

Chapter 9

JSW Steel—Journey with Speed and Innovation



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Abstract The progressive growth of JSW group in the past three decades has mainly been attributed to the core principles on which the group stands viz. culture and work environment of complete freedom, innovation, empowerment, ethical governance, generous rewards, focus on results and global standards. JSW Steel has been a pioneer in introducing the new technologies in Indian Steel industry, such as Corex technology, setting up of non-recovery vibro-compacting coke ovens, India's largest blast furnace, the largest and widest hot rolling mill, most modern cold rolling mill and continuous annealed tinplate products. This article brings out the journey of JSW Steel and its contributions to the Indian steel industry.

9.1 Introduction

The journey began in 1982, with JSW Group's first steel plant at Vasind, near Mumbai. This project was helmed by Jindal Iron and Steel Company. The next two decades saw several acquisitions and expansion plans being drawn out. This was followed by the merger of Jindal Iron and Steel Company (JISCO) and Jindal Vijayanagar Steel Ltd (JVSL) in 2005. Today, JSW Steel can be found in six locations across India—Vijayanagar in Karnataka, Salem in Tamil Nadu, and Tarapur, Vasind, Kalmeshwar and Dolvi in Maharashtra—with a combined capacity of 18 MTPA. The mother plant, a world class manufacturing facility at Vijayanagar, Karnataka, is the largest single location steel-producing facility in India with a capacity of 12 MTPA. It's India's pride, and that inspires every visitor. With the completion of JSW Dolvi Works' expansion from the existing 5 MTPA to 10 MTPA, it becomes a mammoth 27 MPTA steel conglomerate. At JSW Steel, we are well-placed to address the strong demand growth enabled by the government's thrust on infrastructure, housing and the increasing share of manufacturing in GDP. By 2026, JSW Steel aims to produce 40 MTPA steel annually (Fig. 9.1).

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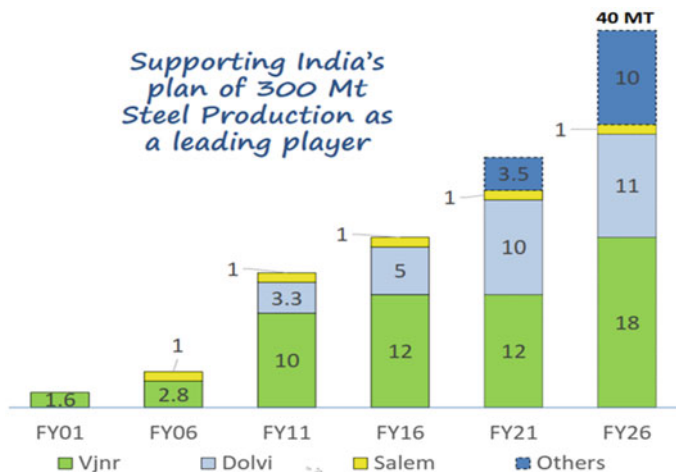


Fig. 9.1 Growth of JSW steel

To stay on the leading edge of technical advancement, JSW has entered into technological collaboration with JFE Steel Corp. Japan, for manufacturing high strength & advanced high strength steel for automobile sector. JSW Steel also entered into a joint venture with Marubeni-Itochu Steel Inc., Tokyo, to set-up state-of-the-art steel processing centers. To strengthen its global network, the Company has acquired a Pipe and Plate making steel mill in USA and JSW Steel Italy, Piombino. By 2030, the company plans to increase its capacity to 10 Million Tons overseas.

JSW Steel is recognized worldwide as a purveyor of value-added steel. JSW offers a wide gamut of steel products that include Hot Rolled, Cold Rolled, Bare & Pre-painted Galvanized & Galvalume, TMT Rebars, Wire Rods and Special Steel. Today, nearly 40% of the company’s products are high-value steel, and one-fifth of the products are exported to countries around the world. With a footprint in over 100 countries, JSW Steel has become the largest exporter of coated products in India. The JSW Group also embarked its journey of expanding business landscape from Steel to Energy, Cement, Paints, Infrastructure, Sports and so on. The Company has been at the forefront of state-of-the-art, cutting-edge technology, research and innovation while laying the foundation for long-term growth. Strategic collaborations with global technology leaders to offer high-value special steel products for various applications across construction, infrastructure, automobile, appliances and other sectors.

The quick growth of JSW group within the short span of three decades could not have happened without creating a culture and work environment of complete freedom, innovation, empowerment, ethical governance, generous rewards, results focus and global standards and this is what it has done admirably. Adherence to global environment management standards protects and enriches the ecosystem, while creating more opportunities for those at the bottom of the social pyramid,

which is a hallmark of his limitless growth and leadership qualities. JSW Steel is the only Indian Steel company ranked among the top 10 steel producers in the world by World Steel Dynamics for the last 10 consecutive years. Key honors & awards include World Steel Association’s Steel Sustainability Champion (2019), Deming Prize for Total Quality Management at Vijayanagar (2018) and Prime Ministers Trophy-2012 for the best steel plant among others. With the cutting-edge technology and constant innovation, it has emerged as a steel plant with one of the most efficient conversion costs globally.

9.2 Introducing New Technologies and Unique Initiatives

JSW Steel has been a pioneer in introducing the new technology in Indian Steel industry, viz., bringing Corex technology (an alternative ironmaking process) first time in India in 1998, setting up of non-recovery vibro-compacting coke ovens, India’s largest blast furnace (4019 m³ volume) in 2009, the largest and widest hot rolling mill in 2012, and of late the most modern cold rolling mill (CRM-II) in 2013, which is India’s answer to high grade automotive Steels. JSW Steel is the first Indian steel company to introduce continuous annealed tinplate products in the country which can help reduce carbon footprint as India moves towards reducing plastic consumption by eliminating single-use plastics over the next few years. These are the few bold initiatives of JSW in the recent past.

- Adopted Corex technology First time in the country—1999
- Largest blast furnace in the country—2009
- Largest and widest hot rolling mill—2011
- Largest State of the art cold rolling mill—2014
- Country’s largest beneficiation plant (20 MTPA)—2011
- World’s largest Corex gas based DRI Plant (1.2 MTPA)—2014
- India’s First Pipe Conveyor for iron ore transportation—2019

On research and development front, JSW Steel has set-up a world class state-of-the-art steel research facility at Vijayanagar Works, Ballari (Karnataka) and has sub-centers at Dolvi (Maharashtra) and Salem (Tamil Nadu). In order to scale up the research outcome to a commercial scale, pilot plants for processing BHQ iron ores, coal briquetting, slag to sand making, steam aging of steel slag, plastic injection in EAF and coke ovens etc. have been commissioned and stabilized.

At JSW Steel, adopting innovative technologies has helped in cutting down the operational cost, mitigating the environmental concerns and conservation of natural resources. JSW is India’s only steel plant with zero effluent discharge. JSW Steel has set-up the Asia’s largest iron ore beneficiation plant of 20 MTPA capacity to upgrade the low to medium grade iron ores for producing agglomerates to feed the iron making units. For optimal utilization & conservation of natural resources as well as 100% recycling of solid waste generated in steel plants, a number of technology



Fig. 9.2 Unique initiatives at JSW steel

have been adopted, i.e. micropelletization technology, mill scale briquetting Technology, DRI fines briquetting, Iron recovery from slime, dust and sludge, usage of slag as alternative construction materials and in agriculture etc. JSW Steel has an integrated strategy towards efficient waste management that ensures optimal utilization of resources and minimal disposal of solid waste. Some first of its kind initiatives are shown in Fig. 9.2.

9.3 Human Resources and Corporate Social Responsibility

Trained and experienced human resource is the key to efficiently run the plant and achieve the operational excellence. A rigorous induction training of 3½ months to the youngster and continuous learning opportunities are provided to every workforce to develop skills and functional expertise. In every area of manufacturing, learning centers are set-up and classroom as well as job based training are regularly provided. Leadership development is derived as one of the key process which ensures the development of employee as potential leader.

The CSR activities through JSW Foundation mount a number of initiatives. The company through its CSR activities facilitates access to water and sanitation to nearby villages/talukas. It also promotes skill development through vocational training and education. JSW partners with government and various civic organizations for providing outreach to the community. JSW Steel, through JSW Foundation, is committed to contribute 2% of its net profit towards community development activities. The fund is allocated to empower women, impart primary education, mitigate infant mortality and nurture maternal health. The Company also aims to safeguard water, using renewable energy and promoting hygienic sanitation.

9.4 Summary

JSW Steel firmly believes that continued innovative research with an emphasis on Nature and Society is the driving force for long-term growth, competitiveness and sustainability of the steel industry. The company reiterates its commitment to align all the initiatives to achieve the overall business objectives and to put India higher on the map of Global Steel Production.