

COMPANY PROFILE

Overview

Bhilai Steel Plant (BSP) has been the proud winner of Prime Minister's Trophy for the best Integrated Steel Plant in the country for a record 10 times. BSP, the flagship unit of Maharatna Company, SAIL, derives significant competitive advantage through the synergetic organizational relationship with key SAIL divisions viz. Central Marketing Organization (CMO)-the largest industrial marketing network in the country, Research and Development Centre for Iron and Steel (RDCIS), Centre for Engineering and Technology (CET), Management Training Institute (MTI), Raw Materials Division, Environment Management Division, Growth Division and Safety Organization. BSP has its own captive mines for key input raw materials i.e. iron ore and dolomite which is of strategic importance in this era of volatility on the raw material side in the steel industry. BSP products are marketed through extensive network of Central Marketing Organization of SAIL which has 37 Branch Offices, 25 Warehouses, 43 consignment agents, 27 Customer Contact Offices and a network of 2800 SAIL dealers located all over the country including rural areas. The dealer network has ensured presence of Company in every district of the country and "Apna SAIL" shops across the country have emerged as the preferred destination for small consumers of quality steel. Export of BSP products are managed by International Trade Division to a wide spread international market. Plates, wire rods and rails are the main products sold in export market.

The product portfolio of BSP is mainly targeted towards infrastructure segment and includes Rails, Heavy Structurals, Light Structurals (Angles, Channels, Rounds and TMT bars), Wire Rods (TMT, Plain & Ribbed), Plates (up to 3600 mm wide) and Semis. BSP is the sole supplier of rails to Indian Railways and is currently supplying up to 260 meters long rails, the longest rails in the world dispatched from works, to meet the objectives of improving passenger comfort and reducing track maintenance activities. The newly developed UTS-100 high strength Vanadium micro-alloyed Rails will meet the future requirement of high density, heavy haulage routes including proposed freight corridor. BSP produces a wide range of value added plates to meet customized requirements viz. high pressure and boiler quality plates, high tensile plates, API grade plates and ship building quality plates. BSP's TMT rods and structural have a strong brand value in the market and command high premium. The product portfolio is further being enriched through the ongoing Modernization and Expansion Plan. BSP has been continuously improving its existing products and developing new products which have resulted in manufacture of value added and differentiated products. BSP products have found applications in a number of prestigious infrastructure projects of the country in the areas of rail lines, bridges, dams, air / sea ports, refineries, pipelines, etc.

Products in Mega Infrastructure Projects

- Bandra Worli Sea Link
- 340 km J & K Rail link having 64 bridges
- Tsunami Rehabilitation Social Infrastructure Project
- Windmills by Suzlon
- Lower Subansiri Power Project, Assam by NHPC
- Mumbai and Delhi Airports
- Bansagar Canal Project on Sone river
- Delhi Metro
- Korba Power Plant
- Rail Vikas Nigam

Products envisaged after modernization

- Asymmetric Switch Point Rails, Grooved and Tongue Rails, Flat bottom Rails
- Climate Resistant And Low alloy Heavy Structural Steel
- Special Steel & Normalized Plates
- Wire rods – Bright bar, Cold heading, Spring Steel, Free Cutting Steel
- TMT Bars in straight length
- Climate Resistant Quality Angles and Channels

industrial peace with no industrial unrest/loss of production even for a single day is a testimony to Bhilai's culture of Industrial harmony.

Human Resources

In BSP, the total number of executives and non-executives is 3868 and 25915 respectively as on 01.04.2012. The qualifications required for different functions and disciplines are well defined. The executives' qualifications include BE/B.Tech, MBA, CA, ICWA, MBBS/super specialty, LLB etc. The non-executive work force is highly educated and includes 5524 employees with higher secondary education, 6933 ITI certificate holders, 1625 diploma holders, 252 graduate engineers, 2170 other graduates and 2454 post graduates. BSP is an equal opportunity employer that has employed both women and men of caliber. BSP employs about 1458 women employees in both technical and non-technical areas, which is around 4.89 % of the total employees.

Bipartite Forums operate on matters of employee welfare and other issues where the nominated employees i.e. Social Accountability Welfare Representatives (SAWRs)* under SA 8000 attend the meeting on welfare issues. The Bipartite Forums cover production, productivity, safety and welfare of non-executive employees. Recognized Officers Association is working within the umbrella of Steel Executive Federation of India (SEFI) to take care of the needs and welfare of executive employees. BSP's unblemished record of four decades of



Area	No. of Employees
Works	21125
Administration	2936
Township and Medical	2735
Mines	2551
Projects	436
Total	29783

Major Technologies and Facilities

BSP is an integrated steel plant having all the basic facilities including captive mines, sinter plants, coke ovens, blast furnaces, steel melting shops, rolling mills and related service departments. BSP has acquired state of the art technologies across the Plant in a planned manner with the engagement/involvement of expert bodies viz. RDCIS, CET and MECON. The modern technologies include 7.0 m tall Coke Oven Battery, Sintering Machine of 320 m² area with circular cooler, Blast Furnace with Paul-Wurth Bell Less Top charging, Hoogoven's stove design, INBA slag granulation, SMS-III with VAD, RH Degasser, Ladle Furnace, Desulphurization unit, etc. The ongoing MODEX Plan envisages installation of cutting edge technologies for improvement in productivity, yield, quality, cost competitiveness, energy efficiency and environmental protection.

Steel for manufacturing rails is produced exclusively through modern BOF Converter – Ladle Furnace – RH Degasser – Continuous Casting route for complete control on properties. A world-class long rail manufacturing complex has been set up at BSP where rails are produced of rolled lengths of 80 meter and welded panels up to 260 meter. The mill has sophisticated technologies viz. Online Eddy Current & Ultrasonic Testing Machines for Rails, Laser Straightness Measurement, Laser Controlled Presses for Rails, etc. The Plate Mill also has advanced facilities for ensuring high product quality such as - On-line Ultra-Sonic Testing Machine, Hydraulic Automatic Gauge Control (HAGC), Plan View Rolling (PVR), Normalizing Furnaces, etc.

BSP has deployed IT in layered architecture with shop-floor automation through Manufacturing Execution System (MES) and supervisory systems at layer-1 which are monitored by operation management and functional application at layer-2. All the IT solutions have been integrated through implementation of SAP-ERP Business Suite. IT footprints can be seen all across the value chain from automation at shop-floor level to serving the society by supporting schools, government interfaces and ex-employees through custom made applications.

Regulatory Environment

BSP complies with all legal and regulatory acts applicable to its business through dedicated departments/earmarked sections viz. Safety Engineering Department, Environment Management Department etc. Systems and Standards have been deployed in the areas of Quality, Environment, Occupational Health & Safety and Social Accountability. Planned audits in these areas ensure compliance to statutory norms and regulatory acts. System Standards i.e. ISO: 9001 QMS, ISO: 14001 EMS, OHSAS: 18001 and Social Accountability: 8000 have been deployed across the organization.

*Regulatory Environment for BSP

- The Factories Act
- The Air & Water (Prevention and Control of Pollution) Act & Rules
- The Environmental (Protection) Act
- Noise Pollution Act
- The Hazardous Waste (Management and Transboundary) Rules-2008
- Environment Impact Assessment Notification
- SEBI guidelines
- Financial acts

*The list of regulations is not exhaustive.



Key Customers & Market Share

- BSP has a unique product portfolio of having both the long and flat products and it has the capability to offer customized products to its customer. Systematic relationship building over the years has resulted in long term relationships with key customers. The key customer requirements are Quality, delivery and service. The Customer Service Index for measuring customer satisfaction incorporates capturing of customer perception on the basis of all three.
- BSP has a competitive advantage in its ability of product-mix flexibility and capability of supplying wide range and grades of differentiated products. BSP products cater to various segments and have strong presence in key sectors of Construction, electrical goods, Oil/gas transportation and yellow goods. RINL, Tata Steel and JSPL are main competitors in Long products whereas in the area of heavy and wide plates BSP is facing the competition from M/s Essar Steel. Emergence of new players in the steel arena, capacity addition by existing ones and regulatory environment becoming more stringent are some of the key changes that may affect the competitive situation.

Market Segments	Products	Customers
Long Products	Rail	Indian Railways
	Bars, Rods and Structural	L&T Ltd, Gammon India Ltd, KEC International Limited, NTPC, BHEL
Flat Products	Plates	Thermax Ltd., Indian Oil Corporation Ltd., Essar Ltd, Ispat Ind. Bharat Earth Movers Ltd. Nagarjuna Construction Co, BPCL, L&T

Main Products	Market Share
Prime Rails	91.2 %
Plates	19.5 %
Bars, Rods	4.0 %
Structurals	5.8 %

Key Suppliers

BSP has MOU / Long term contract / Annual contract arrangements with some of the leading PSU organizations viz. major oil PSUs, BHEL, NALCO, BEML, HEC and others to meet the key requirements associated with the respective items for procurement.

	Key Product/ Services	Key suppliers
Raw Material	Lime stone	RSM&ML, Jaisalmer
	Manganese Ore	MOIL
Consumable	Sea Water Magnesia	Premier Periclase Ltd., Ireland
	Casting Powder for Slab/Bloom	S&B Minerals, Germany
	Aluminum Ingot	NALCO
	Copper	HINDALCO/ HCL
Services	Total Tundish Management	IFGL/ OAL/ Vesuvius
	Total Ladle Management	TRL/ OCL

Partnership

Partnership relationships with different organizations across the value chain have been forged based on mutual benefits and long term goals. In the area of procurement BSP has MOU arrangements with some of the leading PSU organizations i.e. IPCL, HPCL, BPCL, NALCO, BEML, BHEL and HEC. BSP's partnership with Manganese Ore India Limited (MOIL) for sourcing Manganese Ore has been converted into JV partnership for producing Ferro Manganese at Bhilai. BSP has nurtured the local ancillary industry by providing continuous support to them which has resulted in a mutually beneficial relationship which is getting stronger with time. The partnership with NTPC for jointly installing power plant has resulted in the installation of a 500 MW power plant at Bhilai. Being the sole supplier of Rails to the Indian Railways, BSP has

been upgrading the rail making facilities on a continuous basis through partnership and collaboration to meet the demand of rail transport. A number of partnership arrangements have been created in diverse areas like operations, technology, mines, human resource management, logistics, marketing etc.

Key Strategic Challenges

Some of key strategic challenges for BSP are depleting iron-ore mines reserves, aging equipment, incorporation of new technologies in steel making, continual increase in the prices of other raw materials like coking coal, fuel etc. Development of Rowghat iron-ore Mines in the shortest possible time is critical to BSP's growth strategy. BSP is also exploring availability of iron-ore in other regions. As a part of MODEX, BSP is replacing its aging equipment and energy intensive process by state of art equipment, which will help in enhancing its productivity. A dedicated group HRPE (Human Resource Planning for expansion) addresses the issues of up gradation of skill and competence of people in view of incorporation of newer technologies Coal sourcing is another serious concern for BSP. Coking coal prices in the world has witnessed unprecedented fluctuations and constraints on supply side. For securing raw material supplies, SAIL has co-promoted International Coal Ventures Private Limited (ICVL) with CIL, RINL, NMDC and NTPC for the purpose of acquisition of coal assets in overseas territories. SAIL is working towards acquiring coking coal sources in India and abroad through its joint venture ICVL..

BSP faced tough times in fiscal 2011-12 owing to the falling health of coke ovens batteries # 7, 8, 9 and 10 caused by ageing which affected coke production and availability of coke oven gas (bye-product of coke making) for its reheating furnaces. Several steps were taken to manage the adverse impact of the situation on the production. The production was realigned with the changed requirement and greater focus was given to maintenance and upkeep of equipment to manage the downstream effects of the coke and gas shortage. The ABP targets for BSP have been accordingly set for year 2011-12 to allocate resources for maintenance of Coke Ovens.



Strategies Adopted in 2011-12

- Enhancement of special steel and value added products
- Rebuilding and renewal of assets
- Procurement of coke from alternative sources
- Using Furnace oil in Mill furnaces as alternate fuel
- Optimizing gas distribution
- Strengthening systems and standards
- Increasing the auxiliary fuel rate through CDI in blast furnaces

Sustainability Policy

Bhilai Steel Plant (BSP), is the flagship integrated steel plant of Steel Authority of India Limited, specializing in production of rails, structurals, plates, wire rods and merchant products. BSP is committed to improving its performance in accordance with the three pillars of sustainability viz. economic, environment and social in the area of operations and undertakes to

- Operate business in an efficient and financially sustainable way in order to satisfy its customers and add value to stakeholders.
- Optimise the eco-efficiency of its manufacturing processes through conservation of natural resources and increased energy efficiency.
- Foster health and safety of employees and provide healthy, safe and environmentally sound operations and products.
- Demonstrate social responsibility by promoting values and initiatives that show respect for people and communities associated with its business.
- Conduct business with high ethical standards.
- Engage stakeholders in constructive dialogue to help implement sustainable development.
- Achieve performance improvement through continuous monitoring and review of sustainability performance indicators.

