goals.

Giridhar Rajagopalan, executive director, technical, Afcons Infrastructure, articulates this need for change well, stating, "Looking at the larger picture, it is high time that the codes of practice for manufacturing steel are updated to match international standards. There is a need to bridge the gap between the practices vis-à-vis the infrastructure development in the country."

BENDING TO CUSTOMER NEEDS

In an industry where demand generation is the key, vendors are required to keep a close eye on customer requirements. Even in countries like India, where there is a spurt in demand subsequent to new government initiatives and increase in private & public spending, customer requirements cannot be undermined. As a result, the Indian steel industry is getting highly competitive. Managing cost pressures means providing customers what they need. And steel vendors are complying.

As Mukesh Jaitley, director, projects, The Wadhwa Group, explains, "Time is always of the essence for project completion and is one of the key requirements for our business. Pre-engineered buildings (PEB structures) are a widely used concept for the early completion of projects, through which great speed is achieved. This leads to cost benefits not only for us, but also for our potential customers."

Shabbir Kanchwala, senior VP, K Raheja Corp, agrees when he suggests, "We have been utilising an increasing number

of steel bars of grade Fe500D supplied by reputed names in the industry viz: TATA, JSW, SAIL, RINL & JSPL. These steel bars are produced under regulated manufacturing processes and are known for their ductile and high strength, as well as for their fine welding strength. A preferred choice of the construction and architecture industries, these bars are checked for optimum quality and are BIS certified."

Speaking about other important business requirements, **Sushil Sethi Jain, MD, SPML Infra**, says, "Safety and environment protection are two primary considerations in all infrastructure development projects. Our pipe vendors have started supplying us 12m pipes instead of the conventional 6m, thereby reducing the number of joints and welding required. This saves transportation, laying time and also energy & fuel consumption. The pipes are now being supplied with three-layer polyethylene coating, which is more resistant to corrosion and has minimal chances of leakage, thus reducing



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wastage and offering better quality control."

From a quality perspective, Rajagopalan adds, "Afcons ensures all suppliers follow stringent rules when it comes to delivering raw materials for projects. We are in the process of executing the Chenab Rail Bridge which, when ready, will be the world's tallest arched railway bridge. We specifically require E250C and E410C grade steel plates for the project, which are met by Essar and Jindal."

TIME IS OF ESSENCE

The cost of investment for steel is quite large for users. So, the return on investment is of great import for everyone. This means the projects need to be completed in time, in fact, if possible, ahead of schedule.

Neetal Narang, additional VP, corporate communications, Parsvnath Developers, emphasises the importance of timely delivery expected from steel vendors and explains, "In build-



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ing construction, steel and steel products play a major role and contribute to approximately 20% of project cost. The key business requirement is timely availability of all diameters/sections/thickness of steel members across the country, which saves not only execution time, but also wastage. This saves project cost and helps maintain project timelines."

Harjith Bubber, MD & CEO, Rivali Park, CCI Projects, adds,



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**M N BALASUBRAMANIAN,
BRIGADE ENTERPRISES**

"Our key business requirement is the timely delivery of good quality products with cost benefits. Indian vendors easily facilitate timely delivery."

This also helps vendors to constantly work on import substitution. "Indian manufacturers are able to cater to the design needs of the designers and consultants with cost benefits, hence reducing the reliability of imported steel products. Delivery period is also shortened by which the overall schedule of the project is reduced, leading to better profitability" supplies Jaitley.

Kanchwala justifies imports in specific conditions where they are economically viable – like in SEZ projects – but, here again, he emphasises that there is no compromise on delivery terms. He explains, "Our efforts are always aimed at procuring validity of rates for the delivery of the steel bars for a longer stretch of time as well as per site delivery schedules to avoid delays. Various MoUs have been signed by us with numerous steel producers to avail of a turnover discount on the total quantity of steel bars ordered in tandem with their defined terms & conditions."

INNOVATE TO ADD VALUE

In addition to keeping up with their needs, a collaborative R&D effort with consumers will help vendors develop products that can add value for users. Rajagopalan acknowledges the contribution that Indian vendors can make, when he confesses, "Given the direction in which the infrastructure industry is heading, there is a lot that steel suppliers can do in terms of innovation. In the coming days, there will be enough scope for manufacturing materials that are, at present, available only internationally. Several of our requirements are now been met through improvisation. If our suppliers were to manufacture



Parinee uses an innovative coupler system that reduces the project completion time.

certain items domestically, such as Universal Beam Sections, equivalent to the quality available in the European markets, our projects can be executed more efficiently. Indian steel manufacturers also have the scope to develop facilities to manufacture High Performance Steel."

Speaking of new products, **MN Balasubramanian, AVP – projects, Brigade Enterprises**, professes, "Steel vendors have brought in the concept of prefab with economised design and quick construction. With the support of large erection equipment, installation is done quickly and handed over. Due to this approach, there is a cost benefit to both customers and us."



OUR KEY BUSINESS REQUIREMENT IS THE TIMELY DELIVERY OF GOOD QUALITY PRODUCTS WITH COST BENEFITS.

HARJITH BUBBER, CCI PROJECTS



TECHNOLOGICALLY ADVANCED STEEL HAS HELPED SAVE COSTS AND RESULTS IN A BETTER QUALITY PRODUCT.

VIPUL SHAH, PARINEE GROUP

Narang adds, "Introduction of high tensile steels by vendors has reduced the rate of consumption. Vendors are now introducing the concept of pre-bent/prefabricated structures from their integrated engineering workshops that have equipment with the latest technologies, thus reducing execution time as well as wastage of material."

Bubber agrees that customised cut-and-bend steel assists to avoid fabrication on construction sites, which would otherwise involve hiring a large labour force and wastage. This method also saves on storage space requirements on site.

Vipul Shah, MD, Parinee Group, says, "An innovative coupler system has been introduced which reduces the completion time. Technologically advanced steel has helped save costs and results in a better product in terms of quality and reliability."

Kanchwala highlights the value addition put forth by vendors when he suggests, "Suppliers like Tata and JSW provide us with the highest grade of Fe500D TMT steel bars, which are extremely malleable and constitute powerful bonding between steel and concrete. JSW has introduced steel bars which reduce the congestion of steel bars and honeycombing in RCC."

Often, vendors are ready to go out of their way to accommodate customer requests. "In one of our projects, pipe manufacturers did not have the facility for manufacturing high diameter three-layer polyethylene coated pipes; they had to upgrade their facilities to supply the required pipes," says Sethi Jain.

With such a positive attitude among vendors, it is no surprise that the Indian steel industry has made significant headway in terms of creating value for consumers and rising above the hardships faced. And now, given the pace of construction across infrastructure projects, one cannot deny that the future seems bright indeed for Indian steel vendors. **CW**