

12th Corporate Sustainability Report 2011-12

# EXCELLENCE FOR COMMON GOOD

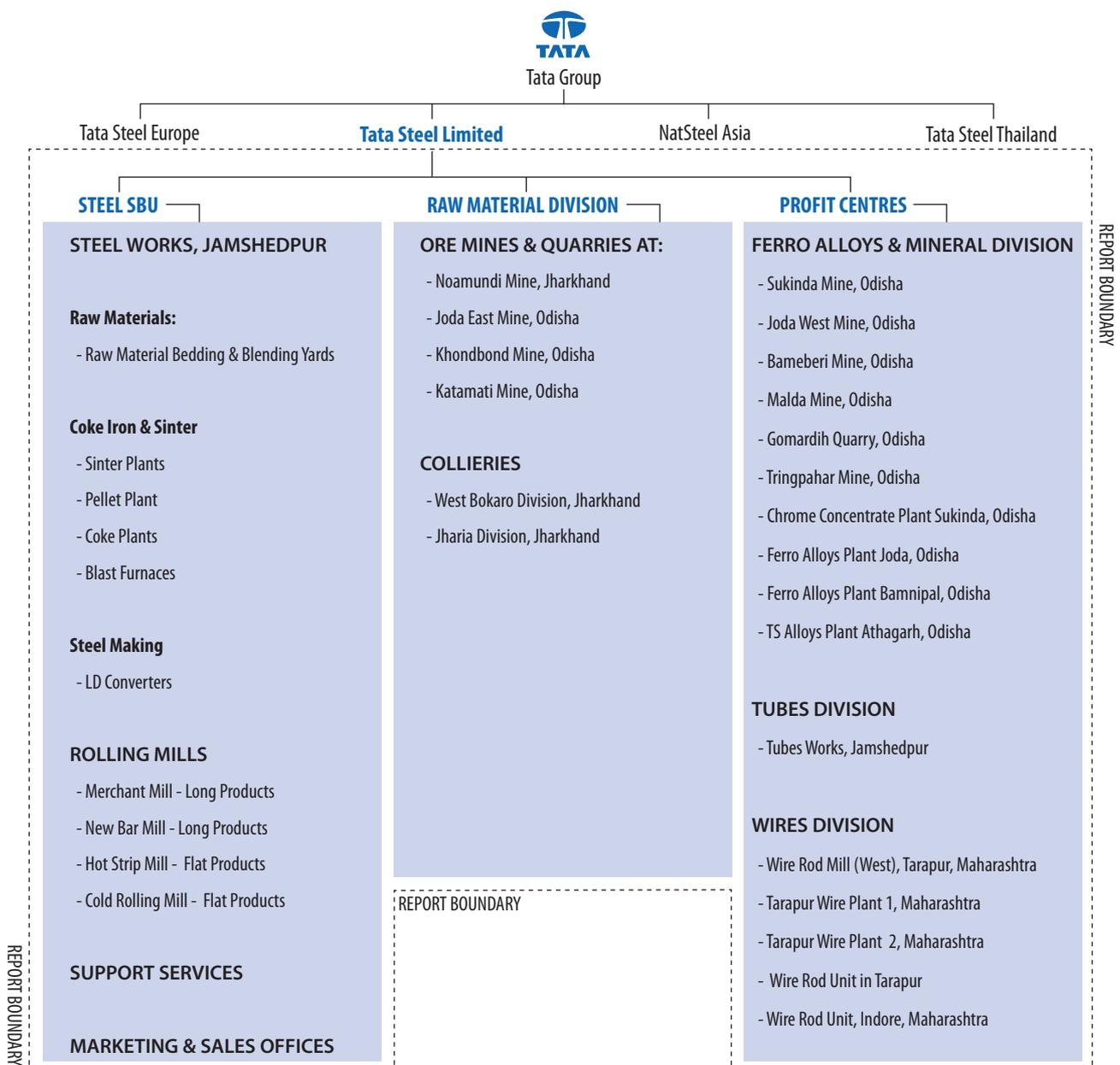


**Theme:**

The central purpose driving all business actions at Tata Steel is to serve Common Good.

The Company's vision is to be a global steel industry benchmark in Value Creation and Corporate Citizenship. The route Tata Steel has chosen to achieve this vision is excellence in all spheres of impact. The Company's excellence initiatives are aimed at improving its economic, environmental and social performance.

# REPORT BOUNDARY



- Subsidiary & Associates Companies

- Agrico Division
- Bearing Division
- CRC West
- Hoogly Met Coke
- Secondary Products
- Tata Growth Shop

# MANAGING DIRECTOR'S STATEMENT



*Mr Hemant Nerurkar, Managing Director, Tata Steel Limited*

On February 12, 2012 Tata Steel completed 100 years of steel making in India. This historic moment gave me the opportunity to reflect on the unique attribute that has sustained Tata Steel over these years. Without doubt, it has been the "Values" of the Company. When setting up Tata Steel, the Founder Jamsetji Tata had stated, "We think we started on sound and straightforward business principles..." Successive generations of the Company's leaders have never deviated from his philosophy of "conducting business in a responsible manner", which captures the very essence of the ideology of sustainability.

The completion of one century has intensified our focus on the next. We therefore gave ourselves onerous challenges to prepare not just for our tomorrow but also for the next century of sustainability. These challenges include systematically building our capabilities and simultaneously deepening our understanding of current and potential gaps we must rapidly bridge before the next phase of our exponential growth, aimed at meeting India's current growth needs.

## **Strategic priorities for the short/medium-term with regard to sustainability**

The Company is executing two of its largest projects, the brownfield expansion being commissioned in Jamshedpur and the greenfield expansion in Odisha to address the growing demand for steel in India, which is expected to touch ~ 100 MTPA in 2017 (Source: Report Of The Working Group On Steel Industry For The Twelfth Five Year Plan: 2012 – 2017). Our expansion projects will more than double our total steel making capacity from 6.8 MTPA in 2012. Balance of capacity prior to completion of the brownfield expansion project at Jamshedpur was achieved during the year by sweating our assets. While our new facilities get commissioned during 2012-13 increasing our capacity, we have also planned two

major maintenance shutdowns to upgrade the existing facilities in the first half of the financial year and the plant will achieve production at full rated capacity of 9.7 MTPA in the last quarter of the year.

Our focus is to leverage our pursuit of Excellence, one of our five core values, for Common Good. The theme for this report "Excellence for Common Good" captures the work and the mind-set of Tata Steel today.

## **Performance with respect to targets**

Our pursuit of excellence is reflected in our Corporate Goals. Safety remains my top priority till we attain the target of zero fatality. We achieved an LTIFR of 0.51 against a goal of 0.4. Our efforts must now focus on meeting our target of 0.2 by 2017.

Our specific CO<sub>2</sub> emission continued to be improved upon at 2.5 tCO<sub>2</sub>/tcs, while EBIDTA was sustained at 34 per cent.

The fuel rate in 2011-12 was marginally adverse compared to 2010-11, as the need for balancing capacities required us to continue running select older facilities (Blast Furnaces) beyond original plans.

These facilities are to be closed in 2012-13. Besides, some imported coals turned out to be of inferior quality than expected affecting our fuel efficiency. We are taking steps to prevent the recurrence of such incidents in future procurements.

While the spend on Research & Development continues to show an upward trend in the long term, a higher spend in 2010-11 is on account of pilot projects for coal beneficiation set up in Jamshedpur and Vizag during the previous year.

Tata Steel Limited has managed robust profitability in spite of significant declines witnessed in steel prices after the global financial squeeze and higher costs on account of inflation, reinforcing the message, that better operating performance and effective market penetration is the key to higher profitability going forward. This has been achieved by building on branded products (~30 per cent of the product portfolio), ensuring a larger proportion of value added steels, combined with sustained cost reduction and higher labour productivity.

### Broader trends influencing sustainability priorities

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Our growth in capacity flows from the long-term plan to fulfil the current and emerging requirements of India's rural population, the urban construction sector, infrastructure industry and world-class

manufacturers with bases in India. The Company's focus remains on these markets in India.

This growth requires a structural shift in the manner in which we conduct our business and a review of all aspects of our performance – strategies, risks, operational efficiencies, environmental benchmarks, safety, employee wellbeing, community relations and ultimately the license to operate.

The magnitude of the task, especially new product development, raw material security and manpower capacity and capabilities, was effectively addressed through our Total Quality Journey. It has transformed the way we work, from a result focus to the systematic pursuit of effects. We now not only have the confidence to set aspirational targets but more importantly have instituted processes to achieve them.

After becoming the only steel plant outside Japan to receive the Deming Application Prize, we challenged the Deming Grand Prize (DGP) during 2011-12, which yielded shining stories we are proud of. Experts from JUUSE (Union of Japanese Scientists and Engineers) will examine the Company during 2012-13 for this prestigious award. Total Quality Management is a journey and DGP is certainly a milestone, but the greater reward is already being reaped in the form of an inspired workforce, a more systemic approach to business and a deeper understanding of the individual's role in the business.

Our customer centric approach to product development is aimed at creating high quality products for all segments. This year, while we introduced high-end steel for automotive applications, we also launched roofing and fencing solutions for rural India. Products intended to serve the rural segment reflect Tata Steel's persistent call to make growth inclusive.

The Company's growth plan is supported by a raw material strategy to remain one of the most competitive steel producers globally and people strategy to continuously improve employee productivity.

### Key Challenges

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The next big step forward is to enunciate, roll out and institutionalise our process of excellence, to guide Tata Steel in the manner in which it conducts day-to-day business in the years to come, within the overall Value framework. Work has already commenced on several fronts to create the platform to meet this challenge and along with it create a next generation Tata Steel.

It includes leveraging the strategic planning process, mapping our environmental and social impacts and defining the way forward in all areas of sustainable growth. We have developed a Technology Roadmap, and are focused on improving our raw material security for the sustainability of our operations. Besides, we are also determining our Carbon Footprint, Water Footprint and capturing our social impact through the Human Development Index in the state of Odisha now, after it was accomplished in Jharkhand during 2010-11. We are working on a Memorandum of Understanding with the Bombay National History Society (BNHS) for a project on Tiger reserves and have invited a team from the International Union for Conservation of Nature (IUCN) to help us focus on issues concerning the preservation of biodiversity.



*The tribal script is reintroduced to tribal youth*

Each of our initiatives mentioned above is a transformational exercise for a diversified company as Tata Steel, in which, our operations commence with the mining of Raw Material and extend to the delivery of end products to the consumer. Some of the items have been captured in this report, and many others will progressively be reflected in the subsequent reports.

### **Accelerating Common Good**

For me the most gratifying impact of our work is the difference Tata Steel is making in the lives of the most underprivileged ones through its Affirmative Action programmes aimed at indigenous communities. Apart from the “4Es” – Employability, Entrepreneurship, Education and Employment - Tata Steel is according equal attention to a fifth “E” - Ethnicity. Industrial growth and the integration of India into a plural whole, raises the possibility of indigenous cultures being rapidly eroded. While it is good that we mainstream these communities, we also must strive to retain in them, the pride for their unique heritage, language and culture in order to help preserve their uniqueness. The progress initiated in

2011-12 through our “institution of centres for traditional scripts” for our indigenous languages has been extremely rewarding.

Another matter of great pride is the bank transfer of wages to all contractors’ workmen to ensure that they get paid the full wages as per the wage norms agreed to by our contractors. This effort is aimed at assuring contractors’ workmen of their legal rights. During the year we also launched the Suraksha Scheme to protect families of contract workmen through assured compensation in the event of a distressing fatality.

Some more commendable recent achievements are –

- ◆ The achievements of Mrs. Premlata Agarwal, the first lady from Jharkhand and the oldest from India to scale Mt. Everest,
- ◆ Two young people from Jharkhand, Mr Meghlal Mahato and Ms Binita Soren and an instructor of the Tata Steel Adventure Foundation Mr Rajendra S Pal, recently scaled the world’s highest peak.
- ◆ 2012 is the year of the London Olympics in which two archers trained by Tata Steel represented India; also, an employee of the Company had been selected to coach the Indian Women’s Archery team.



*Atop Mt Everest - Ms Premlata Agarwal hoists the Tata Steel flag*

It makes me extremely proud that we are sustaining the Vision that the first Chairman of the Company, Sir Dorabji Tata had, for the development of sports in the country. He personally financed the Indian contingent that participated in the Paris Olympics in 1924 and previously sponsored two Indian athletes who competed in the Antwerp Olympics in 1920. Sir Dorabji Tata went on to become the first President of the Indian Olympic Association when it was formed in 1927.

The Olympics inspire me to reiterate its motto “Citius, Altius, Fortius” – “Faster, Higher, and Stronger” which I believe has immense resonance for Tata Steel of today.

A handwritten signature in black ink, appearing to read 'Hemant M Nerurkar'.

Hemant M Nerurkar  
Managing Director,  
Tata Steel Limited

30th October 2012

# EXCELLENCE ENABLERS



*Tata Steel bags the 'NDTV PROFIT BUSINESS LEADERSHIP AWARDS 2011'*



*Forbes India confers its Best Conscious Capitalist Award on Tata Steel Limited*



*CNBCASIA confers its Corporate Social Responsibility Award*

## GOVERNANCE SYSTEM

### Excellence Enablers

A Stakeholder Approach to Business  
Labour Management Relations  
Public Policy  
Commitments to External Initiatives  
Tata Code of Conduct

## GROWTH DRIVEN BY EXCELLENCE

### Excellence Enablers

- Expansion projects
- Enhanced Offering
- New Product Solutions
- Raw Material Security
- Localisation of the Supplier Base
- Supporting Infrastructure Development

## OPERATIONAL EXCELLENCE

### Excellence Enablers

- ECO EFFICIENCY
- Material Efficiency
- Energy Efficiency
- Operational Excellence
- Water Efficiency
- Improving Air Quality
- Sustainable Mining Practices
- Logistics Efficiency

## HAPPY & ENGAGED WORKFORCE

### Excellence Enablers

- People Development Architecture
- Capacity and Capability Building
- Employee Happiness
- Safety Excellence Journey
- Wellness@Workplace Programme

## PARTNERSHIP IN THE VALUE CHAIN

### Excellence Enablers

- Responsible Procurement
- CLAP (Contractors Labour Awareness Programme)
- Suraksha Scheme for Contract Labour
- Supplier Governance Mechanism
- Value Creation for the Customer
- Customer Satisfaction

## COMMUNITY DEVELOPMENT

### Excellence Enablers

- Mainstreaming Indigenous Communities
- Mid day meal
- Tata Parivar Scheme
- Inclusive Growth through Sustainable Livelihoods
- Bridging the healthcare deficit
- Public-Private-Partnership to prevent HIV/AIDS
- Improving Physical Infrastructure
- Social change through Sports

## IMPROVEMENT AND INNOVATION

### Excellence Enablers

- Resource Conservation
- New Product Development
- New Process Technology
- Advocating Safe Use of Products
- Lifecycle Assessments
- Environmental Product Declaration

# EXCELLENCE FOR COMMON GOOD

## Tata Steel's Vision :

"We aspire to be the global steel industry benchmark for value creation and corporate citizenship" - places equal emphasis on value creation and corporate citizenship. It makes inclusive growth a natural corollary to the Company's corporate strategy, ensuring that a share of the benefits accruing from value creation devolves on communities where the Company operates.

The Strategy Management System cascades the Company's Vision into business objectives and further into strategies to realise it. Each strategy is supported by excellence processes, monitored and reviewed by the Board and Corporate team through Key Performance Measures. The adoption of this Strategy Management Framework allows the Company to capture learnings from the past, prioritise its actions and focus on necessary and sufficient enablers to proactively address the changing business environment and stakeholder expectations.



*The state of the art H Blast Furnace is among the largest and most energy efficient in India*

Tata Steel's Strategy Management System is governed by its Business Planning Framework, which ensures engagement with all key stakeholder groups for inputs and feedback. The framework has been customised for all business verticals of the Company. The feedback of the stakeholders is captured through formal stakeholder engagement mechanisms.

Tata Steel business objectives are a reflection of the expectations of its stakeholders, its commitment to the eight sustainability indicators as a member of World Steel Association (worldsteel) as well as the rights of its stakeholders.

## Business Objectives

- To be the preferred supplier in the chosen market segments
- To grow in size to participate in the growing global / Indian steel industry
- To ensure better ownership of captive raw materials for long term competitiveness
- To hasten the speed of improvements so that cash flows match our aspirations and plans
- Develop proficient and engaged employees
- To improve safety, health and environmental performance
- To improve the life of communities around our area of operations

## worldsteel Sustainability Indicators

- Greenhouse Gas Emissions
- Energy Intensity
- Material Efficiency
- Environment Management System
- Loss Time Injury Frequency Rate
- Employee Training
- Investments in New Products and Processes
- Economic Value and Distributed

# CORPORATE CITIZENSHIP



*Skilled manpower lead Tata Steel's growth aspirations*

## To develop happy and engaged employees:

To enhance the capacity and capability of its people, major new initiatives during the reporting year were the institution of a people development architecture to improve focus on the training and development needs at all levels, along with investments to improve employee happiness.

## Safety and Health of the employee:

Given the nature of steel-manufacturing operations, Tata Steel strives to provide an injury-free workplace as well as focus on the well-being of its workforce through its Safety Excellence Journey, Occupational Health initiatives and Wellness@Workplace programme, all of which are interminable programmes.

The implementation of Process Safety Risk Management - to reduce the occurrence of high consequence but very low frequency events - and the special focus to reinforce Behavioural Safety Management and secure fatality potential hazard has eliminated fatalities due to fall from height or asphyxiation in confined spaces, causes for the highest number of fatalities in steel industry in the world. Tata Steel's LTIFR at 0.51 is a benchmark for the Indian steel industry.

## Energy Efficiency and Emissions:

Along with the rest of the global steel industry Tata Steel faces the challenge of reducing CO<sub>2</sub> emissions and efficiently utilising finite resources. A roadmap has been developed to reduce Tata Steel's CO<sub>2</sub> emissions, optimise resource utilisation and improve its overall ecological footprint.

## Material Efficiency:

To ensure optimal use of resources, Research and Development for innovations in ore and coal beneficiation, process optimisations, waste management - through reduce, reuse and recycle - is being pursued.

## Economic Value Distributed:

Tata Steel's social interventions address the aspirations of two key stakeholder groups, the rural communities and the urban stakeholders in Jamshedpur.

Initiatives taken during 2011-12 in response to the aspirations of rural and urban stakeholder groups include:

### **Rural stakeholders:**

- Establishment of centres to promote traditional scripts of ethnic languages
- Launch of Tata Steel Skill Development Society
- Measurement of HDI in villages located on the periphery of the Company's operations in Odisha, after completion of the project in Jharkhand
- Basic health care to improve the health status of the community and reduce infant and maternal mortality
- Launch of a Renewable Energy Project to illuminate villages across operational areas
- Significant increase in educational scholarships offered to economically and socially challenged students and extension of the scheme to new locations

### **Urban stakeholders:**

- Serving the stakeholders in Jamshedpur through assured availability of Water, Electricity and Road infrastructure
- Central Kitchen to provide the mid day meal for ~100,000 students of Government schools
- Focus on empowerment of youth and women

# VALUE CREATION



Tata Steel's strategy for Value Creation focusses on four key areas:

- Growth in size to participate in the growing steel industry
- Enhancing value through enhanced offerings
- Ensuring raw material security
- Improving cost competitiveness.

This growth is aimed at fulfilling India's growth needs by serving among others - India's rural population, the urban construction sector, infrastructure industry and world-class manufacturers with bases in India

## Growth driven by Excellence:

Tata Steel has been pursuing growth in India through brownfield and greenfield expansion projects. The brownfield expansion project at the Jamshedpur Steel Works will add 2.9 MTPA to its crude steel making capacity. The project will enhance total crude steel making capacity to 9.7 MTPA. Trial production and testing has commenced at the Pellet Plant, 1 Blast Furnace, LD#3, first stream of the Thin Slab Caster (TSC) and fines circuit of the Noamundi iron ore mines. All balance facilities under this project are scheduled for completion in 2012-13.

Dhamra Port commenced commercial operations in May 2011 and Tata Steel is seeing an integrated logistics cost benefit on the cargo moved through Dhamra Port, which is expected to further increase once the Odisha project is commissioned.

## Investments in New Products and Processes:

2.54 MTPA of the 2.9 MTPA to be added at Jamshedpur is planned for high end Flat Steel, while the entire 6 MTPA facility at Kalinganagar in Odisha will produce high-end automotive Flat Products. Tata Steel's New Product Development programme led to the introduction of several new offerings during the year.

The Company's comprehensive growth strategy also includes capacity growth through downstream expansions in the product portfolio of steel applications like tubes, packaging and high-end automotive steels. In addition to its product portfolio, the Company strong service focus and programmes for customer value creation are an important differentiator in the market place.

## Ensuring raw material security:

The long-term strategy of securing ownership of assets and enhancing self sufficiency in raw materials, resulted in the implementation of existing raw material projects being expedited both in India and overseas.

## Improving cost competitiveness:

Tata Steel's Quality Assurance systems have significantly improved product and service quality performance. The special improvement initiative - 'Kar Vijay Har Shikhar' - has resulted in savings of Rs. 9450 Million in 2011-12. Going forward it will create a significantly differentiated position for Tata Steel's products in the marketplace and develop a market to support Tata Steel's volume expansion in India, by focusing especially on Small and Medium Enterprise (SMEs).

# OPPORTUNITIES AND RISKS

The steel industry is subject to risks and opportunities arising from external business environment such as regional demand - supply imbalances, volatile swings in market demand and prices, more recently exacerbated by swings in input prices, rising interest rates, exchange rate volatility as well as the euro zone crisis and the global slowdown. Tata Steel's Long Term Plan takes into account such risks and opportunities.

## Growth Opportunities

As economies grow the demand for steel increases. India has been a net importer of steel, especially the high value added end products, and is likely to remain a net importer for some time to come. The demand for steel in India will continue to grow strong given the need for infrastructure growth and urbanisation, providing market opportunities that warrant further expansion of steel capacity.

Our 2.9 million tonne expansion in Jamshedpur is in the final stage of completion and is expected to go on stream during the financial year 2012-13, taking Jamshedpur's capacity to 9.7 million tonnes per annum.

The greenfield project in Odisha is progressing and capacity is planned to increase by 6 million tonnes in two phases of 3 million tonnes each.

## Raw Materials Security and Price Volatility

Raw material availability depends, to a large extent, on worldwide supply and demand relationships. Tata Steel is exposed to risk of non-availability and price volatility of essential raw materials.

The existing operations are fully self-sufficient in iron ore. Around 60 per cent of our coal requirement is imported (mainly from Australia) exposing us to risk of raw material supplies and volatility in prices mainly due to natural calamities, labour issues and port congestions. Also, for limestone Tata Steel is dependent on supplies from Gulf countries, which are exposed to geopolitical risks.

The Company Raw Material Strategy proactively tracks the factors affecting availability and prices of raw materials and plans its sourcing strategy accordingly. Alternate supply sources are explored to reduce the risk exposure.

## Technology Risks

A key challenge for the Company is to ensure that its plants are equipped with updated technologies in order to serve clients and secure cost competitiveness. The Company's Technology Roadmap provides the way forward.

Continuous R&D efforts, with the support the Technology Group, are aimed at advancing our position in technology for both products and processes.





*Energy conservation and CO<sub>2</sub> abatement initiatives are part of Tata Steel's progress towards a green economy*

## Manufacturing safe steel

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The manufacture of steel and mining involves steps that are potentially hazardous if not executed with due care. The Company's businesses are subject to laws, regulations and contractual commitments relating to health, safety and the environment.

Extra efforts are taken to ensure workplace safety at all our sites of operations. Tata Steel is committed to the worldsteel goal of injury free steel.

## Progress towards a green economy

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Tata Steel is adopting Best Available Technologies and replacing multiple blast furnaces with a smaller number of high-capacity furnaces and several other measures to enhance energy efficiency and bring about a planned improvement in CO<sub>2</sub> emissions per tonne.

It has implemented environmental management systems that are certified under ISO 14001. Tata Steel's Board of Directors review the overall health, safety and environment performance through the Safety, Health and Environment Committee.

## Internal Control Systems

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In Tata Steel, the Corporate Audit Division continuously monitors the effectiveness of internal controls with the objective of providing the Audit Committee and the Board of Directors, an independent, objective and reasonable assurance on the adequacy and effectiveness of the organisation's risk management, control and governance processes. The division also assesses opportunities for improvement in business processes, systems and controls; provides recommendations, designed to add value to the organisation and follows up on the implementation of corrective actions and improvements in business processes after review by the Audit Committee and Senior Management.

The Company Secretary ensures compliance with the SEBI regulations and provisions of the Listing Agreement. The Group Chief Financial Officer ensures compliance with guidelines for prevention of insider trading.



# A CUSTOMER CENTRIC, EXCELLENCE DRIVEN ORGANISATION



Part of the Tata Steel Group, Tata Steel Limited is a public limited company with its registered office at Mumbai, India. Among Asia's first integrated steel manufacturers, it is engaged in mining of raw materials, production and rolling of steel and marketing and sales of end products.

The Company was established by Jamsetji N Tata, the founder of the Tata companies and is today one of the flagship Tata companies. The Tata Group of Companies owned 31.35 per cent of Tata Steel by voting strength as of March 31, 2012.



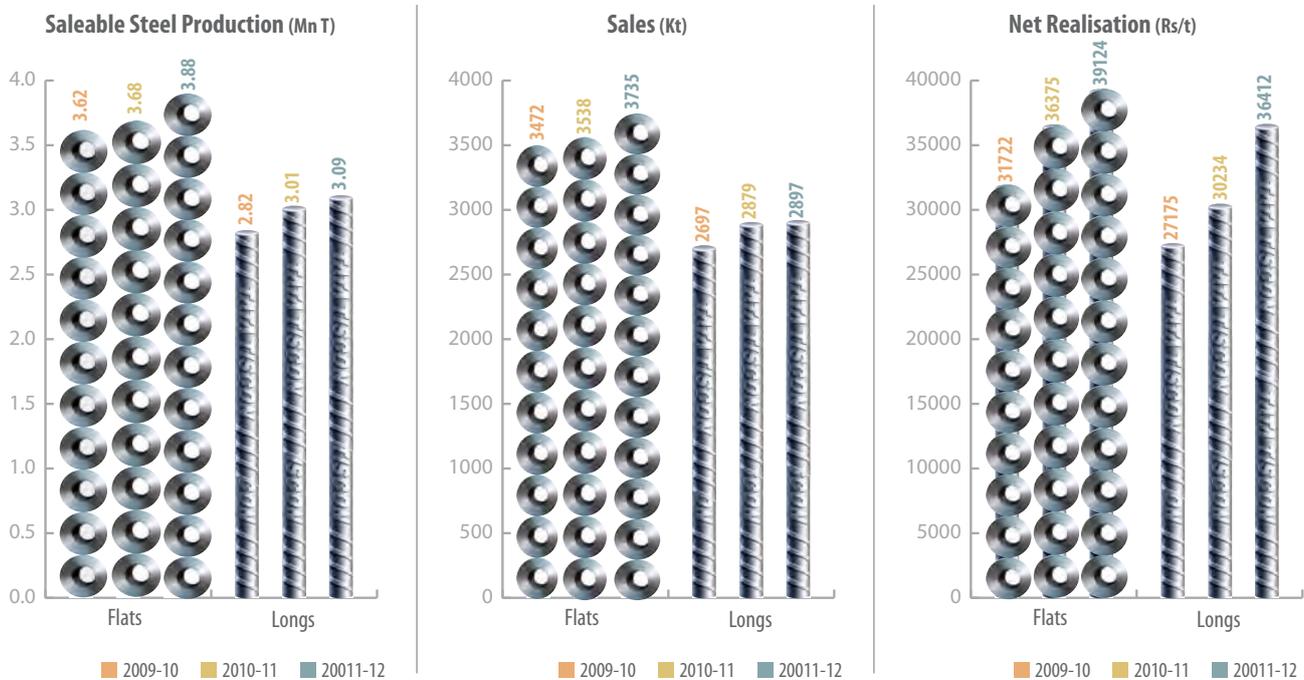
*Tata Steel is a preferred supplier to India's leading auto manufacturers*

## OPERATIONAL STRUCTURE:

Flat Products and Long Products are two key business verticals of Tata Steel. The Raw Materials Division Coke, Sinter & Iron group and Rolling Mills of the two business verticals are involved in key manufacturing functions, while Shared Services is a support function for its only steel-producing unit in India, the Jamshedpur Works. Tata Steel's crude steel production capacity of 6.8 MTPA is being increased to 9.7 MTPA through a brownfield expansion project of 2.9 MTPA and a greenfield project is being executed at Kalinganagar in Odisha. The Ferro Alloys and Minerals Division (FAMD) is the largest non-steel business unit of Tata Steel. FAMD, Tubes Division and Wire Division are the larger profit centres by revenue outside the Steel Works.

## MARKET LEADERSHIP:

Tata Steel is the second largest steel producer in India, the largest supplier to the domestic automobile industry and the second largest re-bar supplier.



As on March 31, 2012 the Company had a committed workforce of 35793 employees including its Profit Centers and greenfield projects (both Officers and Non Officers) across India, spread over its operational locations in Jamshedpur, Mines and Collieries of the Raw Material Division and various Marketing and Sales offices across the country. The Company also engages contract employees for its project and utility maintenance through service contracts.



After Quality Inspection Cold Rolled Coils are ready for despatch at the Steel Works

## PRIMARY BUSINESS GROUPS WITH PRODUCTS AND BRANDS

Business	Market Segment	Product	Brands	
Long Products	Distribution	Reinforcement Bars	Tata Tiscon	
	Infrastructure/ Industrial Construction		Tiscon CRS	
	Automotive & Construction	High Carbon Wire Rods	Tiscon 500	
	Automotive, Construction & General Engineering	Low Carbon Wire Rods	Tata Tiscon 500 D	
Flat Products	Automotive	Hot Rolled Products		
	Automotive	Cold Rolled Products	Tata Steelium	
	Automotive	Galvanised Products	Tata Shaktee	
	Steel Roofing		Galvano	
Ferro Alloys & Minerals Division	Steel Manufacturing	Chrome Alloys		
	Carbon & Stainless Steel	Manganese Alloys		
	Stainless & Alloy Steel		Chrome Concentrate	
			Fluxes	
			Manganese Oxide	
			Manganese Dioxide	
Tubes Division	Conveyance	Commercial Tubes	Tata Pipes	
	Construction	Structural	Structura	
	Auto, Boilers and Engineering	Precision Tubes	Tata Precision Tubes	
Wire Division	Institutional	Tyre Bead Wire, Spring Wire, Spoke Wire,	Tata Wiron	
	- Automotive, Infrastructure, Power, Annealed	LRPC, PC Wire, Cable Armour, ACSR, Card		
	Retail	Clothing Wire, Galvanised Wire, Welding Wire		
	- Galvanised, Welding			

## TATA STEEL'S BRANDS ARE INDIA'S MOST TRUSTED NAMES



## GROWING IN SIZE IN A GROWING INDUSTRY

- **Best-ever** sales of 6.97 million tonnes, exceeding the previous best of 6.69 million tonnes
- **25 per cent increase** in sale of branded products with total branded sales accounting for 2 million tonnes
- **A newly institutionalised** Corporate Quality Assurance System ensured the best-ever Quality performance
- **Flat Products** sales registered a 6 per cent increase to reach 3.74 million tonnes
- **Sales** in the Automotive segment crossed 1 million tonnes with highest-ever Skin Panel sales of 0.06 million tonnes.
- **Tata Shaktee** GC sheets recorded an 11 per cent increase in sales at 0.212 million
- **Branded products** like Steelium and Galvano recorded a 7 per cent growth.
- **Long Products** achieved a 40 per cent increase in sales of Tata TISCON at one million tonnes sales in the retail segment
- **Leveraging** the countrywide distribution network, with tracking dealer inventory on a daily basis, led to a spurt in retail sales.
- **Value-selling** of Cut and Bend and Coupler products from 'Ready Build' centres at distributor premises aided the Company's product differentiation strategy
- **The Ferro Alloys and Minerals Division** continued to supplement strong earnings inspite of weak international demand



*Brand outlets and exclusive showrooms for TATA SHAKTEE ensure that the brand promise is delivered to customers*

## SCALE OF OPERATIONS IN 2011-12

Particulars	UoM	2009-10	2010-11	2011-12
Crude Steel Production	Mt	6.56	6.86	7.13
Saleable Steel Sales	Mt	6.44	6.69	6.97
Gross Revenue	Rs Crs	27,612	32,045	37,028
Net Turnover	Rs Crs	25,022	29,396	33,933
EBITDA %	%	36.68	39.55	34.06
Exceptional Income/(Expenses)	Rs Crs	628	648	511
Net Fixed Assets	Rs Crs	16,006	18,774	29,873
Capital Employed	Rs Crs	64,233	77,683	81,634
Net Worth	Rs Crs	37,169	48,445	54,491
Net Debt Equity	Ratio	0.61	0.49	0.41
Research & Development Expenses	Rs Crs	43.86	80.57	52.98
Market Capitalization	Rs Crs	56,767	59,720	45,808
Basic Earnings Per Share	Rs./share	60.26	75.63	67.84
Dividend Rate	%	80%	120%	120%
P/E Ratio	Ratio	10.50	8.20	6.93
Total Number of Employees:	Numbers	34,101	34,912	35,793

## CHANGES DURING THE REPORTING YEAR

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Tata Steel's brownfield expansion project at Jamshedpur includes setting up a 6 MTPA pellet plant, a new Blast Furnace with a capacity of 3.05 million tonnes per annum, a new LD Shop, a Thin Slab Caster and 2.4 MTPA Rolling Mill to produce Hot Rolled Coils.

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The expansion project also entails augmentation of the Noamundi and Joda Iron Ore Mines and the setting-up of two coke ovens batteries with a capacity of 0.7 million tonnes per annum each. Trial productions have begun for fines circuit of Noamundi Mines, Pellet Plant, at the 1 Blast Furnace and the 1st stream of LD#3 and the TSCR Mill. All balance facilities under this project are to be completed in 2012-13. Major civil and refractory work is nearing completion for Coke Oven Battery No. 10. Mechanical and electrical work is in progress.

Tata Steel Limited has de-leveraged to rebalance its capital structure over the previous year. It repaid ~ Rs. 3,500 crores of borrowings during the year, creating headroom for future project financings. In May 2011, Tata Steel successfully launched the second tranche of its offering of Corporate Hybrid Perpetual Securities worth Rs.775 crores. To maintain a liquidity buffer, the Company also tied up an unsecured long term Rupee term loan facility of Rs 2,000 crores (\$400 million) to be drawn over the next 10 months and to be repaid over the next five years. Tata Steel had cash and cash equivalents of Rs. 3,947 crores as on 31st March 2012.



# REPORT PARAMETERS

## Report Profile, Scope and Boundary

In 2011-12 the profile, scope and boundary of the Corporate Sustainability Report has been expanded to respond as per the Global Reporting Initiative (GRI) G3.1 guidelines and the Mining and Metals Sector Supplement.

This report also includes for the first time three of the Company's profit centres, Ferro Alloys & Minerals Division, Tubes Division and Wire Division, in addition to the Raw Materials Division - OMQ & Collieries, Steel Division - Long Products and Flat Products - covered in the previous years. These account for over 99 per cent of total GHG emissions by the

Company and ~ 90 per cent of the profits of the Company. The individual profit centres included contribute 5 per cent or more of the Company's revenue. This is the twelfth consecutive annual report; the last report was published in 2010-11.

The report focuses on the operations, economic, environmental and

social impacts of Tata Steel Limited standalone for the period April 1, 2011 to March 31, 2012.

While compiling this report, the GRI principles of Materiality, Stakeholder Inclusiveness, Sustainability Context and Completeness have been applied.

## Contact Person

Mr Shubhenjit Chaudhuri  
Chief, Corporate Sustainability, Tata Steel Limited  
Email: shubhenjit@tatasteel.com

## Materiality

The initiatives included as part of this Report are based on a materiality assessment on issues important to Tata Steel's stakeholders. Any omission does not imply that a concern is not being addressed.

Tata Steel undertook a detailed exercise to map its Corporate Strategy and Objectives prior to the preparation of this report.

The key indicators covered in the report were shortlisted on the basis of the Tata Steel Group Vision, Mission, Values and Policies; key learning & remaining problems from 2010-11; inputs from stakeholder engagements through surveys, feedbacks, relationships meets, etc; analysis of internal & external factors; and senior management views. The process of identification of issues/strategies and prioritisation has been explained in Section 1.2 of this Report.

Tata Steel's stakeholders include its customers, investors, vendors, people, community and regulatory authorities

where Tata Steel operates. Further, Tata Steel's Mission states: "Consistent with the vision and values of the Founder, Jamsetji Tata, Tata Steel strives to strengthen India's industrial base through the effective utilisation of staff and materials."

## Metrics

Tata Steel has identified Key Performance Measures, which are globally accepted standards in areas of priority against which it measures performance. As part of its membership of worldsteel, Tata Steel adheres to the worldsteel sustainability charter. In addition to adopting the worldsteel methodology for CO<sub>2</sub> emissions, in 2011-12 Tata Steel adopted the worldsteel methodology for tracking waste generation.

## Vision

All elements of the Company's Vision and Goals have been addressed through specific Corporate Objectives and Corporate Strategies and are tracked through Key Performance Measures.

## Independent Assurance

Tata Steel continues to seek independent assurance for its Corporate Sustainability Report. Accordingly since 2008, Tata Steel appointed Det Norske Veritas AS (DNV), as the independent assurance provider.

## GRI Index

Refer pages 107 - 112



# GOVERNANCE SYSTEM

## MANAGEMENT APPROACH

The Board of Directors of Tata Steel Limited consider themselves a trustee of its stakeholders. The Committees of the Board of Directors maintain direct oversight in various areas.



*The Hon'ble President of India, Smt Pratibha Devisingh Patil (left) confers the Padma Bhushan, among India's highest civilian honours on the Vice Chairman of Tata Steel, Mr B Muthuraman (right)*

### GRI INDICATORS:

4.1-4.3 / 4.4 / 4.5 / 4.7 / 4.15 / 4.8 / 4.9-4.10 / 4.14 / 4.16 / 4.17 / MM4 / LA 4 / LA5 / HR 4 / HR 11 / HR9 / SO 5-SO 6 / 4.11-4.13 / SO 2-4 / SO8 / MM COMPLAINTS / EN 28 / PR8 / PR9

### WORLDSTEEL INDICATORS:

We conduct our business with high ethical standards in our dealings with employees, customers, suppliers and the community.

### EXCELLENCE ENABLERS :

- A Stakeholder Approach to Business
- Labour Management Relations
- Public Policy
- Commitment to External Initiatives
- Tata Code of Conduct

The Non Executive Chairman of the Company, also the Chairman of Tata Sons - the largest shareholding organisation - and board members reviewed the compliance status of the organisation on sustainability issues. The Managing Director makes a declaration at each Board Meeting regarding the compliance with provisions of various statutes after obtaining confirmation from all the units of the Company.



**Committees driving sustainability**

The Safety, Health and Environment Committee of the Board (constituted in 2009) monitors and reviews the deployment of policies across Tata Steel Group. The Managing Director is a part of the five-member Board. The Managing Director heads a company level Steering Committee on Climate Change.

Corporate Governance Report for the year 2011-12 (as required under Clause 49 of the Listing Agreements entered into with the Stock Exchanges) is available in the Annual Report (pages 111-134). It includes disclosures with respect to remuneration policy for senior management. All senior management and officers forego 10 per cent of the annual variable pay in the event of a fatality during the year.

# A STAKEHOLDER APPROACH TO BUSINESS

Tata Steel identifies its stakeholders based on voluntarily accepted obligations and those whose interests it must address in the value creation process. The Company includes interest groups who have the potential to impact its goals and aspirations and those who it may in turn impact. Its strategic

planning and risk management processes systematically collect and analyse information on existing and emerging stakeholders and continually realign organisational priorities.

It includes internal and external as well as primary and secondary

stakeholders for strategic engagement. Priority is accorded on the basis of Power Influence Matrix. Engagement with these stakeholder groups helps identify important issues and consequently opportunities and risks.



*The Chairman, Mr Ratan N Tata (front row/second from right) meets members of the Tata Workers' Union*

## Capturing stakeholder inputs

Inputs from external stakeholders captured by the facing division/department and identification of risks (including risk to reputation) are integral to the planning framework.

Inputs through internal feedback that capture learnings from the past are also part of the planning framework. The long term and annual

planning process engages a cross section of employees from the Corporate team to those across various levels of management.

Select stakeholder inputs, which could harm Company's reputation, are immediately taken up with the Board including with the Chairman for appropriate actions and communication to stakeholders.

**Driving improvement through stakeholder inputs :**

This engagement helps identify key issues before the stakeholders. The top management formulates the strategy for the Company to address sustainability issues and to achieve the Company’s Vision, Mission and policy objectives and proposes them to the Board.

As a signatory of the Sustainable Development Charter of

the World Steel industry the top management monitors the implementation of its sustainability indicators.

In 2011-12, the top management proposed the revision of the Safety target for LTIFR to 0.2 by 2017, reducing GHG intensity of GDP by 20-25 per cent from the 2005 level by 2020 and reducing water utilisation by half.

Sustainability challenges, risks and opportunities for the Company are identified and reviewed during the strategy planning process, formulation and business planning. The Company has developed a customised planning framework to arrive at strategies and to formulate its Annual, Short Term and Long Term Plans (LTP) .

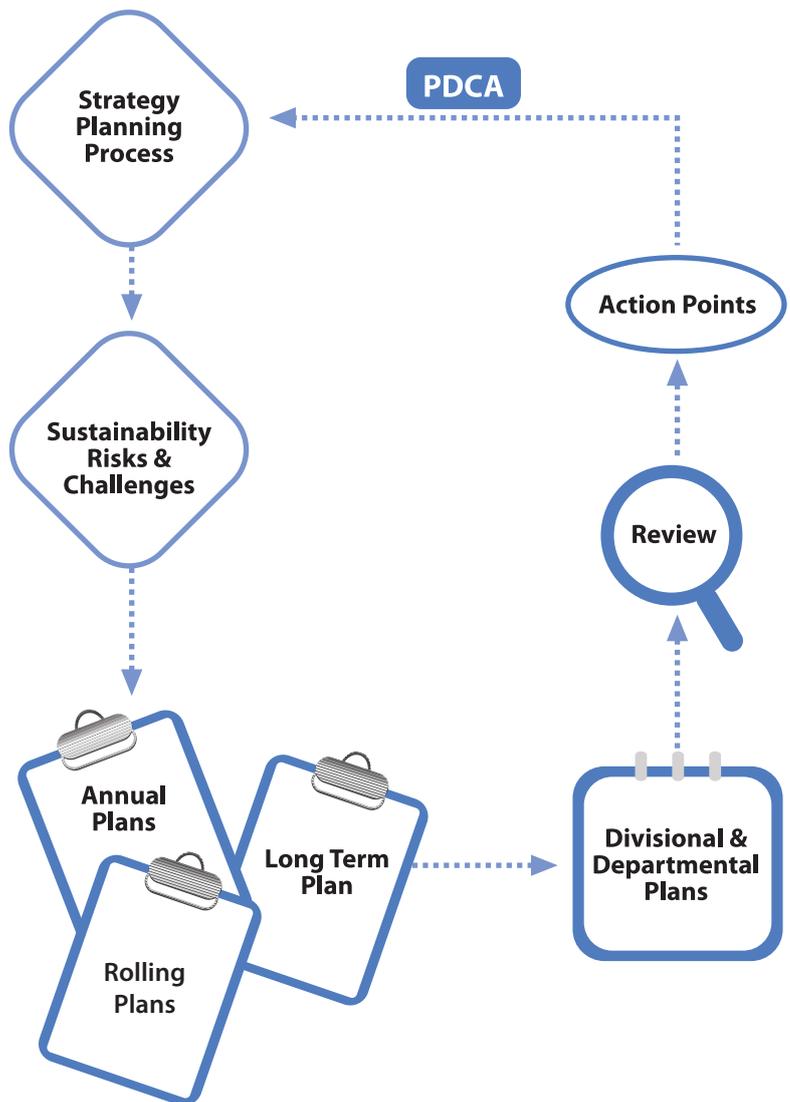
Tata Steel has a robust company level review system to ensure business continuity. In addition each Division and Department has systematic review mechanisms.

The outcomes from the reviews are acted upon. Some action points flow back as learning into the planning process through the institutionalisation of the PDCA cycle.

**Projects taken up to address sustainability issues through this process include:**

- The Pellet Plant to promotes material efficiency,
- Coke Dry Quenching to achieve energy efficiency and reduce CO<sub>2</sub> emissions,
- Central Effluent Treatment plant to minimise waste water discharge

**STAKEHOLDER INPUTS INTO STRATEGY FORMULATION**



- Support for setting up of a Mid-Day Meal kitchen to improve the HDI in Tata Steel’s area of operations.

**Stakeholder facing departments :**

The Company's top management actively engages with its stakeholders through structured processes that comprehensively cover all stakeholder groups.

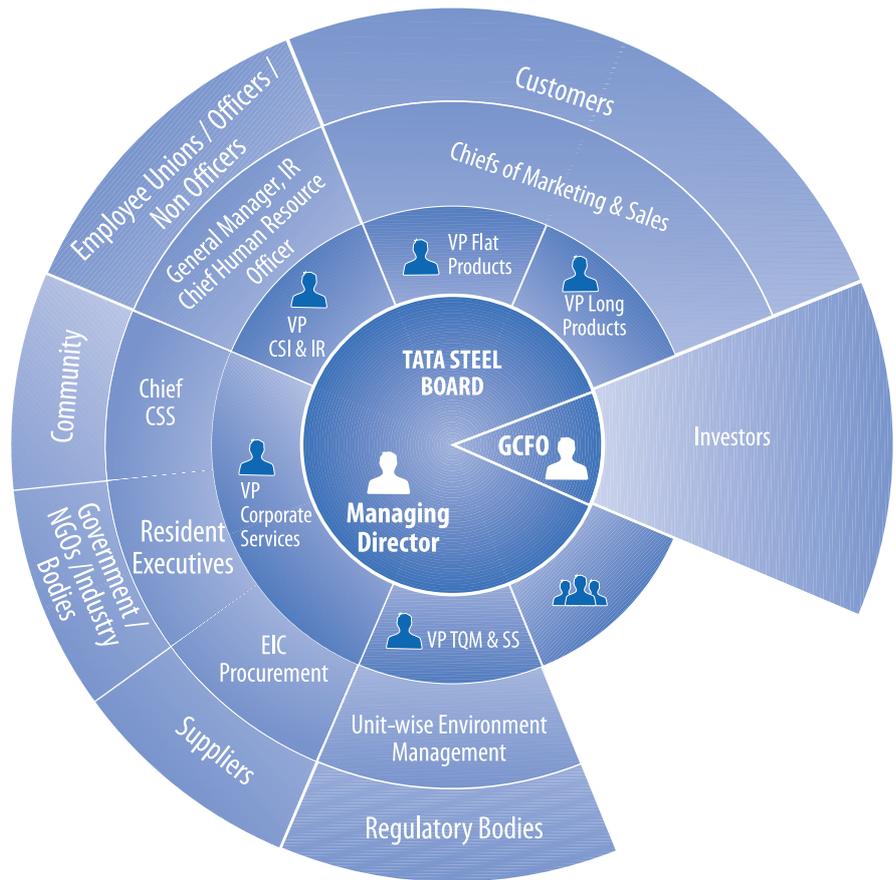
**STAKEHOLDER GROUPS**

**Employees:**

Tata Steel respects the employees' right to exercise freedom of association and collective bargaining. Tata Steel's proactive approach to stakeholder engagement, open door policy, joint consultative process and mechanisms for conflict resolution has been rewarded with over eight decades of industrial harmony and the continued license to operate in the very communities it began operations over a century ago. The Company takes pride in being the employer of choice in several instances to four generations of the same family.

Organisational changes are in line with the policies of the Company, agreements with the various unions and Works Standing Orders. All such changes in the status are suitably communicated/ notified to the employees either directly or through the Union within the specified time.

**STAKEHOLDER ENGAGEMENT MAP**



*Mr Ratan Tata meets employees at the West Bokaro collieries*



*A Joint Departmental Council meeting in progress*

### Suppliers :

Suppliers are seen as a valuable source of knowledge and resources. Regular, structured engagements with suppliers are undertaken to encourage capacity building, business resources and adoption of green supply and

ethical practices. In 2011-12, the Supplier Relationship Management programme was rolled out to nine of the 43 Suppliers selected under the "Strategic Partner" category across various buying segments in Tata Steel.

### Customers including channel partners :

A reduction in working capital of customers through a reduction in inventory by 10-15 days and non price benefit of more than Rs 40 crores for auto customers was achieved in 2011-12 through specific initiatives that

address customer concerns captured by Customer Service Teams or through Customers / Distributor Meets and Satisfaction Surveys.

### Investors :

The Managing Director and the Group Chief Financial Officer (GCFO) meet investors during Analyst Meets, Press Meets, Annual General Meetings, and Road Shows on a quarterly and annual basis to share the current and future plans of the Company and respond to their concerns. Transparency through communication, especially related to return on investment, governance and future prospects address shareholder concerns related to profitability, creating value for investors, strengthening the Balance Sheet and timely implementation of projects.

The interest of the minority shareholder mainly lies in receiving regular dividend income and seeing their investments appreciate in the long term.

Despite lower profits in 2011-12, the Directors maintained the dividend to shareholders at the same rate as was paid in the previous year. In their view the dividend was maintained because the challenges faced by the Company during the reporting year now is not an endemic situation but a factor of economic downturn, which will recover in the coming years.

## Community :

Tata Steel's social strategy is revisited in response to the aspirations of the community. The progress of the plans is jointly monitored and reviewed. Funds for the implementation of the plans are part of the pre budget exercise.

## Greenfield Locations :

At all greenfield sites the Company diligently follows processes as defined by law. The Company is also conscious of the promise that entry of industry brings to such locations. Its unique Resettlement and Rehabilitation Programme, Tata Parivar carries the promise of substantially improving the quality of life of the project affected families.



*Village heads who attended the workshop with officers of Tata Steel*

The Corporate Social Responsibility Plan 2012 for Ores Mines & Quarries Division was envisioned with village Mankis and Mundas (village heads) and elected Panchayat members during two separate workshops in January 2012, within the overall social strategy framework of the Company. A total of 28 village heads and 21 elected Panchayat members attended the workshops. The plan envisages further improvements in access to health, education, irrigation and skill development training.

## Indigenous Communities :

Myriad ancient tribes accounting for a higher percentage of the population than the National average inhabit the states of Jharkhand, Odisha and Chhattisgarh where Tata Steel operates. Therefore they constitute a significant part of the communities across raw material locations, particularly at West Bokaro Division and the Ore Mines & Quarries.

An important thrust area is to enable primitive tribes groups- the Birhore and the Sabar in particular - to become economically self reliant by providing them livelihood opportunities.

Members of the senior management and representatives across all units regularly engage with village opinion leaders, youth and women to integrate the aspirations of indigenous communities within the social strategy of the Company, as well as help them benefit from greater awareness and understanding on their rights as indigenous communities. Minutes of the meetings are shared with them and joint review of the progress of projects undertaken. This consultative approach has ensured an enduring and peaceful relationship with indigenous communities.



*The top management meets beneficiaries to assess the impact of Tata Steel's community development programmes*

#### Media :

The top management participates and features in both print and electronic media frequently to candidly state their opinion in the best interest of the sector in particular and the nation in general. It ensured information access on the sector and compliance with the disclosure obligations of listed-companies status. The Managing Director met members of the print and electronic media four times during 2011-12.

#### NGOs & Institutions :

Members of the top management not only extend material support but also volunteer their time and skills as members and office bearers of a host of organisations working for the social sector and society in general. These include social agencies promoted by Tata Steel and societies supported by it. This association with NGOs and institutions allows access to experts, knowledge partnerships, best practices, consultancy and research opportunities.

The Company's Tubes Division in Jamshedpur, for instance, provides infrastructure support and resources to four organisations, Kalyani Welfare Trust, Chotagovindpur Club, Navjivan Welfare Society and Baridih Recreation Club to identify and deliver welfare programmes for communities around its establishments. A team from the Division, constituting senior officers visits them regularly, conducts meetings, monitors the activities and reviews progress of the projects entrusted to them.

# LABOUR MANAGEMENT RELATIONS

All policies, standards and strategies are undertaken in consultation with the Workers' Unions at all locations through joint consultations.

All employees of the Company have the freedom to express their opinion freely and raise rights-based issues through forums for two-way communication, participative management and joint consultations.

Non-officers of the Company interact with the top management through the monthly MD Online and a minimum of 56 Joint Departmental Council meetings held to ensure that issues related to operational changes, production, productivity, quality, safety, welfare, training, etc. are addressed in a timely and effective manner.

Free and fair elections via secret ballot are periodically held across all locations for unions representing its workforce. The next election of the Tata Workers' Union, the largest representative body, is scheduled for early 2012-13.

Officers are free to express their opinion at the quarterly General Dialogue. Issues, concerns and suggestions related to career planning, compensation and growth, training and development, infrastructure, amenities for employees and creating a safe and healthier work

environment are addressed through these meetings. A new HR Desk was launched in 2011-12.

A special forum for women's empowerment addresses issues related to women.

Tata Steel's culture of continuous improvements rests entirely on the contribution of its employees through their participation in initiatives under the Business Plan Meeting, Total Quality Management journey, Small Group Activity (SGA) including TPM Circles, Quality Circles and "MASS" teams to engage employees in improvement activities and thereby create a vibrant work place. Employees directly contribute through Suggestion Management, Joint Works Council & Joint Departmental Councils, Quality Board Meetings, Safety Committees, Communication Meetings and the like.

Deeper involvement and empowerment of frontline employees has also been achieved through the drill down of Key Performance Indicators under the Total Quality Management process.

**Joint Consultative Council of Management (JCCM)**  
**Management Representatives + Employees' Representatives**  
 (Chairmanship alternates between MD, Tata Steel & President, TWU every year)

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>■ Joint Works Quality Committee</li> <li>■ Joint Committee for Employee Training &amp; Development</li> <li>■ Hospital Advisory Committee</li> </ul> | <ul style="list-style-type: none"> <li>■ CD&amp;SW Advisory Committee</li> <li>■ Joint Amenities Committee</li> <li>■ Sports Coordination Advisory Committee</li> </ul> |
|---|---|



**Joint Works Council (JWC)**  
**Management Representatives + Employees' Representatives**  
 (Chairmanship alternates between VP, Tata Steel & General Secretary, TWU every year)

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>■ Suggestion Box Committee</li> </ul> | <ul style="list-style-type: none"> <li>■ Central Canteen Managing Committee</li> </ul> |
|--|--|



**Joint Departmental Council (JDC)**  
**Management Representatives + Employees' Representative (Equal Representation)**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>■ Suggestion, agenda and follow up Sub Committee</li> <li>■ Quality and Training Sub Committee</li> </ul> | <ul style="list-style-type: none"> <li>■ Welfare and Amenities Sub Committee</li> <li>■ Safety, Health &amp; Environment Sub Committee</li> </ul> |
|--|---|

# PUBLIC POLICY

Tata Steel participates in stakeholder consultations with Committees and Ministries both through industry associations and directly when invited to do so by the relevant planning and policymaking bodies to support short, medium and long term planning exercises where inputs are invited from each sector. These include established Governmental processes and transparent multi-level platforms aimed at enacting new Acts, Rules and Regulations or revisiting existing legislations.

The principle consistently followed by Tata Steel for policy advocacy is to promote common good by making the prosperity of the community the purpose of its enterprise. It therefore does not support any single political ideology.



*Probationers of the Indian Police Service visit Tata Steel's collieries*

During the pre-budget exercise for 2012-13, the Ministry of Steel specifically asked Tata Steel for its views on an increase in the import duty on steel. The Company also joined Ministerial level sub committees constituted to discuss and develop India's 12th Five Year Plan (2012-2017), including three formed by the Ministry of Steel. The Company was a member of the Working Group on Mineral Exploration and Development (Other than Coal & Lignite). It was also invited to the Working Group on Coal & Lignite and the Working Group on the Railway Sector.

During 2011-12, the Company provided inputs for the new Mines Act (MMDR) and Land Acquisition, Rehabilitation and Resettlement Act (LARR) through presentations to members of the Standing Committee of the Parliament, concerned Ministries and Planning Commission.

It also participated in a review of India's Coal Disposal Policy and its Coal Allocation Policy. An active participant in the formulation of the New Steel Policy (up to 2050), Tata Steel is represented in all task forces formed by the Steel Ministry. The Company did not make any contribution to any political party in 2011-12.

# COMMITMENTS TO EXTERNAL INITIATIVES

## Precautionary Approach:

Alive to the fact that both raw materials critical to the manufacture of steel, iron ore and coal, are non renewable, Tata Steel focuses on research & development

on the use of inferior quality raw materials. This includes significantly higher utilisation of iron ore fines and technologies to use lower grade Indian coals.

## Signatory to Sustainable Development Charter of worldsteel

Tata Steel is a part of the World Steel Association, which represents 180 major steel producers, steel industry associations and steel research institutes from across the globe.

Given the strategic importance of this membership, Tata Steel is a signatory to the Sustainable Development Charter of worldsteel and it is part of its key programmes:

- CO2 Data Collection and Climate Action Programme
- Safety and Health Excellence Recognition - four companies have been recognised for their excellent improvements this year
- Life Cycle Inventory (LCI) Study

The Company reports its CO<sub>2</sub> emissions from Jamshedpur Steel Works to worldsteel annually and is in the process of assessing the baseline for some of its divisions spread across India.

## Support to UNGC and GRI Reporter

Tata Steel published its first GRI report in 2000-01 and is a Founder Member of the United Nations Global Compact. The Company's engagement with UNGC has deepened further with its membership of the CEO Water Mandate.

The Company is now determining its Carbon footprint and Water footprint as part of its engagements with the CEO Water Mandate and worldsteel through Water Footprint Network (WFN) and International Finance Corporation (IFC is a member of World Bank Group).

Information related to compliance with all country specific statutory guidelines, Tata Code of Conduct and standards for global businesses such as the principles of the United Nations Global Compact (UNGC) is published annually and placed in the public domain in the Company's annual Corporate Sustainability Report. This is the twelfth consecutive Sustainability Report of the Company, which has along with all others been assured by a Third Party. Tata Steel also publishes a UNGC 'Communication on Progress' document every year as a part of its Sustainability Report. All financial and non-financial reports including the analyst's meet report are

available on [www.tatasteelindia.com](http://www.tatasteelindia.com).

Tata Steel has adopted Environment, Safety and Occupational Health systems governed by ISO14001 and OHSAS 18001. The Company's Steel Works is certified to SA 8000 and ISO 14001. SA 8000 compliance has been extended to the Supply Chain. Sukinda Chromite Mines of FAMD is certified to SA 8000.

Tata Steel attaches great importance to its association to the Confederation of Indian Industry (CII). Its Vice Chairman, Mr B Muthuraman is the Immediate Past President of CII, while the Managing Director is the Chairman of its Human Resource Committee.

The Company is a lead member in various committees of CII and the Federation of Indian Chambers of Commerce and Industry (FICCI) including Steel, Mining, Environment, Infrastructure and Manufacturing Committees.

It is an Executive Member of the Federation of Indian Mineral Industries (FIMI) and the SMI (Sustainable Mining Initiative).

# TATA CODE OF CONDUCT

**As Chief Ethics Officer, the Managing Director is responsible for the deployment of the Tata Code of Conduct. A designated Ethics Counselor assists him in deploying the Tata Code of Conduct through a formal organisational structure. Designated as the Management of Business Ethics, Departmental Ethics Co-ordinators are responsible for implementation of the process. It stands on the four-pillar concepts of Leadership, Communication and Awareness; Compliance Structure; and Evaluation of Effectiveness.**

Various systems and processes have been developed and implemented in Tata Steel to improve the implementation of the code, namely: Gift Policy, Whistle Blower Policy, Whistle Blower Reward Policy, Vendors Whistle Blower Policy and Sexual Harassment Prevention and Guidelines. To encourage employee activism against malpractices and to protect the identity of the Whistle Blower a third party operated Whistle Blowing Line was established in 2011-12.

## **Training and Awareness :**

Compliance to the Code is a condition of service for 100 per cent of the employees at Tata Steel as well as a prerequisite for entry and continuation as a supplier to the Company. An integral part of all Employee Induction programmes, relevant sections of the Code are placed on the Company's e-procurement site and all suppliers are required to make an electronic undertaking of compliance with this Code.

Existing employees undergo periodic refresher programmes, including participation in a theme based Ethics Month. The theme for 2011-12 was "Ethics is your conscience". Employee unions at various locations have signed a Joint MoU with the Management on behalf of the workers to comply with the provisions of the Code.

## **Evaluation of Effectiveness :**

An evaluation of the MBE Programme is conducted once in two years via employee and supplier perception surveys by an independent third party. The results are analysed for self-evaluation and gaps identified are used for new initiatives.

Any employee can directly raise his concerns with the Ethics Counsellor/ Head Vigilance or escalate it to the level of the Board through the Chairman of the Board's Audit Committee.



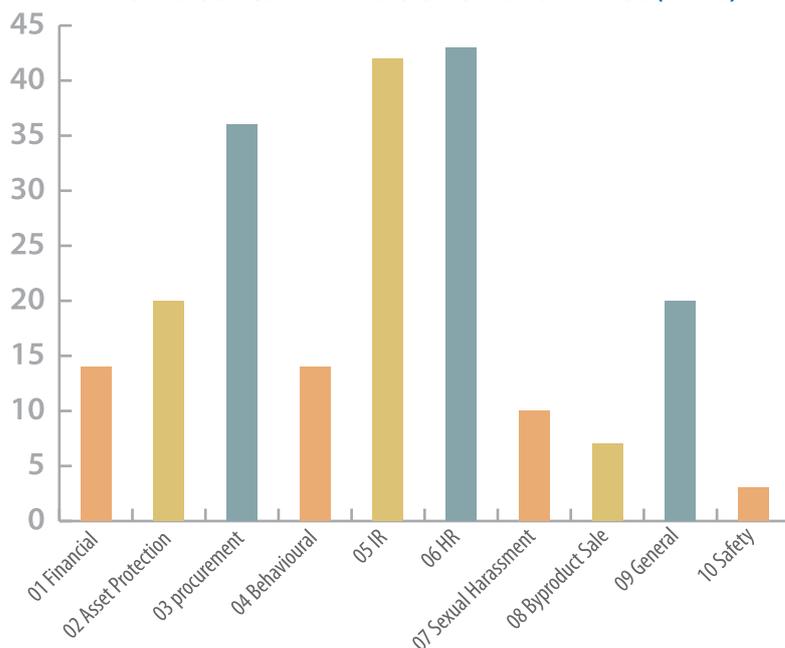
*Officers of Tata Steel attend a refresher programme on the Tata Code of Conduct*

## Action for Non-Compliance to the Code

Tata Steel has a zero tolerance policy towards corruption and unethical behaviour. All officers have to submit a Conflict of Interest declaration (COI) on the intranet and update it as and when a new COI situation emerges in their employment period.

The total number of concerns raised in 2011-12 was 209 as opposed to 105 in 2010-11 and 100 in 2009-10 due to special workshops conducted to make employees aware of interpretations with respect to ethical and unethical conduct.

**TOTAL CONCERN ANALYSIS - CATEGORY WISE (FY'12)**



## Annual Tata Code of Conduct (TCOC) Compliance Declaration

The Managing Director submits an annual TCOC Compliance declaration to the Chairman disclosing the steps taken in the Company during the year. The Declaration regarding compliance by Board Members and Senior Management Personnel with the Code of Conduct is available in the Annual Report (page 80).

Concerns raised regarding the involvement of its

employees or business partners in any act of bribery or corruption are thoroughly investigated and punitive as well as preventive action is taken.

Concerned about protection of female employees from Sexual Harassment in the workplace, Tata Steel has constituted a Sexual Harassment Redressal Committee.

## LEGAL COMPLIANCES

Tata Steel, including its profit centres collectively and individually, anticipate and address public concerns. The Company also proactively seeks information on issues of public concerns, tracks Government notifications, changes effected in developed economies including product related risks and concerns in order to develop such compliance in advance.

No fines were imposed during the year for non-compliance with applicable laws or provisions.

## COMPLIANCE

The Company received 28 communications from statutory authorities pertaining to its operations covering broadly 14 issues during 2011-12. All three issues of significance pertained to perceived environmental non-compliance.

Tata Steel honours all non-disclosure/confidentiality agreements with customers. No complaints were received or recorded regarding breach of customer privacy and loss of customer data in 2011-12.



# GROWTH DRIVEN BY EXCELLENCE

Value Creation at Tata Steel is aimed at fostering growth through strategies that enhance profitability along with sustainability, namely optimising usage of raw material resources, improving energy efficiency and its overall ecological footprint.

The Company achieved an EBITDA margin of 34 per cent in 2011-12, placing it amongst the best in the global steel industry. The benefits of the value created by it were shared through payments to the Government of Rs 9,373 crores along with investments of ~ Rs 379.71 Cr in environment management and Rs 146 crores in community development. Healthy cash generation continued to facilitate investments in growth projects at Jharkhand and Odisha, intended to enhance the Company's steel making capacity in India and to meet the growing Indian steel demand.



## EXCELLENCE ENABLERS :

- Expansion projects
- Enhanced Offering
- New Product Solutions
- Raw Material Security
- Localisation of the Supplier Base
- Supporting Infrastructure Development



**Pouring of concrete commences at the site of the Coke Oven Plant for the Odisha Project**

## ECONOMIC VALUE GENERATED AND DISTRIBUTED

	UoM	2009-10	2010-11	2011-12
Economic value generated (A)	Rs Million	2,84,111	3,30,027	3,83,076
a) Revenues [Note - 1]	Rs Million	2,84,111	3,30,027	3,83,076
Economic value distributed (B)	Rs Million	2,42,427	2,74,515	3,32,147
a) Operating Costs	Rs Million	1,43,115	1,45,016	1,81,649
b) Employee Wages and benefit [Note - 2]	Rs Million	23,615	28,375	30,473
c) Payment to providers of Capital	Rs Million	22,641	25,078	24,836
d) Payment to Government	Rs Million	52,038	74,784	93,726
e) Community Investments	Rs Million	1,018	1,263	1,464
Economic value retained (A-B)	Rs Million	41,684	55,511	50,929

Note - 1: Revenue figure includes sales tax.

Note - 2: From FY 2010-11, Employee Compensation includes Staff Welfare expenses, earlier included in Other Expenses

### Enhanced Offerings:

Tata Steel continued to accelerate quality and delivery improvements and create new products & services, many of which are a first in India. The enhanced offering allowed the Company to extend its market reach and depth in 2011-12. Production of Flat Products grew by 6 per cent

and of Long Products by 10 per cent during the year.

Earnings from value added branded products grew to 32 per cent, driven by Tata Steel's focus on new products and services. It retained a 40 per cent share of the high-end automotive steel segment.

### Product Solutions:

The Company continued to differentiate its offerings to retain its leadership position in the automotive, construction & SME segments. New service initiatives in 2011-12 included the Structura Studio, Shaktee Roofing Solutions, Tata Tiscon Superstore and Tata Wiron Fencing Solutions.

Wire Rod customers (~ 13000 tpm) from "Acid Pickling" of Wire Rods led to lower costs and better environment practices for the customers. The Company also test-marketed a new-age "plasma" technology product to provide rust proof rebars to customers.

The first branded zero-spangled Galvanized Plain (GP) steel sheets in the country Galvano, produced through "lead-free" coating chemistry, was introduced in 2011-12. The Company produced and sold Fe500 (TISCON 500D) rebars, which consume 15 per cent less steel by weight effectively reducing greenhouse gas emission. A shift to mechanical descaling by 100 per cent of its Low Carbon

Solutions such as "RAISE" (Responsible Architectural Initiatives & Structural Engineering) initiative and 'BuildWise' a Home Building solution to offer architectural (contemporary & efficient), structural designs (safe & economical) and bill of material quantities to Individual House Builders (IHB) on a pilot basis were added to the wide range of programmes institutionalised by Tata Steel to engage with channel partners and end use consumers.

## Kar Vijay Har Shikhar:

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The accelerated Total Quality Management initiative Kar Vijay Har Shikhar (KVHS), further enhanced profitability through benefits amounting to Rs 965.8 crores. In the 2012-13, an additional benefit of Rs 847.7 crores has been planned.

# RAW MATERIAL SECURITY

Raw Materials constitute the largest share of Tata Steel's total spend on procurement at 62.39 per cent in 2011-12. The Company's existing operations at Jamshedpur are self-sufficient in Iron ore, however it is exposed for coal and limestone, which are critical for the operations.

Around 60 per cent of our coal requirements are imported (mainly from Australia) exposing the Company to the risk of raw material supplies and volatility in prices mainly due to natural calamities, labour issues and port congestions. Also for limestone Tata Steel is dependent on supplies from Gulf countries, which are exposed to risk of country specific supply risks. Alternative strategies are being explored to reduce the risks.



*Mechanised processing of ore at Tata Steel's captive raw material unit*

# LOCALISATION OF THE SUPPLIER BASE

To encourage the development of the local economy and meet its needs for engineering products, spares and services such as rolls, material handling equipment, blast furnace shells, refractories and the like, Tata Steel has spawned profit centres, subsidiary and associate companies which have grown to be counted among India's best in their respective segments. These include Tata Growth Shop, TRF Ltd, Tayo Rolls, Jamshedpur Utilities & Services Company Limited. Tata Steel's presence has made Jamshedpur the largest industrial hub in the region.

In line with Tata Steel's Affirmative Action (AA) and Corporate Social Responsibility (CSR) policies, the practices pursued by the Company included (a) support for local underprivileged communities by creating contractual provisions, (b) contracting with vendors to augment employment and employability of local underprivileged communities, like employing members of the indigenous communities for various jobs, (c) reservation of identified goods and services for sourcing from NGOs, (d) year on year growth in business for NGOs and underprivileged sections of society through Affirmative Action.

To foster inclusive growth, Tata Steel encourages local buying, particularly from small entrepreneurs and Non Governmental Organisations, whose revenue flow benefits the local community and mainstreams disadvantaged communities.

## PURCHASES FROM LOCAL SUPPLIERS

Purchase Category	UoM	2009-10		2010-11		2011-12	
		Total	Local Vendor	Total	Local Vendor	Total	Local Vendor
Capital Purchase	Rs Crores	38.33	13.3	38.86	18.81	42.51	19.9
Spares	Rs Crores	389.40	188.38	428.40	201.51	472.26	228.53
Services	Rs Crores	425.41	291.16	510.35	383.07	517.00	381.65

*Excluding logistics and EPAs (External Processing)*

**\*\* Vendors with address in Jharkhand (supply may be from outside Jharkhand for many vendors)**



*Stacker Reclaimers manufactured by TRF serve Tata Steel's manufacturing facilities and many other leaders in India's core sector industries*

# SUPPORTING INFRASTRUCTURE DEVELOPMENT TO AID GROWTH

In context of the poor infrastructure in various states, especially where Tata Steel operates, the Company supports private and government initiatives in building infrastructure. These include construction of roads, lift irrigation projects, health care infrastructure, community centres, water pipeline projects, support to local schools and colleges along with bus services for school students. Grants to Tata Steel Rural Development Society (TSRDS), Tata Relief Committee and discretionary funds at the disposal of heads of operational locations allow them to respond to specific infrastructure demands raised by the community.



*Adityapur Toll Bridge was built and is now managed by subsidiaries of Tata Steel*

The Company's Public Private Partnership for supply of safe potable water was extended to ten additional underserved communities around Jamshedpur. The Company was able to achieve this goal through the reduction of Non Revenue Water from 20.26 per cent in March 2011 to 4.78 per cent by February by 2012. Over 250 street lights were also installed in these areas.

Tata Steel ensures access to civic

amenities benchmarked against the best international standards at Jamshedpur as well as at all company managed locations.

This includes quality and sufficiency of potable water, sanitation, power availability, municipal solid waste management collection and disposal, disease and vector control, roads and street lights.

The Quality of Life in Jamshedpur is

assessed through periodic surveys commissioned for the purpose. Jamshedpur was rated second best in the country based on responses from its citizens in 2011-12. During the year in addition to operating and managing civic utilities, Tata Steel invested in electrification of new areas, development of parks, resurfacing of roads, extending access to piped drinking water to ten underserved communities and focussing on public health activities across a leasehold area of 64 square kilometres.

The Company is working on the development of a Master Plan for the future development of Jamshedpur.



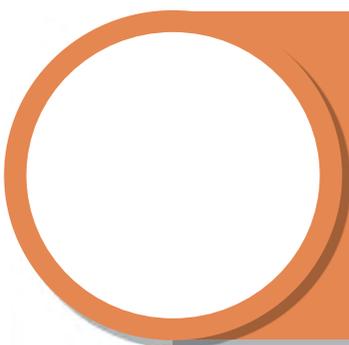
# OPERATIONAL EXCELLENCE

## MANAGEMENT APPROACH

Operational Excellence is embedded in the design of Tata Steel's operating units and forms part of its ethos of serving common good. The Tata Group's Code of Conduct (Clause 8), Climate Change Policy, Tata Steel's Vision, Environmental Policy and the UN Global Compact Principles guide Tata Steel's approach to operational excellence. Improvements in Key Performance Indicators for operational performance are driven through its Total Quality Management process; with objectives and strategies making excellence integral to the way business is conducted.

Tata Steel's responsible mining practices have ensured that its ore mines, quarries and collieries have remained operational for over a century.

The brownfield expansion of 2.9 MTPA and 6 MTPA greenfield project at Odisha is intended to progressively shift to larger size blast furnaces for higher productivity, achieve better energy efficiency, higher waste utilisation and lower emissions.



### EXCELLENCE ENABLERS :

- Eco Efficiency
- Material Efficiency
- Energy Efficiency
- Operational Excellence
- Water Efficiency
- Improving Air Quality
- Sustainable Mining Practices
- Logistics Efficiency

*Pelletisation of iron ore fine*

## Material:

Conservation of resources through planned mining, beneficiation and blending is an on-going process at Tata Steel. In 2011-12 technology interventions for the beneficiation of iron ore and batch-wise processing with improvements in separation efficiencies at the coal mines were pursued to improve material efficiency and the sustainability of raw material sources.

**Resource and energy efficient blast furnaces set up as part of the brownfield expansion at the Jamshedpur Steel Works and greenfield capacity being created at Kalinganagar is expected to maintain Tata Steel's profitability and cost leadership even as these capacities come on-stream by ensuring the long-term sustainability of its captive iron ore and coal mines. The Company has adopted different strategies at different manufacturing stages to achieve this objective.**

## Waste Utilisation:

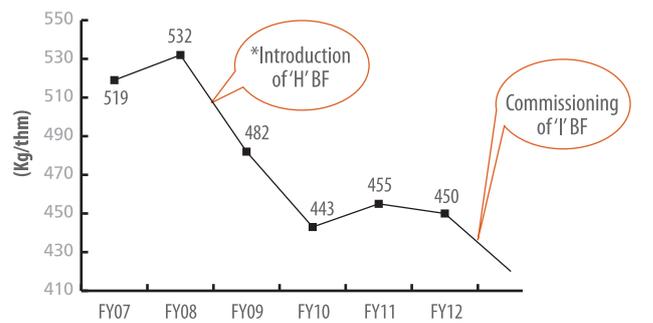
Major enablers for greater utilisation of slag generated during steel making include adoption of cast house slag granulation facilities at Blast Furnaces to potentially reach 100 per cent online granulation, a Metal Recovery Plant for LD Slag (steel making slag) processing, Raw Material Bedding and Blending plants to prepare feed material for Sinter Plant for utilisation of waste materials and use of BOD Plant Sludge, Oil Sludge and Waste Activated Carbon in Coke Making.

Examples of initiatives taken by Tata Steel to conserve natural resource through use of the waste generated include use of iron ore slime for making cold bonded briquettes as an alternative to lump ore addition in LD furnace, iron ore nuggets from iron ore slime by Rotary Hearth Furnace (RHF) and LD slag utilization in paving blocks. The ore-binding programme at Noamundi focuses on higher recovery of water for reuse and faster settlement of slime.

## To optimise use of natural resources the thrust areas for Tata Steel are:

- Resource conservation
- Research & Development on innovative technologies and processes for Ore & Coal beneficiation
- Process optimization, waste management through reduce, reuse & recycle
- Adoption of clean & best available technologies & process upgradation

## TREND IN REDUCTION IN COKE RATE OVER THE YEARS



Projects in progress to improve utilisation include process development for production of DRI using iron ore slime and processes for the production of hot metal from mine and steel plant wastes through development of low shaft furnace technology.

The most voluminous material, about 50 per cent of the total solid waste generated, as a result of steel making is Blast Furnace Slag. A holistic approach to its use - through improvements in the quality of raw materials, their utilisation and adoption of better process technology - has led to > 90 per cent utilization of Blast Furnace Slag through its downstream application in Cement making.

While Specific Solid Waste Utilisation at Jamshedpur Steel Works increased from 473 kg/tcs in 2010-11 to 477 kg/tcs in 2011-12, percentage Solid Waste utilisation dropped from 78 per cent in 2010-11 to 75 per cent in 2011-12 primarily due to higher generation of waste as a result of an increase in crude steel production.

## Energy:

One of two top corporate objectives for the Jamshedpur Steel Works is energy efficiency to reduce CO<sub>2</sub> emissions. Energy conservation at the Jamshedpur Steel Work is also one of the pillars to remain cost competitive as energy costs accounted for 55 per cent of Works costs in 2011-12 against 51 per cent in 2010-11.

### A major strategy for reduction in specific energy consumption and CO<sub>2</sub> abatement is continuous adoption of energy efficient processes.

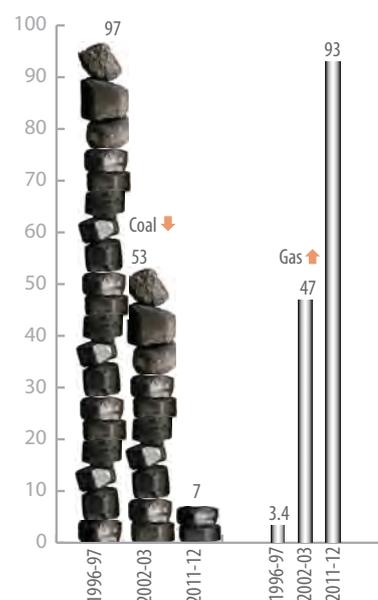
Measures aimed at energy conservation and conservation of fossil fuels led to reduced dependence on boiler coal from 97 per cent in 1997-98 to less than three per cent in 2011-12, while heat input from by-product gas rose to 93 per cent in 2011-12.

This effort was rewarded with the National Energy Conservation Award 2011-1st Prize, conferred on the Company by the Ministry of Power, Government of India.

As part of its brownfield expansion the Company has focussed on processes and technologies that reduce energy consumption. Coke Dry Quenching at Coke Oven Battery Nos.5, 6 & 7 to generate steam using waste heat from hot coke was implemented in 2011-12.

Conservation efforts ensured that Specific Power Consumption at the Steel Works continued to decline from 356 Kwh/tss in 2010-11 to 351 Kwh/tss.

REDUCTION IN DEPENDENCE ON FOSSIL FUELS (%)



## CO<sub>2</sub> Abatement:

Emissions are an area of critical concern for the global steel industry because steel manufacture inadvertently produces Carbon Dioxide (CO<sub>2</sub>) since energy needs are met from carbonaceous fossil fuels.

The Company's commitment to the mitigation of Climate Change is reflected in the inclusion of this goal in its Environmental Policy and its initiatives to reduce energy consumption, especially from conventional fossil fuels. It has set a baseline, developed action plans and is benchmarking with other global steel manufacturers to continuously enhance substitution of fuels through low carbon options. Adoption of Clean & Best Available Technologies, an increase in waste energy recovery (TRT & CDQ) and improvement in the utilisation of by-product fuels are part of its on-going 2.9 MTPA brownfield expansion programme.

As part of its brownfield expansion the Company has focussed on processes and technologies that reduce energy consumption. Coke Dry Quenching at Coke Oven Battery Nos.5, 6 & 7 to generate steam using waste heat

from hot coke was implemented in 2011-12. Conservation efforts ensured that Specific Power Consumption at the Steel Works continued to decline from 356 Kwh/tss in 2010-11 to 351 Kwh/tss.

**The energy efficient processes adopted in the last three years at the Jamshedpur Steel Works and the benefits that have accrued are as follows:**

Unit	Energy Efficient Process adopted	Energy Conserved		
		2009-10	2010-11	2011-12
Blast Furnaces	Waste Heat Recovery to reduce use of coal as fuel	196,179 Gcal/year	195,074 Gcal/year	190,886 Gcal/year
Hot Strip Mill	Regenerative burners for Lean Gas	~9,600 Gcal/year over FY09	~25,600 Gcal/year over FY09	~99,200 Gcal/year over FY09
Coke Oven	Coke Dry Quenching (CDQ) to reduce moisture and lower coke requirement with steam generation from sensible heat recovery	Commissioned in November 2011		- 152,035 Tonnes of process steam generated - 94,262 Gcal conserved during 2011-12
Steel Works	Switch over to Torpedo Ladles for Hot Metal transfer	36,332 Gcal/year	37,942 Gcal/year	39,476 Gcal/year





*Careful management of hazardous waste*

### Organic Waste Converter System developed for Steel Works

During 2011-12 an Organic Waste Converter System was set up at the Steel Works to contribute to a safe and clean environment. Organic waste generated by 16 canteens within the Steel Works is treated bio-mechanically in the Organic Waste Converter machine to produce 400 Kg of mature compost per shift. The matured compost prepared by the Organic Waste Converter System is utilised for in-house gardening.

### Packaging Materials

Minimal or no packaging is required for steel products. Dunnage used to transport its products is reused multiple times for transporting products

### TOTAL WASTE GENERATED

In 2011-12 the worldsteel methodology for calculation of waste generation was adopted.

Material	Location	UoM	2009-10	2010-11	2011-12
Reject Coal	Jharia	Tonnes	126,145	140,314	147,832
Reject Coal	West Bokaro	Tonnes	196,220	226,247	251,455
Non-Hazardous Waste Generation	6 sites	Tonnes	69,062,376	64,870,316	68,112,225
Hazardous Waste Generation	1 site	Tonnes	1,315	1,614	1,284
Used Batteries	4 sites	Nos.	4,397	4,382	5,856
Used Oil	6 sites	KL	455	558	707
Overburden	3 divisions	m3	27,990,506	26,174,336	27,360,362

\* Tailings are disposed off to brick kiln manufacturer and partly institutionalised customer operating power plant

# ENERGY EFFICIENCY

Under the accelerated TQM initiative, Kar Vijay Har Shikhar, greater focus was placed on energy efficiency, primarily to reduce fuel and power consumption. Some of the major on-going projects to reduce energy intensity are:



*The reporting year culminated with the improvement project Kar Vijay Har Shikhar marking 100 successful weeks.*

Manufacturing Unit	Energy Efficient Process	Status of projects and Energy Conservation Potential
Pellet Plant	Lower coke requirement by providing a higher proportion of agglomerate	The Pellet Plant was commissioned in November 2011 and is currently under ramp-up. It is run on by-product gases from the Blast Furnace, CO Gas and Coal Tar. 17 kg/thm reduction of fuel rate is expected to be achieved in Iron Making due to various initiatives, this one being the key - leading to a reduction in energy consumption by 1,000,000 Gcal/year during future operations at the 9.7 MTPA level.
I Blast Furnace Stoves	Waste Heat Recovery	Expected level @ 125,000 Gcal/year

Regular energy audits along with capacity building, advocacy and improvement in the HR structure form part of the effort to improve internal focus.

## PLANT SPECIFIC IMPROVEMENTS

### Coke Ovens

The energy conservation potential of CDQ is estimated at 403,000 Gcal/year through generation of 650,000 tonnes/year of process steam. After the process was implemented during the year, 152,035 tonnes of process steam was generated from waste heat resulting in energy savings of 94,262 Gcal during 2011-12.

### Hot Strip Mill

Reheating Furnace No.3, with regenerative burners, at Hot Strip Mill uses lean gas, i.e. Blast Furnace gas for reheating the slab. This has improved the efficiency of the Furnace leading to a fuel saving of > 5 per cent.

### Finishing Mills

Finishing Mills at Jamshedpur Works reduced fuel consumption through monitoring & operational control. Three Mills achieved their best ever fuel rate.



## Initiatives to reduce indirect energy consumption

Processes and technologies to reduce its electricity consumption include the first LCI (Load Commutated Inverter) drive in a Sinter Plant in Sinter Plant No.3. Thereafter variable speed drives were installed in major high capacity motors - Blast Furnace Electric Blowers, I D Fans in LD Shops, I D Fan in Boilers, Combustion Air Fans in Hot Strip Mill, Primary Descaler Pump in the Hot Strip Mill besides smaller applications. Tata Steel has also adopted

TRT for generation of power from pressure energy.

The Coal Mines at Jharia generate 50 per cent of their power needs at the 10 MW Fluidised Bed Power Plant from coal rejects generated at the washeries, allowing the Division to continuously reduce indirect energy consumption.

## PLANT SPECIFIC IMPROVEMENTS

### Blast Furnaces

Blast Furnaces Recovery of pressure energy from Blast Furnace top gas enabled the Company to generate electrical power @ 2.4 MW in 2011-12 from two operating TRTs. The third TRT of 14 MW capacity will be installed at

the new 'I' Blast Furnace. Once complete the three TRTs will generate more than 250 GWh of electrical energy per annum and achieve an offset of more than 225,000 tonnes of CO<sub>2</sub> per annum.

**Power generated by TRTs at Jamshedpur Steel Works during last the three years and corresponding quantity of energy conserved at an upstream power plant with heat rate @ 2,800 kcal/kwh.**

Energy Efficient Process adopted	Energy Conserved		
	2009-10	2010-11	2011-12
Top Gas Pressure Recovery Turbines (TRTs) to improve energy efficiency through waste energy recovery	12.53 MW ≡ 109,729,779 kWh ≡ 307,243 Gcal/year	16.01 MW ≡ 140,284,421 kWh ≡ 392,796 Gcal/year	11.98 MW ≡ 105,240,425 kWh ≡ 294,673 Gcal/ye

### Power House No.5

An innovation allowing Low Pressure steam to energise the PRDS resulted in an additional 3 MW of electricity being generated through steam.

Two Finishing Mills at Jamshedpur Works achieved their best specific power consumption during 2011-12

The Company is striving to reduce purchased coal & coke consumption to achieve dual benefit of cost & energy reduction. Reduction of coke reduces indirect energy consumption at its upstream raw materials facilities.

Finishing Mill	Unit	Previous Best	
		2011-12	Value Year
Merchant Mill	KWh/t	60.95	61.62 2009-10
New Bar Mill	KWh/t	97.85	102.26 2010-11

## MAJOR PROJECTS TO REDUCE INDIRECT ENERGY CONSUMPTION ARE :

Energy Efficient Process	Manufacturing Unit	Status of projects and Energy Conservation Potential
TRT	I Blast Furnace, Steel Works	Expected to generate 14MW electricity
Coromax basex Electrostatic Precipitators	Sinter Plant 3, Steel Works	Plant commissioned in January 2012 in phase-1 and phase-2 is to be completed by October 2012. Thereafter the savings will be assessed-expected @ 320 KW.

The Ferro Alloys & Minerals Division of the Company brought about a reduction in plant idle running, increasing Plant Availability and improving Specific Energy Consumption. Tata Steel has implemented green procurement practices and is proactively greening its supply chain. Tele-presence and video conferencing

is actively used during interactions requiring Company employees from multiple locations to participate. Use of two wheelers was restricted within the Steel Works with bus services now available to employees of both Tata Steel and its contractors.

# EMISSION ABATEMENT



*Energy efficient burners at the Indurating Machine of the Pellet Plant run on by-product gases from the Blast Furnace, CO Gas and Coal Tar*

Measures for environment protection at Tata Steel include adopting Best Available Technology and designing pollution control infrastructure to achieve discharge and emissions within statutory limits.

Tata Steel revised its emission performance target during 2009-10 to be consistent with the World Steel Association (worldsteel) scope for reporting. Its corporate goal is to reduce CO<sub>2</sub> emissions per tonne of crude steel (tcs) produced.

The Jamshedpur Steel Works achieved the best ever direct CO<sub>2</sub> emission intensity (under Scope-1 of worldsteel methodology) in 2011-12 @ 2.27 tCO<sub>2</sub>/tcs that is 1.6 per cent lower than 2.31 tCO<sub>2</sub>/tcs achieved in the previous

year. Total CO<sub>2</sub> emission (Scope-1, 2 & 3) for Jamshedpur Steel Works at 2.499 tCO<sub>2</sub>/tcs in 2011-12 surpassed the lowest ever achieved i.e. 2.504 tCO<sub>2</sub>/tcs in 2009-10 and 2.513 tCO<sub>2</sub>/tcs achieved in 2010-11.

## ROADMAP TO REDUCE CO<sub>2</sub> EMISSIONS

The roadmap for reducing CO<sub>2</sub> emissions intensity through reduction of specific energy consumption developed by the Company places critical emphasis on greater efficiency in processes and adoption of technologies including fuel switch.

Manufacturing Unit	Technology / Practice adopted	Estimated CO <sub>2</sub> emission abated (tonnes of CO <sub>2</sub> or tCO <sub>2</sub> )		
		2009-10	2010-11	2011-12
Hot Strip Mill	Regenerative burners for Lean Gas (savings estimated over FY09 <sup>1</sup> performance level)	~9,600 tCO <sub>2</sub>	~25,600 tCO <sub>2</sub>	~99,200 tCO <sub>2</sub>
Blast Furnaces	Waste Heat Recovery from hot flue gases of stoves to reduce fossil fuel consumption	92,683 tCO <sub>2</sub>	92,161 tCO <sub>2</sub>	90,182 tCO <sub>2</sub>
Blast Furnaces	Top gas pressure Recovery Turbines (TRTs) to improve energy efficiency through waste energy recovery	12.53 MW 55,273 tCO <sub>2</sub>	16.01 MW 70,664 tCO <sub>2</sub>	11.98 MW 53,012 tCO <sub>2</sub>
Coke Ovens	After use of dry coke in Iron making 152,035 tonnes of process steam was generated Waste heat recovery of heat from hot flue gases in stoves	Under implementation		29,695 tCO <sub>2</sub> through offset 98,677 tCO <sub>2</sub>
Steel Works, Jamshedpur	Use of Torpedo Ladles for Hot Metal Transfer	7,819 tCO <sub>2</sub>	8,165 tCO <sub>2</sub>	8,495 tCO <sub>2</sub>
Power House 5	Innovative solution at PRDS using spare steam for power generation	~ 10,880 tonnes of CO <sub>2</sub> was abated during 2011-12		

1. @ 3.2 MTPA production level – actual production has been higher resulting in higher savings.

CO<sub>2</sub> emission intensity of Tata Steel's products is expected to reduce by 5 per cent over the next two years and 10 per cent over next five years.

#### DIVERSE NATURE OF MEASURES ADOPTED FOR CO<sub>2</sub> ABATEMENT

Technology / Practice being adopted	Location of installation	Current status and CO <sub>2</sub> abatement potential
Lower coke requirement by providing a higher proportion of agglomerate in Iron Making	Pellet Plant, Steel Works	Commissioned in Nov 2011 and currently under ramp-up; it uses by-product fuels (gases & tar) only. Potential abatement expected ≈ 500,000 tCO <sub>2</sub> /year at rated capacity.
Coromax based Electrostatic Precipitators	Sinter Plant 3, Steel Works	Phase-1 of the Plant commissioned in January 2012 and Phase-2 is to be completed by October 2012. Savings shall be assessed thereafter. Potential abatement expected ≈ 1,413 tCO <sub>2</sub> /year through offset.

#### Emissions of ozone-depleting substances

Tata Steel has proactively reduced Ozone Depleting Substances to touch 0.20 kg/TR in 2011-12. Sanctioned schemes are being implemented to achieve a switch over to R22. In most operating locations, such as at West Bokaro and Sukinda, 100 per cent switch over to R22 has been achieved.

Parameter	UoM	1997-98	2002-03	2011-12
Specific Refrigerant Consumption	kg/tons of refrigeration	0.99	0.50	0.20

# WATER EFFICIENCY

**Tata Steel draws water required for industrial use from surface water sources, primarily perennial rivers and streams. Jamshedpur Steel Works has achieved an 18 per cent reduction in specific water consumption over a ten-year span from 7.1 m<sup>3</sup>/tcs in 2002-03 to 5.83 m<sup>3</sup>/tcs in 2011-12.**

The largest users of water in the raw material units are the iron ore and coal beneficiation plants. Closed water

cycles at these plants capture and recycle back the water. In addition, Slime Dams at the Ore Mines and

Quarries separated 1,575,317 m<sup>3</sup> of water and recycled it back for use.

## **Actions being taken to limit water consumption:**

- Deployment of 3R (recover, recycle and reuse) for wastewater streams
- Chemical treatment to reduce cooling tower blowdown
- Installation of close water circuit systems for new and upgraded units
- Diverting storm water drains to cooling ponds by taking advantage of the natural topography
- Rain Water Harvesting system at the raw material locations and major buildings in Jamshedpur
- Toilets provided with auto-flushing with movement sensors in major buildings with trials on water-free urinals
- Installation of flow metres at key locations for monitoring and review
- Surveillance for identification of leakage and corrective action



*State of the art Waste Water Treatment plants at Jamshedpur*

### Water sources significantly affected by withdrawal of water

During the course of the expansion project, phased commissioning and ramp up of production units, the demand for make-up water in Steel Works at Jamshedpur has increased over previous years. Initiatives to harvest rainwater and to recycle treated wastewater are being pursued to offset the temporary increase and to ensure no critical impact of increased capacity on water sources. About 47 per cent of the water withdrawn by the Steel Works is discharged back into the river after treatment.

### Water recycled and reused

Steel manufacturing requires relatively large volumes of water most of which is used for non-contact cooling (ICW) and is therefore primarily reused. Wastewater recovery at the Steel Works rose by over 30 per cent to 4.3 MGD in 2011-12 against 3.3 MGD in 2010-11.

Water management plans are being rolled out at all raw material locations. They include dewatering plants and controls, to mitigate the impact of water use and discharge. Closed water cycles at coal beneficiation plants capture all effluent water and recycle it back to the processing plant instead of it being discharged. Dewatering plants at the ore mines capture water from mine tailings.



*Recovery of water at the raw material beneficiation plant*



*The Slime Dam at Noamundi Iron Ore Mine*

The total capacity of the slime dams at the Ore Mines & Quarries is 34.56 million tonnes. An additional capacity of 10 MT is being created at Noamundi and 36 MT at Joda. The decanted water from the zero discharged slime dam is completely recycled back to the beneficiation plant.

The installation of India's first tailing dewatering plant at West Bokaro has nullified the need for a tailing pond and eliminated water loss due to evaporation.

## Protecting our water sources

The sanctity of rivers and other water sources is always the first priority for Tata Steel, which discharges only treated effluents from its industrial units and treated domestic sewage from townships. Therefore, all locations have Sewage Treatment Plants with adequate capacities to treat the entire sewage. All units within the Steel Works are provided with wastewater treatment plants. Wastewater from various processes are treated with the best available physio-chemical methods and recycled in the process. Wastewater from the coke plant is treated biologically where organic pollutants are oxidised and decomposed by micro-organisms.

Mine water from Coal Mines at Jharia and West Bokaro is treated at the water treatment plants. Garland drains and toe walls with settling pits along overburden dumps prevent run-off water or sediments from flowing directly into natural streams. Check Dams across the lease areas of the Ore Mines & Quarries, including four across Balijhor Nullah at Noamundi and another four at Joda East arrest run-off water. The desiltation of these check dams is done regularly.

**During the current reporting year Rainwater Harvesting structures constructed at Noamundi created the capacity to harvest 125,000 cubic metres of rainwater.**

The Company abstracts fresh water downstream from the point of discharge of effluent water.



# IMPROVING AMBIENT AIR QUALITY

Reduction in dust emission is one of top two corporate objectives for environmental performance. To improve Ambient Air Quality, air pollution control equipment designed to meet particulate emission of < 30 mg/m<sup>3</sup> is being installed at all operating and new units.

In addition better combustion control was established through multiple initiatives including automation in facilities such as Blast Furnace Stoves, Coke Ovens, Sinter Plants, Lime Kilns and Finishing Mills, along with adoption of better process and operational control over raw material blends. Maximum availability of air pollution control equipment and commissioning of the energy efficient Electrostatic Precipitator with higher dust capture capabilities - compared to the earlier conventional technology - significantly improved Specific Stack Dust Emission at the Steel Works. Covered conveyors for raw materials are progressively being commissioned at the Steel Works to further improve air quality. Specific dust emission reduced by 0.5 kg/tcs in the reporting year.

## REDUCTION IN DUST EMISSIONS AT THE STEEL WORKS

Parameter	UoM	2009-10	2010-11	2011-12
Specific Stack Dust Emission	kg/tcs	0.86	0.84	. 0.79



*Dust suppression equipment at the Steel Works has improved overall air quality*



# SUSTAINABLE MINING PRACTICES

While operating its mines Tata Steel has adopted best practices to prevent, or otherwise minimise, mitigate and remediate harmful effects of mining operations.

Planned scientific mining ensures that the thrust on continual improvement in environmental performance is maintained. Biological Reclamation Plans are drawn for each mine, based on available mined out/barren area/dump and, as per approved Environmental Management Plans, Mining Plans and/or Review Schemes of Mining. To achieve the reclamation targets, Annual

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Afforestation Programmes are designed. Presently the mined out area of Hill 4 at Noamundi is being backfilled with subgrade material.

A Bio-diversity study to enumerate floral species around Tata Steel's Noamundi Iron mine was conducted in 2012 along with the Environmental Impact Assessment of the mine for its expansion project. The species diversity index within the mine lease and in the buffer zone around the mine was found to be -1.089 and - 0.965, respectively.

## BIODIVERSITY OFFSETS

Hills 1 and 2 at Tata Steel's Ore Mines & Quarries were afforested in 1982-83. The trees today have an average girth of 2-2.5 feet. A total area of 363.765 hectares within the lease area has been afforested till 2011-12 with density maintained at the rate of 5255 plants per hectare. In 2011-

12, for example about 28,500 additional saplings were planted at Noamundi Iron Mine and 12,000 plants and 15,000 grass tufts along roads, vacant places and inactive dump slopes at Katamati Iron Ore Mine.



*Reforested hills at Tata Steel's raw material unit*

Sir Dorabji Tata Botanical Park at Noamundi, spread over 45 acres of mined out land, is a model for mined out land reclamation. The park supports the development of herbal and medicinal plants, provides saplings for afforestation activities and has resuscitated species on the verge of extinction such as Basak, Sarpagandha, Bari katai, Chitrak, etc.

The vast and verdant Sir Dorabji Tata Park at Jharia, once a goaf or mined out area, has been reclaimed by developing a park and growing local varieties of fruit trees.

The Company's afforestation activities, botanical parks at mining locations and the Tata Steel Zoological Park at Jamshedpur aim to protect and restore the natural habitat of local species, including butterflies and local species of plants and fruit trees. The Rare Plant Park at Noamundi is the only park of its kind in the state. Spread over an area of 1,720 square metre it helps create awareness on rare plant species and the need to conserve biodiversity. Demonstration Plantation Plots have been developed as per the guidelines of the Ministry of Environment & Forests at the Chromite Mines at Sukinda.

## MANAGING IMPACTS ON BIODIVERSITY AND ECO SYSTEMS

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A special study has been initiated to arrive at the optimum soil amendments required in afforestation. Twelve different species were studied for their rates of growth under varied simulated soil conditions. The treatment regime includes soil, soil and cow dung, soil and slime, soil and chemical fertilisers, soil and compost organic manure, etc. in different combinations and ratios. The outcome of this study is helping establish the species-specific soil amendment required while planting these saplings for afforestation activities undertaken across the Company's mines.

In 2011-12 Tata Steel invited a team from the International Union for Conservation of Nature (IUCN) to visit its locations. It is part of a comprehensive Company-wide effort to develop policies, strategies and action plans for managing biodiversity. The report of the IUCN team will form the basis for future action. The drafting of a Memorandum of Understanding with the Bombay Natural History Society, among the oldest nature conservation organisation in India, is in an advanced stage. The agreement will result in research on tiger reserves.

**Fully committed to bearing pollution abatement costs to serve common good, Tata Steel has for example, reclaimed the site of a Muck Dump to create a park. Its environment management programme aims at continuously greening all locations and afforesting mines, besides conducting specific environmental assessment studies.**

## ARTISANAL AND SMALL SCALE MINING

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Artisanal and small-scale mining Illegal mining around its mining locations is a risk that Tata Steel is constantly alive to. Its Safety Excellence Programme, security procedures and community based safety awareness initiatives are aimed at educating the communities against such activities and preventing them from occurring.

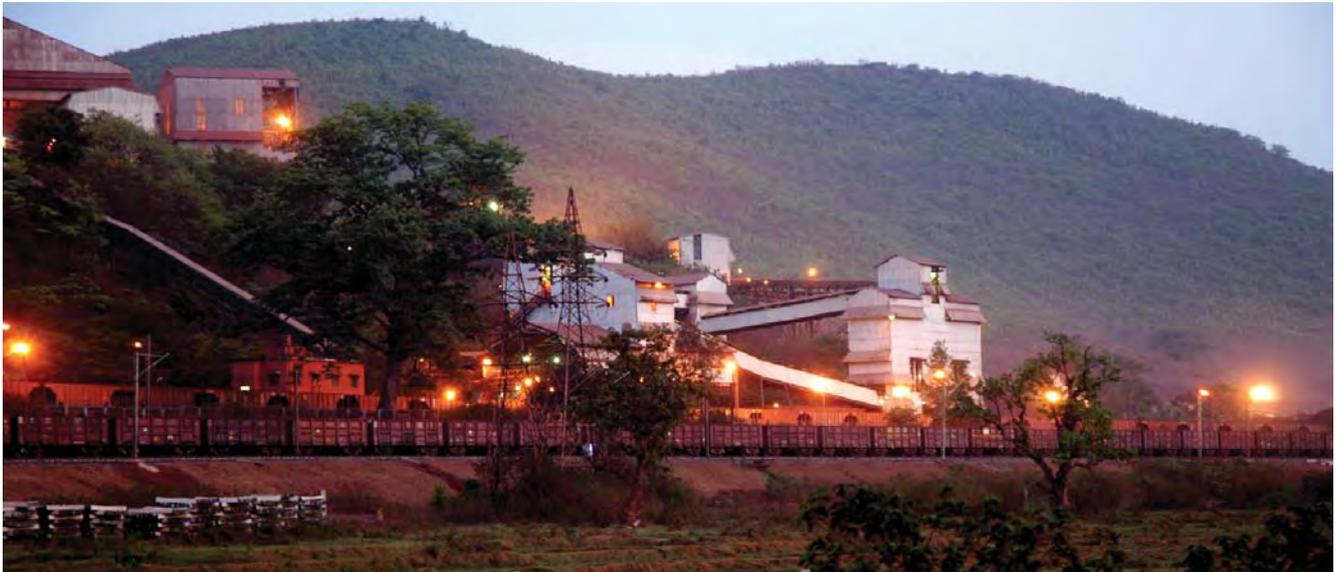
The Company proactively reaches out to the community to apprise them of the dangers of artisanal and small-scale

mining. To prevent such activities around its collieries the Company offers to meet fuel needs for community activities and special occasions. Almost all its employees are drawn from the local community hence a benefit offered by the Company is allocation of a fixed quantity of coal on a regular basis. Among the actions taken in 2011-12 was the installation of solar powered lights to prevent miscreants from entering its facilities during possible blackouts.

# EFFICIENCY IN LOGISTICS

**The Logistics Network of Tata Steel encompasses in-bound raw materials, intra-works material movement, out-bound logistics and Jamshedpur town logistics.**

All in-bound raw materials from Tata Steel's Ore Mines & Quarries, collieries as well as imported material from the ports arrive by rail.



*Wagons with iron ore roll out of the Joda (East) Iron Ore Mine*

Consumption clusters accounting for 80 per cent of the demand and at an average lead distance to serve of 1700 kms are served by outbound logistics. Tata Steel has implemented various strategies, including established a network of 20 stockyards across India, which serve as hubs in the consumption clusters.

Tata Steel's focus on CO<sub>2</sub> emission due to additional transportation on the Secondary Route resulted in a drop in the average monthly fuel consumption and CO<sub>2</sub> emissions from 2009-10 to 2011-12.

## REDUCTION IN CO<sub>2</sub> EMISSION THROUGH LOGISTICS

Parameter	UoM	2009-10	2010-11	2011-12
Average Monthly CO <sub>2</sub> emission	kg	56761	34507	27181

Its strategy of maximising movement by rail led to an increase in rail despatches from 66 per cent to 67 per cent in 2011-12, saving 3770 tonnes of CO<sub>2</sub> emissions.

**Customer Services Division, responsible for Outbound Logistics moved 4,34,000 TPA of finished steel goods by rail to from the Steel Works to a stockyard beyond Jamshedpur to limit vehicular movement within the city. This switch to movement by rail has reduced Tata Steel's carbon footprint by 365 tonnes of CO<sub>2</sub>.**

For intra-works material movement, over 35 high capacity trailers (33T) were deployed during 2011-12 leading to a reduction of 360 low capacity vehicles annually and a drop by 10 tonnes of CO<sub>2</sub>.



# HAPPY & ENGAGED WORKFORCE

A principle aim of Tata Steel's Human Resource Policy is to "enrich the quality of life of its employees, develop their potential and maximise their productivity". The current reporting year saw the Company commit significant efforts and achieve tremendous gains on all three fronts.



*Winners of the Prime Minister's Shram Awards - a National honour that recognises outstanding contributions made by workmen*

## Excellence Enablers :

- People Development Architecture
- Capacity and Capability Building
- Employee Happiness
- Safety Excellence Journey
- Wellness@Workplace Programme

## Maximising productivity:

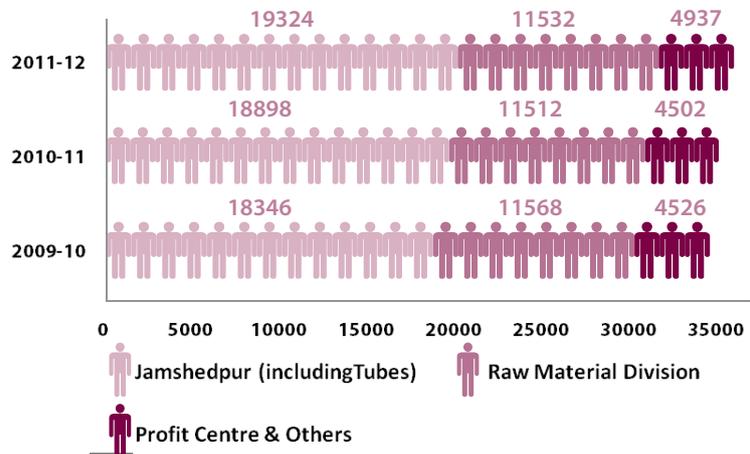
Tata Steel's Vision for growth - an increase in capacity by 45 per cent of its Steel Works - rests on the excellence, capacity and capability of its people. In tandem with its plans for commissioning technologically advanced facilities to support growth, the Company deployed a strategy to build the capacity of its people. The strategy is aimed at raising employee productivity through right manning and right skilling to world-class levels.

The shortage of technical talent and lack of availability of desired skills in eastern India, prompted Tata Steel to pursue the strategy of skilling and training its own people so as to maximize deployment to new units from existing units and only subsequently source its

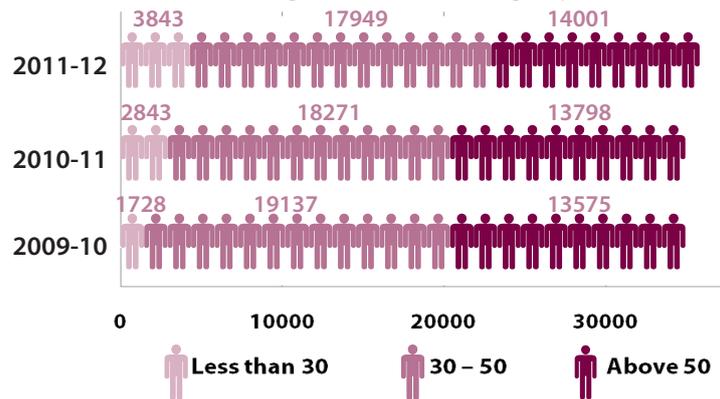


balance requirements from the available external talent pool. The resultant gap created by deploying people from existing units to the technologically advanced 2.9 MTPA units required the Company to give itself the target of upskilling over 1000 workers in the last two years.

### Employee Strength of Tata Steel Limited



### Age Profile of Employees



## Developing their potential:

To meet this goal and its future requirements a People Development Architecture was created to focus on training and development needs at all levels, including top management, senior management, middle management, junior management, frontline managers and workers. Special attention was accorded to the technical functions such as the Technology Group and Research & Development professionals.

## Enriching the quality of life:

Based on an Employee Happiness Survey conducted in 2010, during the reporting year the Company also invested in improving assets including housing, hospitals, canteen facilities and other amenities. The initiatives resulted in a significant and satisfying rise in employee happiness in the Survey conducted in 2012.

**The Company became the first in the country to introduce a special benefit scheme for Contract employees entitled "Suraksha" (protection).**

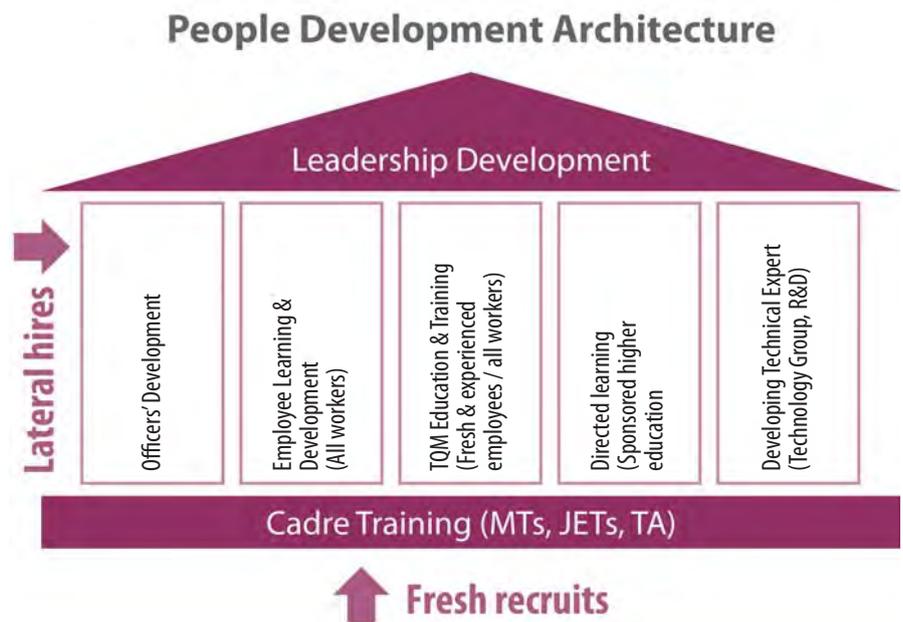


# PEOPLE DEVELOPMENT ARCHITECTURE

Based on its People Development Architecture and requirements of excellence enabling mechanisms such as Total Quality Management (TQM), Tata Steel has established six processes, namely Officers' Development, Employee Learning and Development, Leadership Development, TQM Education & Training, Directed Learning (Study Leave) and Developing Technical Experts.



Need identification exercises were undertaken for all levels and delivery systems coupled with the six People Development processes.





Well known speakers were invited to address the employees through the programme “Window on the World ” on subjects such as Corporate Sustainability, Outlook of Global Steel Industry, Ethical Leadership and Values in management practices based on the ideology of Mahatma

Gandhi, Management of Change or Sustainability - Challenges, Options and Trends.

The learning and development team instituted “The Round Table” in 2011-12. Aligned to the contemporary need for informal learning, its sessions are

theme-based such as: “Does Ethics have a Boundary ?”

Succession Planning was introduced for middle management. Further, HR policies are being reviewed to take into account the employee spread in different locations.

## Employee Learning & Development

For workers and supervisions, the 4Q model is followed for need identification accompanied by Training Need Surveys for job clusters and identification of Job specific customer requirements. Based on the gap between the desired skill level and the existing skill level of employees, training needs are met through Cluster Training, Positional Training and Right Skilling.

To reskill and retrain its

unskilled workers in 2011-12 the Company adopted a new approach to Training & Development. While it continued with the more generic “man to level / cluster mapping” approach in its existing units, the urgent need to meet specific job related skills for the new 2.9 MTPA units led to a radical shift in the approach for manning them. The new

approach of “man to position mapping” was introduced, based on the existing skill gaps and requirements specified by internal customers.

These right skilling initiatives ensured that the Company achieved its goal of reducing the number of unskilled employees by 50 per cent over the base of 2009-10.

## Leadership Development

A systematic process was adopted for tracking talent demand, selection based on the needs of the job and a real time view of the talent bench

strength for top management, leading to an increase in the ratio of leadership positions being filled through internal sources. To create a

talent pool of leaders for spearheading its growth plans a Global Leadership Development programme has been initiated.

The Company has established processes to appoint officers for the CEDEP programme at INSEAD and leadership programmes at Tata Management Training Centre as well as for Executive Coaching of individuals.



### **Developing Technical Experts:**

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The technological capability of the Company is being strengthened through tie-ups with premier educational institutes like IITs and XLRI for programmes aimed at technical learning.

### **Directed Learning:**

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The Directed Learning Policy motivates officers to take on higher professional education, which may be fully or partly sponsored. The need for flexibility in learning approaches both in the 'mode' of learning or the 'time' factor is met through 'e learning modules.' 'Live' Digital workshops offer

easy access to learning and permit participants to benefit from world-class faculty stationed in India or abroad. The Company's Knowledge Management portals as well as the Training Center's websites, which can be accessed by employees at all times, offer theme based learning.

# CAPACITY AND CAPABILITY BUILDING

Training needs to ensure the successful commissioning, faster ramp up and subsequent operation of new units under the 2.9 MTPA expansion project led to a spurt in the training hours per year per employee.

## Capability Building:

The process of training unskilled employees and redeploying them in newer facilities after familiarising them with the equipment, processes and technology allowed them to adapt to a new work environment.

To culturally integrate new employees, initiatives such

## EMPLOYEE TRAINING BY CATEGORY

	2009-10	2010-11	2011-12
Total number of employees	34440	34912	35078
Total number of Officers trained	3038	3992	4129
Total number of Non Officers trained	5975	8345	10249
Percentage of employees trained	26%	35%	41%
Training (hours per employee per year)	22	25	35

as a formal induction programme, interaction with the senior management, on-the-job training to familiarise them with processes, TQM training and safety training were completed prior to their placement in the new units. Special emphasis was placed on orienting employees towards the Tata values and Tata Code of Conduct.

## Improvement in Skill Mix:

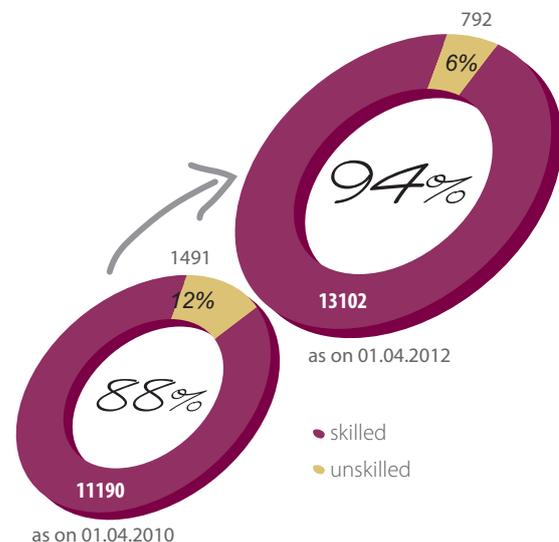
The significant upward trend in the number of programmes led to a perceptible rise in officers and non-officers trained. Capability and Capacity building were given priority across all functions, thereby building expertise in functional and managerial areas. As a result, the skill mix of Tata Steel's employees has improved company wide, particularly at the Steel Works. Employee productivity has seen a spurt with a rise in the number of officers and non-officers trained.

The Company intends to horizontally deploy and continually improve its recruitment processes for future projects given the challenges it faces.

Tata Steel's special focus on women through developmental programmes continued with 'Pehchan' - an introductory programme for new women employees in the Non Officer category - being introduced in 2011-12. A Computer Literacy programme for all women non-officers

is also being designed, while programmes for women executives such as 'Empowering Women Managers to Succeed' and 'Counselling' are planned.

## REDUCTION IN UNSKILLED WORKERS FROM 12% TO 6% OF THE WORKFORCE



# EMPLOYEE HAPPINESS

The goal of being an employer of choice is articulated in Tata Steel's Human Resource Policy. It encourages its employees to prioritise between work and a satisfying, enriching life providing sufficient space for wellness, leisure, family and personal development.



Gyms dot the steel city to encourage work life balance

## RISE IN EMPLOYEE HAPPINESS SCORES

Areas of Response	UoM	2010	2012
Housing	%	74	83
Hospital	%	67	76
Canteen	%	68	84
Amenities	%	74	84

## Employee Benefits

Committees comprising representatives of the Union and Management jointly monitor benefits available to all employees, which include financial benefit plans, insurance, medical and sickness benefits, disability coverage, higher education and sabbaticals, maternity leave, Family Benefit Scheme, Tisco Employees' Pension Scheme (TEPS), Holiday Homes, Tata Steel Executive Holiday Plan (TEHP) and Early Separation Scheme (ESS).

Clauses of SA 8000 apply to all locations of the Company and its suppliers. Its Steel Works and Sukinda Ferro Chrome Mines are formally certified to the standard.

All female employees who took maternity leave during 2011-12 opted to return to work and reoccupied comparable positions.

## Remuneration based on responsibility and performance

The Company firmly believes that in the quest for maintaining a high performance culture, calibration of performance and merit is important. This is supported by a compensation structure, which is comparable to the market so as to attract and retain the best talent. A salary correction for all the officers was undertaken during the year.

For the same work or work of similar nature male and female employees are paid equal remuneration, by linking remuneration to responsibility and performance.

Bonus for non-officers is in agreement with the Workers' Union linked to productivity, cost and absenteeism.

## Drop in attrition

While the results of such initiatives are visible over a period of time, as an immediate indicator, these measures resulted in the enhancement of the Company's retention rate by one per cent, with the rate of turnover at less than 10 per cent

## ATTRITION TREND

Attrition Trend by Gender	2009-10	2010-11	2011-12
Male	3.03 %	4.42 %	3.44 %
Female	5.07 %	5.14 %	3.95 %
<b>Grand Total</b>	<b>3.19 %</b>	<b>4.48 %</b>	<b>3.49 %</b>

# OCCUPATIONAL HEALTH & SAFETY

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Safety of employees, including contractors' employees is given utmost importance. The integrated nature of the

Company's operations and current expansion programme brings together unique Safety challenges from industries

as diverse as mining, metals and construction industries to the Company's operations.

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## **Occupational Health & Safety Structure**

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Occupational Health & Safety is driven at Tata Steel through the combined involvement and commitment of Management and Union representatives.

### **Employee Health Index**

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In 2011-12 special emphasis was placed on employee health through the adoption of a health index. Significant improvements in the health status were achieved with the initiative being driven by the top management. To mitigate the possible impact of HIV/ AIDS on its industrial workforce and the community, 1500 awareness programmes were conducted by the Company's Core Groups AIDS, touching over 100,000 beneficiaries.

**Periodical Medical Examination of employees (departmental and contractual) are conducted as per prescribed norms of Mines Rule, 1955. The initial and periodical examination includes blood haematology, blood pressure, detailed cardiovascular assessment, neurological examination etc. All chest radiographs are being classified for detection of pneumoconiosis, diagnosis and documentation made in accordance to ILO classifications.**

### **Standard Operating Procedures revisited**

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The Company provides the necessary environment for a safe and healthy workplace through a voluntary Health and Safety Agreement with Tata Workers' Union.

To enhance Safety practices at the Steel Works, Mines and Collieries and project sites, in 2011-12 Standard Operating Procedures were developed and encoded, as part of Tata Steel's interminable Safety Excellence Journey. The SOPs describe the approach to be adopted for jobs such as side bolting in collieries, positive isolation and the like.

### **PSTA and Daily Management**

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Tata Steel has achieved a significant reduction in fatalities related to the contractors' employees by working on fatality causes and eliminating a number of them. A significant reduction in Loss Time Injury Rate has also been achieved despite the increased number of contractors' employees inside the Steel Works.

PSTA techniques were used to improve safety performance while Daily Management has sustained them.

### **Safety Guidelines for New Facilities**

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In 2011-12 the Apex Process Safety Sub-Committee issued guidelines covering new facilities (projects) and those that have been modernised. These guidelines have incorporated learning obtained from existing review systems.

Safety considerations during the construction of its 2.9 MTPA expansion project, installation of facilities and commissioning of equipment were addressed through the Company's Behaviour Safety Management Initiative aimed at achieving zero fatality at the construction site.

### **Behaviour Safety Management initiative**

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This initiative includes a Six Step Contractors Safety Management System. The Pre Start-up Safety Review (PSSR) system under Process Safety Risk Management resulted in equipment being energized and a risk free, smooth start-up of facilities under the 2.9 MTPA project.



*Displays at the Safety Training Centre demonstrate use of safety equipment*

Tata Steel has set the target of 0.2 LTIFR with Zero fatality by 2017. Its Safety Principles and Occupational Health Policy guide it in ensuring zero harm to the people it works with.

#### SAFETY PERFORMANCE

		2009-10	2010-11	2011-12
Tata Steel Limited	Fatality	4	8	7
	LTIFR	0.56	0.44	0.51

*(Note: Lost time injury is an injury when a person does not join back duty in his next scheduled shift and Injury Frequency Rate is number of injury per million man - hours worked).*

# WELLNESS@WORKPLACE PROGRAMME

The Wellness@Workplace programme was rolled out across locations in 2011-12. It helps monitor the health of all individual employees and suggests ways to improve their overall quality of life.



*Health checkups are an integral part of the Wellness@Workplace Programme*

Since 2011-12 the effectiveness of the Programme is being monitored through a carefully developed Health Index. Along with Health Cards being issued to all employees, a Weight Reduction Campaign was launched. As a result a substantial reduction in life-style related diseases like Diabetes, Hypertension, High Cholesterol etc. and Anaemia among women employees was seen.

Special focus has been accorded to the health status of women in Tata Steel. In the reporting year female officers, non-officers, contractors' employees, as well as spouses of employees were covered through seminars on "Improving health status of working women". A special "Working Women's Health Improvement Project" for women was launched in November 2011 and management of Anaemia was accorded priority, based on the

health report analysis of women.

The objectives of the programme are improving the health status of working women, early identification and management of health issues amongst working women, intervention in common diseases like Anaemia, lifestyle related diseases and job stress.

## HIV/AIDS PREVENTION AND AWARENESS

To increase the reach of its awareness programmes, information on HIV/AIDS is part of all components of Health programmes and projects of Tata Steel's Corporate Sustainability Services in the districts of East and West Singhbhum, Saraikela - Kharsawan, including the mines and collieries.

In 2011-12, workplace interventions benefitted approximately 926 regular as well as contract labour. Community outreach programmes benefitted ~ 15,000 migrants, 44,000 adolescents under the Reproductive and Sexual Health projects and 68,000 truckers through the Truckers Intervention Project in partnership with JSACS.

While the emphasis is on prevention through AIDS awareness, care and support is also an important component of the Company's initiatives. Counseling and medicines free of cost at the Company's Tata Main Hospital (TMH) are provided to all HIV+ employees and their dependents. Sneh Kendra - a "Single Window" health delivery concept provided care and support to 389 PLWHA from the community along with treatment of Opportunistic Infections, counselling, group support and life skills training for family members of PLWHA.

## DIVERSITY AND EQUAL OPPORTUNITY EMPLOYER

Tata Steel recognises and values the differences in employee backgrounds and skills and promotes equal access to employment and supply opportunities without discriminating on the basis of race, caste, religion, colour, ancestry, marital status, sex, age or nationality. Its employee

policies and practices are administered in a manner that ensure all decisions relating to recruitment, promotion, compensation and any other forms of reward and recognition are based entirely on merit.

## AFFIRMATIVE ACTION

All Tata Steel's locations have a higher percentage than the national average of indigenous tribes and communities. Under its Affirmative Action Policy, positive discrimination was therefore exercised in recruitments to fill new positions created by the Company's expansion programme. To progressively increase the number of local persons, in the recent recruitment of 671 workmen, 33 per cent (227) of those recruited are from indigenous tribes or socially backward classes. As a result the percentage of employees covered by Affirmative Action initiatives in the Company went up from 15.7 per cent to 16.1 per cent.

### Diversity Data

	2009-10		2010-11		2011-12	
	Numbers	%	Numbers	%	Numbers	%
Female Employees	1588	4.6	1645	4.7	1721	4.8
AA Employees	5411	15.7	5489	15.7	5622	15.7
Disabled Employees	56	0.2	56	0.2	56	0.2
MOR	34440		34912		35793	



# PARTNERSHIPS IN THE VALUE CHAIN

Tata Steel respects and protects human rights both within and outside the workplace through the application of frameworks such as SA8000 and the United Nations Global Compact, which are based on the Universal Declaration of Human Rights and ILO Conventions. Tata Steel's commitment to human rights is reflected in the Managing Director's declarations through the Tata Steel Group's Responsible Procurement Policy as well as the Human Resource Policy and Affirmative Action Policy of Tata Steel Limited. The Managing Director and Corporate team is direct involvement in ensuring transparency and fairness in Procurement systems with a Whistle Blower Policy and a Third Party Helpline available to all stakeholders. Tata Steel's community engagement mechanisms are continuously reviewed with the aim of fostering socio-economic empowerment and ensuring a life of dignity for those they impact.

A founder signatory to the United Nations Global Compact (UNGC), Tata Steel supports Principles One and Two of the UNGC, which are derived from the 1948 Universal Declaration of Human Rights (UDHR).

To strengthen and reinforce the objective of its Social Accountability and Responsible Procurement Policy, 91 of Tata Steel's suppliers underwent a Supplier Social Compliance Audit in 2011-12 based on the SA 8000 Social Standard and Environment Management systems.



*All contractors labour working at Tata Steel must undergo Safety training and be provided personal protection equipment*

## Excellence Enablers :

- Responsible Procurement
- CLAP (Contractors Labour Awareness Programme)
- Suraksha Scheme for Contract Labour
- Supplier Governance Mechanism
- Value Creation for the Customer
- Customer Satisfaction

## Fundamental Rights and Investment and Procurement:

The Company believes that embedding respect for the human rights of stakeholders across its operations is central to creating a positive impact for its employees, supply chain and the community. Therefore its business conduct is consistent with all applicable laws, provisions and spirit of the Constitution of India governing human and fundamental rights.

## Integrating Human Rights in business management

Tata Steel's Works attained SA8000 certification in 2005 (and was re-certified in 2007 and 2010) to this standard. The Sukinda unit is the first mine to be SA8000 certified. All Tata Steel's operational locations are required to comply by the nine clauses of SA 8000. All supply chain partners must provide a self-declaration on compliance to SA 8000 standards and participate in the audits.

Its systems and processes are

monitored for compliance and subject to continuous improvement through an independent third-party verification for compliance to SA 8000 standards and to safeguard fundamental political and economic freedoms of the individual.

## Non-discrimination

As per Clause 4 of the Tata Code of Conduct Tata Steel provides equal opportunities to all its employees and all qualified applicants for employment without distinction of any kind such as race, caste, religion, colour, ancestry, marital status, gender, age, nationality, ethnic origin, different ability or sexual orientation. To ensure diversity in its workforce, Tata Steel exercises positive discrimination in favour of socially disadvantaged communities, provided potential employees fulfill its merit-based criteria.

## Responsible Procurement

Responsible Procurement is an important element in delivering Tata Steel's Vision. The Tata Steel Group's Responsible Procurement

Policy explains how each constituent organisation will work with suppliers to ensure that their supply chains share the Tata values. All suppliers are required to demonstrate compliance to five principle blocks namely, Health & Safety, Fair Business Practice, Environment Protection, Human Rights and Local Community Development.

## Suraksha Scheme For Contract Labour

In 2011-12 Tata Steel became the first company in India to establish a scheme for the benefit of contract employees.

In the event of death/permanent total disablement/partial permanent disablement resulting in loss of earning capacity of 50 per cent or more of the contract labour due to an accident on duty, the Suraksha Scheme assures the contract labour or the family a life of dignity. Applicable to all locations of Tata Steel Limited, it covers all contract workers. The beneficiary gets a monthly pension till the notional age of 60 years of the contract employee.

### Our Responsible Procurement Policy has the following principles

- Health & Safety – we expect our suppliers to adopt management practices in respect of Health & Safety, which provide a high level of safeguarding for their workers.
- Fair Business Practices – the Tata Code of Conduct outlines the ethical standards and fair business practices by which Tata Steel conducts business and we expect our suppliers to adopt similar principles.
- Environmental Protection – we expect suppliers to maintain effective policies, processes and procedures to manage their environmental impact.
- Human Rights – we expect our suppliers to develop and implement policies and procedures to ensure all human rights in their business and to encourage their suppliers to do likewise.
- Local Community Development – we expect our suppliers to contribute to the social, economic and institutional development of the communities in which they operate.

# SUPPLIER GOVERNANCE MECHANISM

Low levels of literacy and inadequate awareness of legal and human rights is a concern in the areas where Tata Steel operates. Tata Steel has therefore adopted the SA8000 auditable framework, including construction projects at its brownfield and greenfield locations, for awareness-raising and improving working conditions

Tata Steel engaged with 91 high value suppliers in 2011-12 through an audit to assess the risk posed due to possible human rights violations.



*A workshop in progress to assess the effectiveness of Safety communication*

## Positive Indicators of Audit Report

- All vendors are committed to prevention of child labour
- Effective control is in place for pre-medical (pre-employment) check- up
- Functioning of the Contractor Cell

is effective in resolving reported disputes and in ensuring on time payment of minimum wage, PF, ESI contribution, leave and bonus

- All contract employees receive minimum wage stipulated by the Government, which is paid via bank transfer along with their weekly off. Overtime is also paid at

premium rates

- Significant partners are aware of the legal rights and duties under labour legislation and a majority of them maintain records, registers as per legal requirement
- Some significant partners are aware of the legal requirement specific to environment as well

### Supplier Governance Initiatives:

#### CLAP (Contractors Labour Awareness Programme)

#### Vendor Whistle Blowing Protection Policy

#### ProCare for resolving disputes

A dedicated call centre takes care

of issues /problems raised by the vendors. On receiving complaints via telephone or e-mail a complaint number (ticket number) is generated and is sent to the vendor through e-mail.

#### Affirmative Action Initiatives

In establishing Strategic Outsourcing partnerships with global suppliers

accounting for a high annual spend and services critical to operations Tata Steel chooses those aligned to its Affirmative Action policy. For instance, IBM has been identified for outsourcing of the IT infrastructure for a period of five years. The contract signed with IBM requires it to address Affirmative Action.

### Health & Safety Initiatives For External Processing Agents



### Vendor Satisfaction Survey

A Vendor Satisfaction Survey is conducted every two years to obtain feedback from significant vendors/ suppliers. Based on the key concern and issues raised by the suppliers, remedial actions are initiated. The next survey is due in 2012-13.



Customer Services Department conducts "Moving Steel" a partners meet aimed at achieving world class transportation services



# VALUE CREATION FOR CUSTOMERS

“Value Creation for Customers” encompasses building mutually advantageous partnerships that create real benefits by addressing needs captured through verbal inputs from customers and on-site observations. Value created can be tangible (reduces the total cost of ownership for the customer) and/or intangible (provides convenience to customers).



**Tata Steel receives Toyota's Regional Contribution Award 2012**

Tata Steel has established unique processes and customised approaches in seeking new routes to markets and connecting with customers for mutual value creation. Tata Steel's processes undergo improvement through specific approaches such as Customer Value Management (CVM), Retail Value Management (RVM), Solutions for Sales and Value Management for Hot Rolled Products (VMHR), which was introduced in 2011-12.

The key business objective is to create value for customers in the areas of Automotive and Construction Business and thereby sustain its market leadership in focused market segments.

New value propositions are being created for small and medium

consumers (SMEs) through the “Emerging Corporate Value Management” programme, launched at the end of 2010-11. The initiative focuses on value discovery and development of business models.

The drive to continuously improve products and services is facilitated through Customer Engagement Platforms, which include Product Application Groups (PAG), Customer Service Teams (CST), Customer Satisfaction Surveys (CSS) and Annual Meets.

### Improving customer engagement:

Tata Steel is the first steel company in India to develop a 'Distribution Strategy', a move that has differentiated it from other players in the market. An Automotive Strategy has also been framed, which encapsulates a product-service strategy for the Indian Automotive customers, a focus segment for the Company.

In 2011-12, a Vendor Managed Inventory (VMI) partnership programme to guarantee availability to Low Carbon Wire Rod (LCWR) and Tubes (OE) customers ensured 100 per cent availability at low inventory for customers through frequent replenishment based on consumption.

### Customer Service Teams:

Individual Customer Service Teams (CSTs) cater to Auto OE customers, large construction companies & WR Rod OE customers to strengthen relationships and create value for customers. CSTs comprise experts from across functions.

Active participation of customers, especially auto component manufacturers, has led to the indigenisation of these products and localisation benefits for auto majors by anticipating their needs.

### Product Application Groups:

To fully support the needs of its customers, Tata Steel has aligned its sales and marketing teams with targeted steel end-use markets, creating market sector teams with both production and supply chain activities. The market

sector teams offer individual customers a single dedicated account team to ensure they have optimum access to the Company's extensive product range and technical, logistical and R&D resources.

### Lifecycle Assessments:

LCAs are also extensively used to advise customers at the design stage on the sustainability of downstream products made from steel. This approach has led to energy-efficient products within end-user markets. For example, the Company's range of advanced high-strength steels

make cars lighter and more fuel efficient, while its specially designed construction products are integral to delivering energy-efficient buildings and achieving a reduction in steel consumption by weight.



*Met promotes efficiency and transparency as a way of life*

# TANGIBLE VALUE CREATION

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## **Cost Down-Weight Reduction**

Tata Steel enabled a key customer to effect a 10 per cent reduction in vehicle through its “Cost down – Weight reduction approach”, a first by an Indian steel company.

The focus of the study was mainly the vehicle frame, the front and the rear body parts as these mostly used steel components.

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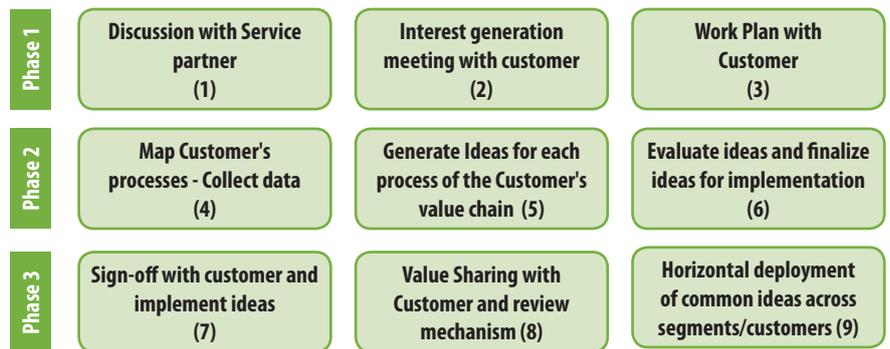
# VALUE-IN-USE PROGRAMME

The Marketing & Sales Team of Flat Products Division has launched “Value-in-Use”, a cross-company, cross-functional initiative. This programme focusses on key customers of Galvano to provide better value for small and fragmented customers in the SME Segment, being served through the distribution route.

By improving awareness on product features and benefits, it enhances

their capability as service partners to offer better products and services and realise the full value potential of the product.

## Process Flow chart of “Value-in-Use” programme



# CUSTOMER SATISFACTION

Based on feedback from customers 'Steelovation' - a unique initiative targeted at creating value for Key Account Customers of the Galvano and Steelium brands - was customised in 2011-12 to their specific needs. It addresses wastage due to the problems during welding, resulting in wastage, quality issues and a less than perfect finish.

In response to the needs of the customers, the diameters of all Tata TISCON rebars are now embossed on them for easy traceability at the construction site and to reduce inadvertent misuse of rebars by bar-benders, optimising steel use of customers.

Through the customer feedback programme "Rishtey", the sales team and the operations personnel are able to interface with customers so that corrective actions are taken by the plant to improve customer satisfaction as well as the quality of product and services in the Tubes Division.

Unique offerings based on consumer needs introduced for the first time in India during 2011-12 include RAISE, 'TISCON Ready-Build', TISCON Super Links, 'BuildWise' and Roof Junction.

## Project NEST

To bridge the gap in quality offerings for complete, comfortable and clean housing available to the relatively



of a complete steel roofing solution using Tata Shaktee - in 2011-12. Approximately 70 masons and 40 dealers have been trained as partners to execute Roof Junction projects.

## TATA WIRON Fencing Solutions

Tata Steel's Wires Division launched a Fencing Solutions initiative in 2011-12 to fill the gap for good quality, durable fencing in rural areas and small towns. Channel partners erected about 160 barbed wire and chain link fences across the country against customer orders.

## AMRIT from Tata Pipes

A complete value solution for the rural customers (farmers) was introduced with a sub brand of Tata Pipes – Amrit being envisioned in 2011-12. An elaborate market study on different ground water levels and bore well requirements was done. The sub brand

Corporate Value Management  
**Shop in shop for Tata Wiron**

programme to provide new value propositions to SME customers. For instance its Cut & Bend solution, design support and couplers has provided significant value to the customer. The Company is therefore appointing new Project Distributors (PD) to enhance its reach of Small and Medium Enterprise (SME) customers.

## ACE+ (R) Service Centres

Small and medium customers who are not retail outlet buyers but repeat buyers of Tata Steel's products such as steel sheets are serviced through 23 service centres. These centres are audited and developed through a trademarked process called ACE+(R). The process has improved the efficiency of small third party cutters who have adopted better safety, health, environment and work procedures based on the annual audit by Tata Steel.

# VALUE CREATION FOR RURAL CUSTOMERS



*Tata Steel's Flat Products Division hosted "Everlasting Spirit of our Parivaar" to bring together its dealers with experts in the business*



# COMMUNITY DEVELOPMENT

## MANAGEMENT APPROACH

The Founder, Jamsetji Tata had wished to make the community the very purpose of the Company's existence.

Therefore today Tata Steel's Vision places equal emphasis on value creation and corporate citizenship - making inclusive growth an integral part of its corporate strategy. The Company's objective is to impact a million lives in the areas where it operates.

To achieve this goal, the Company has adopted a multi-pronged approach that differentiates between urban needs, rural imperatives for growth, concerns with respect to resettlement and the need to safeguard the interest of indigenous communities.



**GRI INDICATORS:**  
 SO 1/ SO 9/ SO 10/ MM -  
 COMMUNITY ENGAGEMENT  
 / MM - SOCIAL INCLUSION /  
 MM 5 / HR 9 / HR 11

### WORLDSTEEL INDICATORS:

We promote values and initiatives that show respect for the people and communities associated with our business.

### EXCELLENCE ENABLERS :

- Mainstreaming Indigenous Communities
- Mid day meal
- Tata Parivar Scheme Inclusive Growth through Sustainable Livelihoods
- Bridging the healthcare deficit
- Public-Private-Partnership to prevent HIV/AIDS
- Improving Physical Infrastructure
- Social change through Sports

*A tribal lady from Tata Steel's project area in Chhattisgarh*

*A beneficiary admires the solar light installed at Bannipal in Odisha*

## A Social Strategy aimed at Inclusive Growth

Tata Steel continually revisits its social strategy to align it to the developmental needs of the disadvantaged and indigenous communities. Last realigned in 2011 key elements of Tata Steel's social strategy include sustainable livelihoods, access to healthcare, education and empowerment. The Company seeks to promote tribal languages and culture as well as safeguard the unique identity of primitive and indigenous tribes. Six such centres were launched in 2011-12.

Tata Steel increased its allocation for social initiatives to Rs 146 crores in 2011-12 from Rs 126.28 crores in 2010-11.

In 2011-12, the Tata Steel Skill Development Society was formed in response to the urgent need to improve the employability potential of youth.

## WHERE WE WORK

### JHARKHAND



Jamshedpur  
Noamundi  
Jamadoba  
West Bokaro

### ODISHA



Joda  
Kalinganagar  
Gopalpur  
Bamnipal  
Sukinda

### CHHATTISGARH



Lohandiguda

## ACTUALISING TATA STEEL'S SOCIAL STRATEGY



During the year, the Company's focus on impacting lives led to the roll-out of an ambitious renewable energy project to illuminate villages through solar lights. 224 villages experienced social and economic change as a result of this initiative. The Company's Ore Mines and Quarries (OMQ), which created rainwater harvesting projects

over three consecutive years, now has the potential of harvesting 125000 cubic metres of water, and is poised to trigger a water revolution in the area.

To prevent the unique heritage of tribes indigenous to Jharkhand, particularly their languages, from becoming extinct, Tata Steel's Tribal

Cultural Society (TCS) is collaborating with community based organisations (CBOs) to open new centres to impart knowledge and to promote the traditional scripts of the ethnic languages such as the Ol Chiki script of the Santhali language or the Warang Kshiti script of the Ho language.

## Mapping expectations

Development programme are designed in line with stakeholders' expectations, which are mapped by external agencies as well as through internal evaluations. Subsequently, projects are planned in consultation with the community.

## Measuring Impacts

The effectiveness of various interventions is measured by the success rate of the programmes, both tangible as well as intangible. In 2011-12, the Company adopted the Human Development Index (HDI) - a globally accepted composite index of income, life expectancy and education - as a measure to assess the holistic impact of its interventions in rural areas across the states of Jharkhand and Odisha.

It was calculated for 112 villages in the state of Jharkhand during 2011-12. In 51 villages the HDI was better than the state average, while in as many as 33 villages the HDI was better than the national average. This outcome is significant in light of the fact that Jharkhand is among the least developed states of the country. As a process ahead, a similar exercise will be carried out in all other villages both

in Odisha and Jharkhand in 2012-2013.

To capture the satisfaction levels of communities in urban areas, the eQ index was adopted. Further to improve HDI and the eQ™ Index, strategies for both rural and urban areas were aligned to include sustainable livelihoods, health, education, water, power and roads as focus areas.

# MAINSTREAMING INDIGENOUS COMMUNITIES

Scheduled tribes, some of the country's most marginalised sections of society, constitute 26.30 per cent of the population in Jharkhand and 22.13 per cent in Odisha, states where Tata Steel has a prominent presence. The Company's Tribal Cultural Society, established in 1993, works towards mainstreaming the tribal communities.

## Focus Areas

- Preservation and promotion of the ethnic identity of indigenous tribes
- Promotion of education
- Creation of an empowered society
- Employability of economically weaker sections through skill development
- Improvements in the health status of marginalised families

An important thrust area is to enable the primitive tribal groups- the Birhore and the Sabar in particular - to become economically self reliant by providing them livelihood opportunities.



*The purpose of the Tribal Culture Centre at Jamshedpur is to preserve and promote tribal culture and heritage indigenous to where Tata Steel operates*

Representatives across all its units regularly engage with village opinion leaders, youth and women to integrate the aspirations of indigenous communities within the social strategy of the Company. This consultative approach, precluding the need for a formal agreement, has ensured an enduring and peaceful relationship with indigenous communities. This has given Tata Steel the continued social license to operate in these communities.

## **Tribal languages:**

The launch of 15 centres for tribal languages in Jamshedpur in 2011-12 led to more than 900 youth being reintroduced to their Santhali and Ho scripts.

## **Tribal Sport:**

Three traditional tribal sports - Chhur, Bahu-Chor and Kati – were revived through tribal sports tournaments organised during the year. The annual Kati Sports Tournament attracted more than 800 players.

## **Access to Education:**

Inclusion of tribal children into mainstream education received a tremendous fillip with 100 girls being enrolled in schools, which supported this initiative by Tata Steel.

## MID DAY MEAL TO FOSTER THE SCHOOL GOING HABIT

The mid day meal scheme of the Government of India was introduced to attract children to school and reduce the dropout rate. Subsequently because of its positive impact the Supreme Court directed all states for its early implementation.

Tata Steel stepped in to support the Government of Jharkhand by setting up a central kitchen to provide mid-day meals to ~100,000 students in

Government schools in and around Jamshedpur. The aim is to enhance enrolment, retention, attendance and simultaneously improve nutritional levels among children.

In the first phase, 301 schools in the East Singhbhum district and 82 Schools in Seraikela –Kharswan district accounting for a total of 65,000 children will be served.

Tata Steel identified ISKCON Food Relief Foundation as the most suitable service provider given that it has ISO 9000 and HACCP (Hazard Analysis and Critical Control Point) certifications.

### Expected long-term outcomes:

- Increasing enrollment
- Promoting school participation
- Facilitating the healthy growth of children
- Fostering social equality



*The Central Kitchen established by Tata Steel where the mid day meal is made for ~ 100,000 school children*



# TATA STEEL PARIVAR - A UNIQUE RESETTLEMENT AND REHABILITATION PROGRAMME

To safeguard the fundamental rights of displaced families, including indigenous communities, while implementing greenfield projects at Kalinganagar and Gopalpur in the state of Odisha, the Company has created a unique Resettlement and Rehabilitation (R&R) programme - Tata Steel Parivar.

The Company is conscious of the promise that entry of industry brings to greenfield locations. Therefore, to provide long-term support for displaced families Tata Steel has exceeded requirements under the Resettlement and Rehabilitation Policy of the Government of Odisha.

Through Tata Parivar cards, issued to all members of displaced families improvements in their quality of life is tracked. The Company is also striving to meet the Millennium Development Goals in 21 villages, 14 of which are directly project impacted.



*Youth undergo employability training at classes run by Tata Steel*

### Livelihood development:

All project affected families primarily subsisted on farming or village based occupation such as cattle rearing and animal husbandry prior to the entry of Tata Steel.

Therefore where possible the Company has attempted to safeguard sections of pre-existing villages and farms while planning the layout of its plant.

### Boosting the local economy:

The Company is developing model townships at Trijanga, Sansailo and Gobarghati, close to its Greenfield project site at Kalinganagar in Odisha to boost the local economy. It provides support to local entrepreneurs based on its

policy of local procurement and imparts employment training to wards of displaced as well as project-affected families.

### Employment and Employability training:

304 students were trained till 2011-12, with another 190 students currently undergoing pre-employment training while a third batch of trainees has been enrolled for vocational training. Twenty-nine members of Tata Steel Parivar from Kalinganagar, who trained in welding

technology have joined its construction partner Punj Lloyd Company for further on-site training.

About 600 families have been employed in various construction sites as semi-skilled and unskilled workers.





# INCLUSIVE GROWTH THROUGH SUSTAINABLE LIVELIHOODS

Poverty alleviation

programmes for the rural population aim at:

- Improvements in crop productivity
- An increase in the area under second and third crops through irrigation and wasteland development
- Skill based training for the youth to allow them to benefit from existing and emerging opportunities and
- Enterprise development at the community-level through Self Help Groups (SHGs).



*SHGs gifted equipment to allow them to set up micro enterprises*

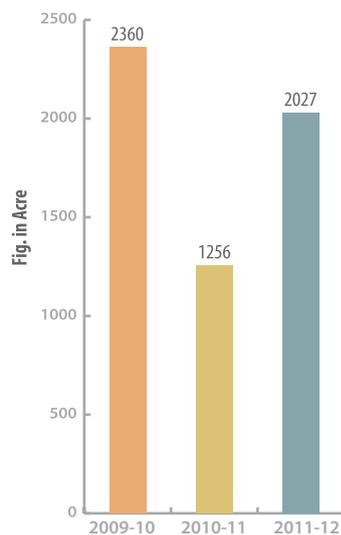
## AGRICULTURE DEVELOPMENT

The System of Rice Intensification (SRI) method of paddy cultivation was piloted in 125 acres of land in 10 villages positively impacting 250 farmers. The yield of SRI cultivation in the demonstrated plots was more than two tonnes per acre.

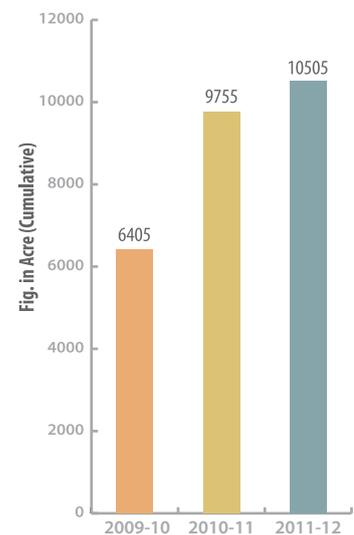


*Paddy cultivation under SRI to improve yield*

### GROWTH IN ACREAGE UNDER 2ND AND 3RD CROP



### WASTELAND MADE ARABLE UNDER NATIONAL HORTICULTURE MISSION





*Small pumps enhance the area under irrigation around the Noamundi Iron Mine*

### Focus on Marginal Farmers in Noamundi

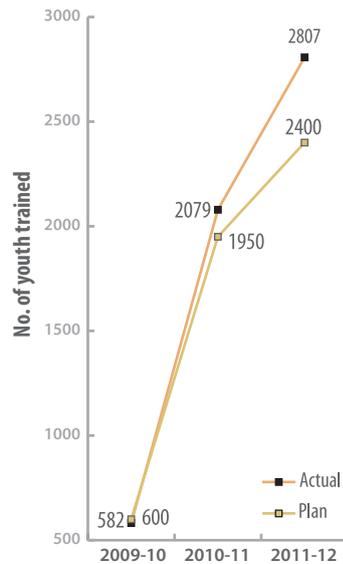
Gaps and challenges	Farmer training:	Interventions by Tata Steel
<p>Tata Steel focuses on improving the economic condition of the marginal farmers by creating the necessary basic infrastructure required for enhancing and sustaining improvements in agricultural productivity, a primary source of livelihood for the community in this area. The principal challenges in improving the economic condition of marginal farmers are lack of knowledge on improved agricultural practices and emerging technology, dependence on mono crops, the inability of the farmers to forge cooperatives aimed at utilising existing water resources and almost no access to agriculture extension services connecting on-going research with the beneficiaries.</p>	<p>Through both village based and classroom training at the Kolebira Training Centre of TSRDS, along with continuous inputs by the TSRDS field staff to the farmers, about 700 acres of farmland has been covered under the Kharif crops benefitting around 400 farmers and their household from an earlier coverage of around 250 acres.</p>	<p>With public investment in agriculture virtually absent, Tata Steel has stepped in to provide basic irrigation amenities and develop Rainwater Harvesting structures. Farmers are continuously motivated to utilise the existing water bodies through small irrigation pumps. The creation of these water structures and use of other irrigation aids has enhanced the irrigation potential of the area and cropping intensity.</p>

*Improved methods of cultivation are shared with farmers*

## EMPLOYABILITY

In-house training for site safety supervision, along with employability programmes in collaboration with PARFI (Pan-IIT Alumni Reach For India), NTTF (Nettur Technical Training Foundation), and TBSS (Tata Business Support Services) led to about 2800 job seekers being trained in various vocational trades. Of them 1074 youths or 38 per cent are from the SC/ST communities. A total of 833 youths or 29 per cent have already been gainfully employed.

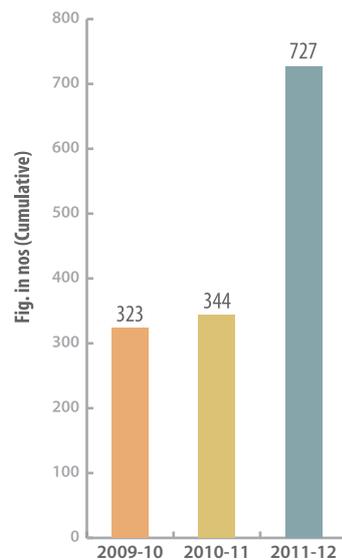
**EMPHASIS ON EMPLOYABILITY PROGRAMMES LEADS TO FOUR FOLD INCREASE IN YOUTH TRAINED**



## ENTERPRISE DEVELOPMENT

Self-Help Groups (SHGs) have emerged as an extremely successful mechanism for Tata Steel to enlarge the scope for women from socially and economically marginalised communities to participate in family decision-making and gain access to grassroots democratic institutions while also boosting their economic self-reliance.

**OVER TWO FOLD INCREASE IN SELF HELP GROUPS TO BOOST ECONOMIC SELF RELIANCE**



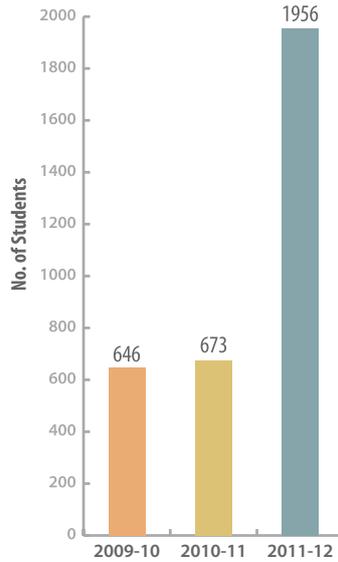
## EDUCATION

Tata Steel's focus on improving access to quality education, especially for the girl child is promoted through interventions such as scholarships for meritorious students who are economically and socially challenged, adult literacy classes, centres for early child education, camp schools for girls and coaching classes for high school students.

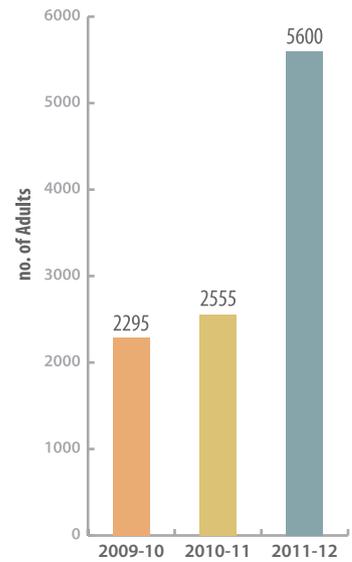
Education scholarships were provided to nearly 2000 meritorious students from marginalised communities.

More than 100 school dropouts, all girls, from underprivileged families returned to mainstream schools after attending a nine-month bridge course at a camp school.

**SHARP RISE IN NUMBER OF SCHOLARSHIPS AWARDED**



**DRIVE FOR ADULT LITERACY DOUBLES NUMBER OF BENEFICIARIES IMPACTED**



*Coaching classes have improved the success rate of high school students*

# BRIDGING THE HEALTH CARE DEFICIT

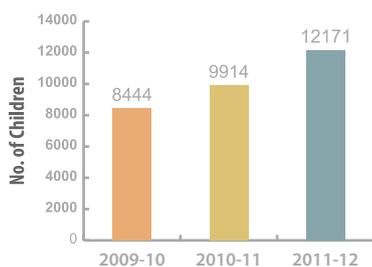
Tata Steel provides preventive, promotive and curative health care services through Company's hospitals in Jamshedpur, Noamundi, Joda, Jharia, West Bokaro and Sukinda, nine dispensaries in Jamshedpur, public health services, mobile medical vans and health care providers to almost three million people across the states of Jharkhand, Odisha and Chhattisgarh.

## BASIC HEALTH CARE:

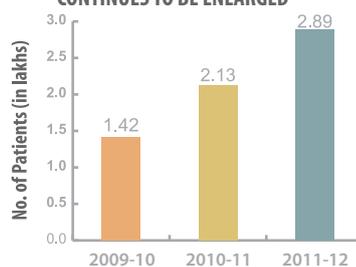
In 2011-12, a total of 2,90,000 people in three states received basic health care through the Company's mobile medical units. Tata Steel's focus on the health of the mother and child led to the immunisation of 12,700 infants and ante-natal checkups for 11,600 expectant mothers.

## SPECIALITY CARE:

CONTINUOUS RISE IN IMMUNISATION TREND



REACH OF PRIMARY HEALTH SERVICES CONTINUES TO BE ENLARGED



Tata Main Hospital (TMH), caters to the advanced medical needs of the entire Kolhan region of Jharkhand, comprising the East Singhbhum, West Singhbhum and Seraikela-Kharsawan districts. Over 13,00,000 outdoor and 57000 indoor patients were treated in 2011-12.

To bridge the demand-supply gap between services during the year the capabilities of the departments at TMH, including availability of advanced equipment and doctors, were significantly enhanced and a state of the art Intensive Care Unit added.



## PROJECT MANSI - Maternal and Newborn Survival Initiative Project

To reduce maternal and child mortality and morbidity in Seraikela block of Seraikela-Kharsawan district in

Jharkhand, a project based strategy under MANSI (Maternal and Newborn Survival Initiative) was adopted in

2009. MANSI is a unique project based on Public-Private Partnership (PPP) approach being piloted in 167 villages

### Significant Achievements under Project MANSI:

Over the last two years, the focused intervention has brought a turnaround as far as maternal and newborn health care is concerned:  
- Nearly 90% of pregnant women have

received ante-natal check-ups and IFA tablets  
- More and more pregnant women are being brought to government health facility for institutional delivery (% of

deliveries at home has decreased from 41.5% to 23.6%)  
- Infant Mortality Rate has come down from 62 to 36 in the project area.



# PUBLIC–PRIVATE–PARTNERSHIP TO PREVENT HIV/AIDS

Tata Steel recognized the importance of HIV/AIDS interventions among high-risk groups where it operates as early as in 1994 and voluntarily took on the responsibility for the districts of East and West Singhbhum. The scope of this effort now extends to the districts of Dhanbad, Ramgarh, Hazaribagh, East Singhbhum, West Singhbhum, Saraikela-Kharswan and Ranchi in the state of Jharkhand.

## Building Awareness:

In 2011-12 a special HIV/AIDS awareness campaign launched by Tata Steel Rural Development Society in collaboration with Jharkhand State AIDS Control Society (JSACS) covered a population of ~100,000 in 854 villages and Urban Bustee Areas.

## Tracking Incidence:

Tata Steel's Health Information Management System (HIMS) indicated 200 HIV Positive cases for 2011-12.

## Hospice for HIV Positive Patients:

A 20-bed Hospice at Gopalpur in Odisha run by Tata Steel has treated about a thousand HIV positive cases.



*Awareness drives are extremely effective in preventing the spread of HIV/AIDS*

## Caring for People Living with AIDS:

1305 patient-visits were attended to in 2011-12.

### Project RISHTA (Regional Initiatives for Safe Sexual Health by Today's Adolescents)

With the objective to improve the sexual and reproductive health and well-being of adolescents, more than 35,000 adolescents have been covered in the project area through home visits, individual and group counseling, health fair etc.



*Street plays help villagers understand the mode of transmission of AIDS and preventive measures to be adopted*



*Compost Plant set up by JUSCO*

**Solar energy changes rural lives**

Tata Steel has initiated a drive to brighten lives in remote villages by using renewable sources of energy like solar energy. Under this ambitious initiative, in 2011-12 over 700 solar streetlights were installed benefitting 224 villages in Jharkhand and Odisha. Regular maintenance of the installed lights is entrusted to select members from the village community through Urja Samitees (Energy Committees).

**New Educational Infrastructure**

Tata Steel began construction of a library at the Kalinga Institute of Social Sciences (KISS) in Bhubaneswar, the largest tribal school in the country. The residential school imparts education to poor tribal students from different parts of the state of Odisha.

To enable school children from different hamlets around its Ore Mines & Quarries to travel safely and comfortably to school everyday, in 2011-12 Tata Steel constructed a five to six kilometre road connecting the villages to the school. It subsequently introduced a bus service for them as well.



*Solar light set up in West Bokaro*



*Waste plastic mixed with bitumen to build roads keep the city clean of plastics as well as strengthens its roads*

# SOCIAL CHANGE THROUGH SPORTS

Sports and Adventure Sports are leveraged by the Company to empower local youth, strengthen its relationship with the community and provide alternative avenues for employment. Development of “Golden Hopes” in Sports is a national priority for Tata Steel India.

In 2011-12, Ms Deepika Kumari and Mr Jayanta Talukdar – cadets of the Tata Archery Academy – were selected to represent India at the 2012 London Olympics, while Ms Purnima Mahato has been nominated Coach of the Indian

Archery Team.

During the year, Tata Football Academy launched a grassroots-training programme to train potential footballers by identifying them between the ages of eight to ten

years and then providing ten years or 10,000 hours of training. Under the programme, 73 boys, all under 10 years of age, were selected for an entire year of training at TFA.



*Rural youth benefit from training at a Feeder Centre at an out location*



# IMPROVEMENT AND INNOVATION

A customer centric organization, Tata Steel consistently strives to develop new safe and environmentally friendly products to meet the growing needs of India's rural population, the urban construction and small and medium enterprise sector, infrastructure industry and world-class manufacturers with bases in India, who use steel as an input material in their products. Therefore while being the best in class, its products are safe as well as resource and energy efficient. The Company's offerings meet the needs of the automotive, construction and infrastructure segments which demand global standards for quality, safety and environment.



## Excellence Enablers :

- Resource Conservation
- New Product Development
- New Process Technology
- Advocating Safe Use of Products
- Lifecycle Assessments
- Environmental Product Declaration

### Resource Conservation:

Tata Steel's Technology Roadmap, released in 2011-12, is aimed at ensuring that product designs are safe, resource efficient and deploy eco-friendly technology. A result of a consultative process the Roadmap provides a long-term view on aspects such as emerging market trends,

product applications and emerging technologies, besides identifying gaps and opportunities based on the present and future needs. It shows the way forward for technology advancement by pursuing both innovative improvements and path breaking technologies.

### New Product Development:

Opportunities for improvements in environmental and sustainability performance are identified through a robust Total Quality Management programme, which spans the entire value chain. Tata Steel's New Product Development (NPD) process, knowledge sharing and customer engagement initiatives are a product of the Company's strategic goals as well as inputs received from customers on emerging needs and future product applications.

The introduction of premium branded products with improved chemistry and physical attributes, through NPD, had a positive economic and environmental impact both direct and indirect on the market. Examples of responsible

products introduced in 2011-12 include (a) Low Carbon Wire Rods (LCWR), (b) C-Mn 440 grade Cold Rolled Sheets, (c) Galvano in the Galvanised Plain (GP) market and (d) Fe500, Fe600 Rebars with varying Yield Strengths. Micro Alloyed rebars, which are rust proof and have better UTS/YS ratio, were tested for the construction sector.

Large diameter black structural tubes for the infrastructural segment, fire resistant structural sections, environment friendly Chrome free Thin Organic Coated galvanized pipes for plumbing applications and Galvanised structural components for upcoming Solar energy projects in India are on the anvil.

### Lifecycle Assessments:

Tata Steel takes a holistic approach - from cradle to grave - in assessing the impact of its products, including sustainable mining practices, resource beneficiation for greater blast furnace productivity and end-of-life scenarios

since steel is 100 per cent recyclable. Comprehensive analyses of environmental impacts associated with the safety of products, processes and resource utilization are obtained through Life Cycle Assessments (LCA).

### Environmental Product Declaration:

The LCA projects undertaken in the last decade have greatly improved resource utilisation and the environmental performance of the Company. An LCA project initiated in 2011-12 is aimed at developing an

Environmental Product Declaration (EPD) for Tata Steel's rebars, providing relevant environmental information along the product's value chain.

# RESOURCE CONSERVATION

Tata Steel's R&D efforts focus on breakthrough technologies and raw material beneficiation to extract reductions in raw material use, energy and water requirements besides greenhouse gas emissions. Progress is continuously tracked and compared with global industry standards or benchmarks for resource efficiency and costs. Year on year adoption of new production technologies, such as the Thin Slab Caster and Rolling Mill as well as the Continuous Annealing and Processing Line, is aimed at delivering products with energy efficient end applications.

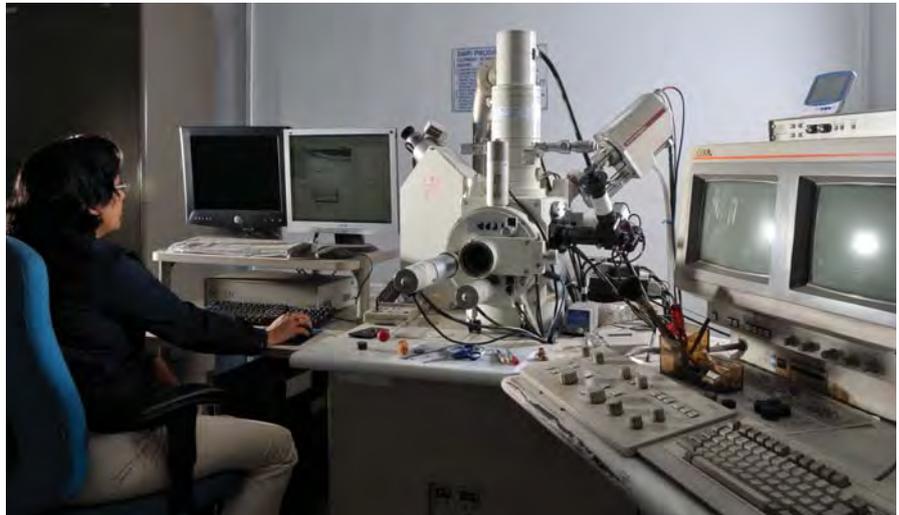
Tata Steel's focus on conserving natural resources spans the entire value chain - from raw material to end-use and disposal. In 2011-12 the Company replaced its Fe415 grade rebars with the Fe500 grade rebar. The Fe500 grade with a higher tensile strength of 500MPa is 17 per cent stronger with respect to Fe415 grade rebars. This translates to a potential savings in cost of house construction due to reduction in usage of steel for the same plan and conservation of critical natural resource for future generations.

Test marketing of high strength Fe600 rebars for construction of high-rises is underway. Fe600 will also help construction majors reduce specific consumption of steel. The 6mm diameter size TMT Fe500 rebar has replaced the 8mm rebar in applications where only the minimum reinforcement criterion needs to be met. The benefits are lower consumption of steel by weight, a reduction in the use of ore along with lower waste generation and a reduction in CO<sub>2</sub> emission @ 2.5 tCO<sub>2</sub>/ton of crude steel.



# NEW PRODUCT DEVELOPMENT

Tata Steel's products are used for applications ranging from vehicles, construction, engineering equipment, packaging and much more. The health and safety considerations of products strongly influence all lifecycle stages particularly during Research & Development, New Product Development initiatives, Manufacturing and Production. Tata Code of Conduct (Clause 8 & Clause 9) provides the framework to ensure product safety for the customer. Tata Steel's reinforcement bars (rebars) are certified by CARES, UK for Product conformity thereby guaranteeing that the product quality matches customer needs.



*Research and Development initiatives benefit Tata Steel's entire value chain*

## **Low Carbon Wire Rods:**

An example of a unique shift brought about in 2011-12 due to a proactive interest in health and safety considerations is the product innovation for Low Carbon Wire Rods (LCWR) enabling customers to change from Acid Pickling to mechanical descaling - reducing health and safety hazards for their employees and simultaneously reducing costs.

A change in rolling parameters to make non-sticky, thick and flaky scales on its wire rods, which can be removed by mechanical descaling, led to 100 per cent of its LCWR customers switching from "Acid Pickling" of wire rods before wire drawing to "Mechanical De-scaling". The health risks posed by the acid to the employees at the customer premises and the need for disposal of the environmentally hazardous acid sludge have been eliminated.

## **Cut and Bend Solutions:**

Downstream solutions to improve safe use of products include ready-made stirrups sold under the brand name 'TISCON SUPERLINKS'. A good quality stirrup not only creates a sound structure for safer and durable homes but also eliminates the need to cut and bend rebars at the customers' premises. Now the Company is developing a new-age "plasma" technology product to provide rust proof rebars to consumers.

## **Minimising oil levels:**

Rust Preventive oil on steel products evaporate during welding. Process technology developed by Tata Steel has controlled oiling which minimises the oil levels and safeguards users.

# NEW PROCESS TECHNOLOGY



*Tata Steel was recognised by the Department of Controller General of Patents for the highest number of patents granted for the period 2007 to 2011 to a private sector company*

## Lead Free Coating:

Development of a lead free coating chemistry for Tata Steel's Zero Spangled Galvanised Plain Sheets - Galvano - ensures that the first branded zero-spangled GP sheet in India is produced

using a 'lead-free' Zinc Bath. The product therefore stands out not only due to its unmatched surface finish, quality and mechanical properties but also compliance to ROHS (Restriction of Hazardous Substances) guidelines.

## Ecologically friendly Chrome Concentrate:

Chrome concentrate is made from beneficiating low grade Chrome Ore that enriches the chromium content in the product. Tata Steel's endeavour to produce ecologically friendly products by herbal and chemical

treatment of Chrome Concentrate to make it hexavalent chrome free (Cr+6 free) is a pioneering effort in environment protection. Tata Steel holds two patents for the herbal treatment of ore.

## Organic Coating for Sheets:

After having eliminated Hexavalent Chromium in its galvanised sheets with Trivalent Chromium, Research & Development is focussing on Thin Organic coating to eliminate Chromium - a carcinogenic material - altogether from Galvanised sheets.

## Recovery of Excess Zinc:

At the Confederation of India Industry (CII) Environmental Best Practices Award Competition Tata Steel's Tubes Division won the "Most Innovative Environment Project" for the installation of an automatic air wiping system in

Tube galvanizing which recovers excess zinc from the bore of the tubes, reducing use of the substance. The award is an affirmation of Tata Steel commitment to safe, green products.

# **ADVOCATING SAFE USE OF PRODUCTS**

Tata Steel takes its role as a supplier seriously with regard to information on health, safety and environment down the supply chain.

Though labeling is not required for steel products, Tata Steel fulfills its responsibilities for providing information on its products to customers through cross-functional product teams who interface with a diverse range of end-users including OEMs, architects, homeowners, masons, etc. The Company provides detailed Test Certificates whenever required by customers to validate that the right quality product is being

provided for an application.

Product Application Groups (PAGs) of the Long & Flat Products Divisions, along with Sales Team also communicate proper use and disposal of the products to Tata Steel's customers, as well as help them realise maximum benefits from its product & services. Complaints/ Feedbacks raised on Product Safety by Customers are monitored. No incidents of non-

compliance in the matters of customer health and safety were reported during 2011-12.

Steel used for Tube making complies with RoHS guidelines. On demand steel samples are checked at independent third party laboratories and certificates for the same are issued to the customer.



*Labeling of products provides comprehensive information and ensures appropriate use of the products*



# LIFECYCLE ASSESSMENTS TO PROVIDE EPD FOR REBARS

Tata Steel undertakes Life Cycle Assessment (LCA) studies which yield information on environmental impact factors like natural resource depletion, global warming, acidification, eutrophication, ozone depletion, human toxicity, etc. LCAs help identify opportunities for improving the environmental performance of the system under consideration and assist strategic planning, new product development, marketing, reusing or recycling and disposal.

Lifecycle Assessment data in accordance with the ISO 14040 series of standards also forms the basis of an Environmental Product Declarations (EPD), intended for use in business-to-business and also business-to-consumer communications.

An EPD can assist purchasers and users to make informed comparisons between products. The overall goal of environmental labels and declarations is to encourage improvement in environmental performance by encouraging the demand for and supply of products that reduces stress on the environment. Communication of

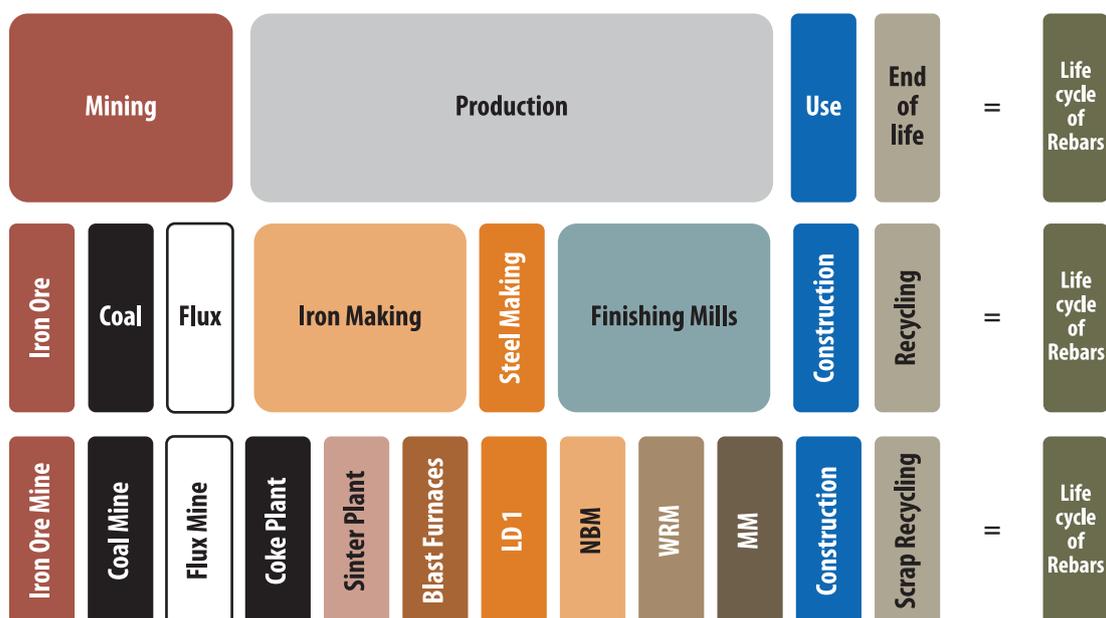
verifiable and accurate information that is not misleading has the potential to stimulate continuous market-driven environmental improvement.

As part of its policy to proactively deal with climate change Tata Steel is identifying and assessing the environmental impacts associated with its reinforcement bars (rebars). An accurate understanding will allow the Company to align product development with its Environmental Policy and provide fact-based information on the environmental impact of its products.

## EPD development project for rebars

The project for EPD development of rebars considers all the environmental aspects in the entire lifecycle of Rebars comprising processes from raw material acquisition, production, use phase and the end of life recycling.

## Lifecycle of the Rebar





## INDEPENDENT ASSURANCE STATEMENT

### Introduction

Det Norske Veritas AS ('DNV') has been commissioned by the Management of Tata Steel Limited ('Tata Steel' or 'the Company') to carry out an assurance engagement on Tata Steel's Sustainability Report 2011-12 ('the Report') in its printed format, against the Global Reporting Initiative 2011 Sustainability Reporting Guidelines Version 3.1 (GRI G3.1) and the DNV Protocol for Verification of Sustainability Reporting (VeriSustain)<sup>1</sup>.

DNV is a global provider of sustainability services, with qualified environmental and social assurance specialists working in over 100 countries. DNV was not involved in the preparation of any statements or data included in the Report except for this Assurance Statement. DNV maintains complete impartiality towards any people interviewed. DNV expressly disclaims any liability or co-responsibility for any decision a person or entity would make based on this Assurance Statement.

The intended users of this assurance statement are the readers of Tata Steel's Sustainability Report 2011-12. The Management of Tata Steel is responsible for all information provided in the Report as well as the processes for collecting, analyzing and reporting the information. DNV's responsibility regarding this verification is to the Company only and in accordance with the agreed scope of work. The assurance engagement is based on the assumption that the data and information provided to us is complete and true.

### Scope of Assurance

The scope of work agreed upon with the Company includes verification of the following:

- Review of Tata Steel's Corporate Sustainability Report for 2011-12

- so developed as per application level A of the GRI 3.1 guidelines and GRI 'Mining and Metal Sector Supplement (MMSS) ;
- Review of the policies, initiatives, practices and performance described in the Report as well as references made in the Report to Tata Steel's 105th Annual Report (2011-12);
- Review of the Report against the requirements of VeriSustain with a moderate level of assurance and:
  - o Information relating to company's sustainability issues, responses, performance data, case studies and underlying systems for the management of such information and data as presented in the Report;
  - o Information relating to company's materiality assessment and stakeholder engagement processes;
- Confirm that the report meets the GRI G3.1 Application Level A+, as declared by the Company.

The reporting boundary is as set out in the Report and during the assurance process we did not come across limitations to the scope of the assurance engagement. The verification was conducted during October 2012 for the activities covered in the Report for the period 1st April 2011 to 31st March 2012.

### Verification Methodology

This assurance engagement was planned and carried out in accordance with the DNV Protocol for Verification of Sustainability Reporting. The report has been evaluated against the following criteria:

- Adherence to the principles of Stakeholder Inclusiveness, Materiality, Responsiveness, Completeness and Neutrality as set out in DNV's Protocol; the reliability of the specified sustainability performance

information, as required for a moderate level assurance engagement;

- The principles and requirements of the GRI G3.1 for an application level A+.
- As part of the engagement, DNV has challenged the sustainability-related statements and claims made in the Report and assessed the robustness of the underlying data management system, information flow and controls. In doing so, we have:
  - Examined and reviewed documents, data and other information made available by Tata Steel;
  - Visited the Tata Tubes, Jamshedpur, Tata Steel Jamshedpur Steel Works, Sukinda Mines, Marketing and Sales Office (FPPC & LPPC), Tata Centre, Kolkata and Wires division at Tarapore, Mumbai for the purpose of verifying qualitative and quantitative information presented in this Report;
  - Conducted interviews with top/senior management and key representatives and managers in various offices, manufacturing units, project sites and at the head office, including data owners, decision-makers and risk managers from different divisions and functions of the Company;
  - Reviewed the Company's approach to stakeholder engagement and its materiality determination process;
  - Performed sample-based reviews of the mechanisms for implementing the Company's sustainability related policies, as described in the Report;
  - Performed sample-based checks of the processes for generating, gathering and managing the quantitative data and qualitative



## INDEPENDENT ASSURANCE STATEMENT

information included in the Report;

- Reviewed the process of acquiring information and economic data from the financial data presented in the Company's Annual Report 2011-12

### Opportunities for Improvement

The following is an excerpt from the observations and opportunities for improvement reported to the Management of Tata steel and are considered for drawing our conclusion on the report; however, they are generally consistent with the Management's objectives:

- Materiality determination may be adopted as a full-scale companywide process to bring out specific key material issues in sustainability context.
- It would be worthwhile if the company could come out with a formal policy & practice on impact of climate change on its business across the verticals
- As a best practice, the environmental expenditure accounting may follow IFAC (International Guidance Document on Environmental Management Accounting)
- Implementing a systematic process for data management and its quality assurance procedure will further help improve the reliability of sustainability performance monitoring and reporting process

### Conclusions

We consider the methodology and process for gathering information developed by the Company for its sustainability performance reporting to be appropriate. The qualitative and quantitative data included in the Report was found to be reliable, identifiable and traceable; the personnel responsible were able to demonstrate the origin

and interpretation of the data. We also assessed the reported progress against the company's commitments as disclosed in its previous Report and observed that the Report presents a fair description of the sustainability activities and the goals achieved. We have evaluated the Report's adherence to the following principles on a scale of 'Good', 'Acceptable' and 'Needs Improvement':

**Stakeholder Inclusiveness: Good.** The Company had engaged themselves in dialogue with selected stakeholders during the year through different channels. The material issues emerging from the stakeholder engagement were collected, prioritised and the results are reflected in the Report. Reference is made to the issue-based stakeholder engagement process under this Report.

**Materiality: Acceptable** The process developed internally captures key sustainability issues. The completeness of materiality assessment process may need to be focused further to bring out sustainability issues with short and, medium term impacts.

**Responsiveness: Good.** The Company has adequately responded to stakeholder concerns through its policies and management systems, and this is reflected in the Report.

**Reliability: Acceptable.** We have evaluated the reliability of specified sustainability performance information and found it to be acceptable. The Company has developed its own data management system for capturing and reporting its sustainability performance. Although no systematic errors have been detected, DNV has identified some manual discrepancies which have subsequently been corrected.

**Completeness: Acceptable.** The Report gives a detailed description of the limitations in scope and boundary. The boundary has been expanded to Ferro Alloys & Mineral Division, Tubes Division and Wire Division for the first time in this Report. The Company may consider increasing the scope and boundary to bring in its Subsidiaries and Associates Companies (Refer page 2 of the Report) which are significant, considering the nature of Tata Steel's operational activities.

**Neutrality: Good.** The Company has reported sustainability related issues in a balanced manner, in terms of content and tone. Challenges and limitations are presented together with commitments to future improvements.

In our opinion, and based on the scope of this assurance engagement, Tata Steel's Sustainability Report 2011-12 provides a fair representation of the Company's sustainability policies, objectives, management approach and performance during the reporting year. DNV also confirms that the Report meets the requirements for GRI application level A+.

For Det Norske Veritas AS,

Prasun Kundu  
Lead Verifier  
Det Norske Veritas AS, India.

Antonio Astone  
Reviewer  
Global Manager, Corporate  
Responsibility Services  
Det Norske Veritas AS, Italy.

Kolkata, India, 20 December 2012

# G3.1 Content Index

Application Level A+

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#### KEY

**AR: Annual Report**

**F/DA: Fully Reported/ Direct Answer**

**UNGCCoP: United Nations Global Compact Communication on Progress**

# GLOSSARY

## Abbreviation/Terms Explanation

A		
AA	:	Affirmative Action
ABP	:	Annual Business Plan
AIDS	:	Acquired Immune Deficiency Syndrome
AHSS	:	Advanced high strength steels
Apprentices	:	Persons who have undergone a 3 year technical training course in specific skills or trades e.g. fitter, electrician, machinist etc. at institutes after passing high school.
Ash	:	Impurities consisting of silica, iron, alumina, and other incombustible matter that are contained in coal. Ash increases the weight of coal, adds to the cost of handling. Ash content is measured as a percent by weight of coal on an "as received" or as "dry" (moisture-free) basis.
B		
BM	:	Benchmark in India
BO&S	:	Business Objectives & Strategies
Brown-field Expansion Capacity	:	expansion within existing manufacturing plant area.
BF	:	Blast Furnace
BSE	:	Bombay Stock Exchange
BF-BOF	:	Blast Furnace - Basic Oxygen Furnace (Steel Making)
C		
CAPL	:	Continuous annealing and processing line
CC	:	Clean Coal
CCPM	:	Critical Chain Project Management
CDQ	:	Coke Dry Quenching
CHRO	:	Chief Human Resources Officer
Clean Coal -	:	Final product after beneficiation of Raw Coal.
Cluster training -	:	Training imparted to employees so that can acquire skills to perform a group / cluster of jobs
Co.	:	Company
CO2	:	Carbon dioxide
Coke	:	A hard lumpy form of coal after heating at very high temperature to release moisture and volatile matter
Coking Coal	:	A type of coal used for making Coke
CP&IR	:	Corporate Planning & Industrial Research
CQA	:	Corporate Quality Assurance
CRM	:	Cold Rolling Mill
CS	:	Challenging Strategies
CSD	:	Customer Service Department
CSI	:	Coke, Sinter & Iron
CSI	:	Customer Satisfaction Index
CSR	:	Corporate Social Responsibility
CSS	:	Corporate Sustainability Services
CST	:	Customer Service Team
CVM	:	Customer Value Management
Captive reserves	:	Tata Steel's own raw materials mines (both Iron Ore and Coal)
CGL	:	Continuous Galvanizing Line
Chosen segments	:	Intended Market Segment (Automotive, Re-bar etc.)

C	
Coal Beneficiation	: Process of Cleaning the raw coal coming from mother earth and making ready for next process.
CVR	: Customer Visit Report
D	
DAP	: Deming Application Prize
DM	: Daily Management
DTQMP	: Description of TQM Practices
DGP	: Deming Grand Prize
E	
E&P	: Engineering and Projects
EBIDTA	: Earnings Before Interest, Taxes, Depreciation and Amortization
EPA	: External Processing Agent
eQ Index Measurement index -	: Trademark of AC Nielsen (independent survey agency)
	: Corporate General DTQMP 2012
EVA	: Economic Value Addition
EVI	: Early vendor involvement
EHI	: Employee Happiness Index
EIC	: Executive In Charge
ERP	: Enterprise Resource Planning
ESI	: Employee Satisfaction Index
F	
Fe	: Iron
Fig.	: Figure
FP	: Flat Products
FY or fy	: Financial Year (Starts with 1st April of one year and ends with 31st March of next year)
G	
GHG emission	: Green House Gas emission
GI	: Galvanized (Zinc Coated Steel Sheets)
GM	: General Manager
GMR	: Global Mineral Resources
Green Field	: New Expansion Projects in locations where there was no industry earlier.
H	
High End Product	: High tensile strength, high surface quality skin panel, high ductility re-bars etc.
HR	: Human Resources
HDI	: Human Development Index -Is a composite index that measures a country's, district /province or village level average achievements in three basic aspects of human development
HIV	: Human Immunodeficiency Virus
High Tensile	: Tensile Strength greater than 500 MPa
HM	: Hot Metal
Highly skilled	: Highly skilled work means work which calls for a degree of perfection and full competence in performance of certain task, acquired through extensive technical or professional training or practical work experience for long years and also required of a worker to assume full responsibility for the judgment or decision
HRC	: Hot Rolled Coil

I		
IF	:	Interstitial Free
IF-HS	:	Interstitial Free High Strength Steel
IFRF	:	ISKON Food relief foundation
IMR	:	Infant Mortality Rate: No. of infant deaths within 1 year of age for 1000 live births
ILO	:	International Labour Organization
IR	:	Industrial Relations
J		
Jharia	:	Coal Mine – under RM Division
JWQC	:	Joint Works Quality Council
Jigging Process	:	Process of Separating iron ore fines by density differentiation.
K		
KM	:	Knowledge Management
KPI	:	Key Performance Indicator. KPI and KPM are used in the same context
KPM	:	Key Performance Measure, KPM and KPI are used in the same context
KPO	:	Kalinganagar Orissa Project
KT	:	1000 Tonne
KVHS	:	"Kar Vijay Har Shikhar" one Hindi word and its meaning is conquering all peaks
kg/tcs Kg/	:	tonne crude steel
KPI	:	Key Performance Indicators
KRA	:	Key Resulting Areas
L		
LD	:	Linz Donawitz
LD#1, LD#2, LD#3	:	Name of Steel Making Facility
LD3 & TSCR	:	LD3 and Thin Slab Casting & Rolling
LP	:	Long Products
L&L	:	Listening and Learning
LTIFR	:	Loss Time Injury Frequency Rate. Any injury at work site that makes a person to remain away from duty for more than 48 hours is counted as loss time case.
LTP	:	Long Term Plan
M		
M&S	:	Marketing and Sales Manning Staffing or providing manpower as per requirement.
MASS	:	"Manthan ab Shop Floor Se" a copy right process in Knowledge Management to horizontally deploy the organizational knowledge through involvement of shop floor employees.
MD	:	Managing Director
MOU	:	Memorandum of Understanding
MT, mt	:	Million Tons
mtpa or MTPA	:	Metric Ton Per Annum
MM	:	Merchant Mill
Mm	:	Millimeters
MoEF	:	Ministry of Environment & Forest
MW	:	Mega Watt

N		
NBM	:	New Bar Mill
NPD	:	New Product development
NIT	:	National Institute of Technology
O		
OE / QEM	:	Original Equipment Manufacturer
OHI	:	Occupational Health Index
OMQ	:	Ore Mines and Quarries, a group of captive iron ore mines of Tata Steel.
P		
PAG	:	Product Application Group
PPP	:	Public Private Partnership
Profit Centre	:	Autonomous Division of Tata Steel with independent Corp. Functions and department. They have their own Profit & Loss Account.
PDCA	:	Plan-Do-Check-Act
PM	:	Policy Management
PSRM	:	Process Safety & Risk management- A systematic approach to address the hazard having potential to create multiple fatality and sever
PSTA	:	Problem Solving & Task Achieving
Q		
QM	:	Quality Management
QA	:	Quality Assurance
R		
RMHS	:	Raw Materials Handling System
RMSG	:	Raw Materials Strategy Group
ROIC	:	Return on Invested Capital
RRT	:	Reliable Replenishment Time
R&D	:	Research & Development
Ref.	:	Reference
RM or RMD	:	Raw Materials, a division of Tata Steel which supplies coal and iron ore to Jamshedpur works for steel making.
RWH	:	Regional Warehouse
RVM	:	Retail Value Management
S		
SGA	:	Small Group Activity
Skilled	:	Skilled work is one which involves skill or competence acquired through experience on the job or through training as an apprentice in a technical or vocational institute and performance which calls for initiative and judgment
SOP	:	Standard Operating Procedure
SS	:	Shared Services
SVM	:	Supplier Value Management
Slabs	:	Input for Hot Rolling, Steel Casted into a material stock of length 6 - 11 meter, width 900- 1550 mm, and thickness 210 mm
SME	:	Small & Medium Enterprises
SNTI	:	Shavak Nanavati Technical Institute
SS	:	Shared Services

T		
TBEM	:	Tata Business Excellence Model
Tics, tics	:	Tons Crude Steel
TG	:	Technology Group
TMDC	:	Tata Management Development Center
TOC	:	Theory of Constraints
TQM	:	Total Quality Management
TRT	:	Top Gas Recovery Turbine
TSCR	:	Thin Slab Casting and Rolling
TSL	:	Tata Steel Limited
Toss	:	tonnes of saleable steel
TOP	:	Total Operating Performance
Tph	:	tonne per hour
TPM	:	Total Productive Maintenance
TQM	:	Total Quality Management
U		
Ultimate tensile strength	:	The maximum load which a material can withstand before necking in while stretching
UOM or UoM	:	Unit of measurement
	:	Up skilling Skill training imparted to employees so that they can perform jobs that need skills of one level higher than their current job.
V		
VIU	:	(Value in use) Concept to decide on the clean coal ash based on crude steel cost model. Clean coal is taken for the year, which gives minimum steel cost.
VMI	:	Vendor Managed Inventory
VP	:	Vice President
VOC	:	Voice of Customer
W		
West Bokaro Coal Mine	:	under RM Division
WHR	:	Waste Heat Recovery
WRM	:	Wire Rod Mill
WSS	:	Works Saleable Steel
Y		
Yield	:	Output of process divided by Input to the process.
Yr	:	Year
Yrs	:	Years
YS	:	Yield Strength (measure of mechanical properties)
OTHERS		
4Q	:	4 Quadrant
9.7 mtpa	:	Brown-field expansion project at Jamshedpur Works for increasing capacity by 2.9mtpa (from 6.8 mtpa)



# KEY AWARDS AND ACCOLADES

## Customer/Brands/Reach

Toyota's Regional Contribution Award 2012  
Consumer Superbrand for "TATA TISCON"  
Best Supplier Award - ESAB

## Industry/Institutional Bodies

World's Most Ethical Companies 2012 (Ethisphere Institute - USA)  
Sustainability Prize CII 2011  
Global Top10 "Most Admired Company" in FORTUNE 500 (The first-ever Indian company)

## Government of India

Best Integrated Steel Plant in India for two consecutive years - PM's Trophy in 2008-09 and Certificate of Excellence in 2009-10 (awarded in 2011-12)  
Prime Minister's Shram Awards conferred on 25 employees (individuals)  
Highest number of patents granted for the period of FY07 to FY11 in the category of Indian owned Private Companies by the Dept. of Controller General of Patents Designs and Trademark in 2011

## Media / Society

Business Leadership Award in the 'Metal Category' - NDTV Profit 2011 Business Leadership Awards  
'Best Sports Advertisement' and 'Best Corporate Involvement in Sports' - NDTV's 'Marks for Sports' campaign 2012



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**PARTNERSHIPS IN THE SUPPLY CHAIN**

Employee Happiness    Value Creation for the Customer    Supplier Governance Mechanism

Responsible Procurement    Customer Satisfaction    CLAP (Contractors Labour Awareness Programme)  
 Suraksha Scheme for Contract Labour

**OPERATIONAL EFFICIENCY**

Improving Air Quality  
 Sustainable Mining Practices

Material Efficiency

**OPERATIONAL EFFICIENCY**

Water Efficiency

Energy Efficiency

Eco Efficiency