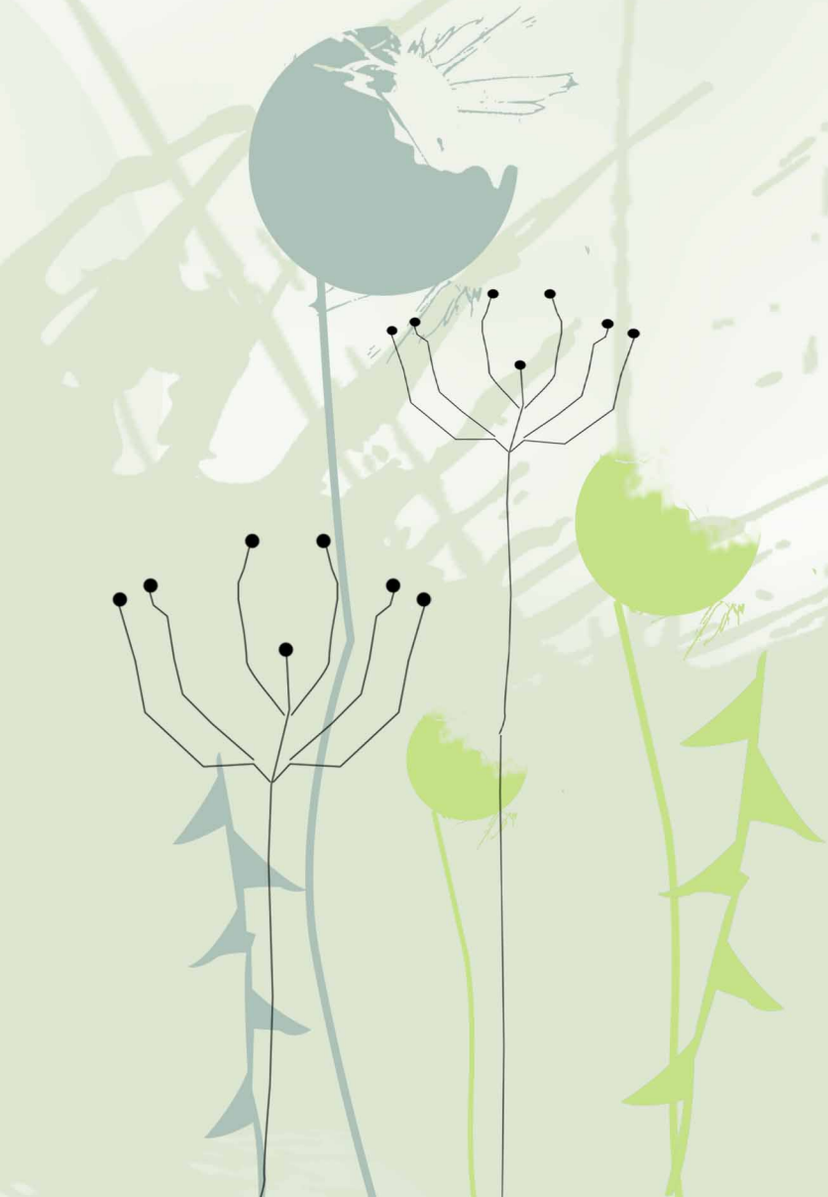
TATA STEEL

TATA

EXCELLENCE FOR COMMON GOOD

14th Sustainability Report 2013–14



CONTENTS

We have chosen the Dandelion flower as a representation of our Sustainability Approach as its flower, puffball and leaf, though less ornate than others, are representative of positivity, progress and survival – a symbol of life.

One form of the dandelion grows in every continent of the planet, planting thought seeds and messages across the world.

Folklore has given the humble flower a place and meaning in all cultures.

Managing Director's Statement

Dear Stakeholder,

The global economy has seen challenging times in the last few years with subdued growth levels in USA, Europe, Japan and gradual cooling of the Chinese economy. Revival of the Indian economy is of critical importance. The country and the industry in particular have been facing mounting challenges, precipitated by several years of subdued economic activity. At the end of the last financial year India had its general elections, which were primarily contested over development issues.

As a foundation industry, Tata Steel recognises its role in engendering economic growth through investments in manufacturing. We have rapidly expanded operations in India during the last few years. Our manufacturing capacities, from mining to steel making, were expanded substantially through the 2.9 MTPA expansion project in 2013-14. We are also at the cusp of becoming a multi-locational steel manufacturer in India. The first phase of our greenfield project in Kalinganagar, Odisha is gearing up to begin operations soon.

Even as Tata Steel changes by adopting new ideas best suited for the future, equally important is to retain best practices from the past. The most important among them is the ethos of value creation for all stakeholders and a culture rooted in growth through ethical business means. Therefore even as Tata Steel is shaping its future course, it is aware of the requirement to balance the organisation's needs with that of the community. This belief, the wellspring of its own sustainability, has given the Company the capacity to consistently progress, taking forward the theme of: 'Excellence for Common Good'.

I joined Tata Steel as a Management Trainee and my journey since then has given me the opportunity to appreciate the relevance of the culture and the values of this great institution, which gives Tata Steel a unique identity. Now as Managing Director of the Company my foremost priority is to strengthen this culture along with factors that create an enabling environment.

To revisit our understanding of the expectations stakeholders have of the Company and for defining the way forward a Materiality Exercise was undertaken, which concluded in 2013-14. Of the ten themes identified as material issues, the majority are those already given high priority by Tata Steel as they are captured in worldsteel's Sustainability Indicators and principles of the United Nations Global Compact (UNGC). These include corporate governance, emissions, environment management, occupational health & safety, product innovation and community engagement. Of these, emissions, environment management and occupational health & safety are the ones where I believe adequate room exists for further strengthening despite our continuous and concentrated efforts.

Several projects and initiatives taken last year were in harmony with issues highlighted by the Materiality Map. The underlying theme for all these initiatives, with a broad based impact across the organization and value chain, is our pursuit for Excellence. It is pursued in Tata Steel through projects that require complex tools, in addition to cross-functional team efforts by shop floor employees such as Kaizens, Small Group Activities and Suggestion Management.

To actualize our strategy for technology advancement, a key enabler for excellence, distinct processes have been set in place for New Product Development as well as for product and process improvements/ modifications. In 2013-14, the **Innovation Council** was established in the R&D Department and Project **"Innovent"** launched in Marketing & Sales. The latter is aimed at adopting a more structured approach to innovation in the marketplace.

Our Procurement function was reorganized, process integration brought about, improved Vendor Development mechanisms, and Contract Management Review Process was launched. The objective includes broad-basing our SA8000 goals, promoting local procurement, developing local vendors and accelerating on our affirmative action priorities.

The scope of work for the reorganised Productivity Services team is to help the Company achieve its productivity goals, while minimizing employee grievances and providing equal opportunities to all employees. Though our employee engagement score of 74% for officers and employee happiness score of 86% for non-officers is better than the industry average, we would like to improve further.

Our growth and expansion strategy for India is juxtaposed with limited availability of natural resources. Our initiatives to optimise use of natural resources continued to accelerate during the reporting year. Project **"Propel"** in the Raw Materials Division will enable us to adopt benchmark-mining practices and sustain quality through state of the art planning. As a part of our 2.9 MTPA growth in iron and steel making, we commissioned a new Coke Oven battery in April 2014, Pellet Plant, state of the art Thin Slab Caster and a Continuous Annealing line. This was a part of our phased expansion programme to install India's most resource and energy efficient Blast Furnaces.

A dramatic improvement in pellet quality (an agglomerate of iron ore fines) achieved by the Research & Development team in 2013-14, allowed us to use 45% pellets in the blast furnace burden, which is a first of its kind achievement in the country. A new thrust area now for the R&D team is to improve Waste Water Management so that we can achieve our goal of near Zero Water Discharge in the steel manufacturing process.

Our Marketing & Sales function was restructured during the year. To establish stronger relationships with the customer, we sought to replace the earlier product led approach and align the organisation to the end-use segments and customer buying behavior for greater customer centricity. The shift also requires new offering and new solutions supported by channel partners who are being encouraged to transit from being traders to entrepreneurs.

The increase in capacity at our Steel Works has been supported by the augmentation and modernisation of the out-bound logistics network by the Customer Services Division to handle despatch of nearly 9 million tonnes of Saleable Steel. As per our long-term plan, warehouses were upgraded with green features like Rain Water Harvesting at various locations. The Supplier Relationship Management (SRM) initiative was extended to major transport partners in 2013-14.

Looking at our performance during the reporting period of FY14 with respect to targets, the key achievements and failures are:

- Specific CO_2 intensity improved substantially to a new low of 2.43 tCO_2/tcs from 2.53 tCO_2/tcs in FY 13
- Tata Steel achieved a Hot Metal Production of 9.89 million tonnes and Crude steel production of 9.16 million tonnes up from 8.86 million tonnes and 8.13 million tonnes, respectively, in FY13
- Best-ever total agglomerate production of 12.14 million tonnes was achieved, which positively impacted mine life and energy efficiency of Iron making.
- Tata Steel performed better than industry growth figures across product market segments with a substantive (14%) increase in sales volumes without compromising on its product premium
- CSR spend at Rs. 212 crores was more than 3% of PAT
- The Company achieved an improvement in savings of Rs 16.14 billion, which included a contribution of Rs 11.70 billion by the **"Kar Vijay Har Shikhar"** initiative for Innovation and Improvements.
- Project **"Innovent"** was launched to create new services and solutions businesses
- Lost Time Injury Frequency Rate rose unfavourably to 0.50 from 0.48 in FY13.

The Mining & Steel industry, being extractive by nature, is resource intensive and has a high environmental and social footprint with processes giving rise to safety hazards. Tata Steel in line with its philosophy to be a responsible Corporate Citizen has several on-going initiatives to minimise its negative footprints and leave an overall positive impact for all stakeholders.

Safety: Prior to assuming charge as the Managing Director in November last year, Safety was my direct responsibility. It is an area I continue to bear responsibility for and am deeply engaged with. Despite a Safety Excellence Journey since 2006 with DuPont, the leading experts in the world as partners, it is an area requiring foremost attention. We have certainly come a long way over the years with extensive work undertaken in focus areas. Quantifiable improvements have been captured in construction activities, road traffic management and contractor management.

Yet I feel no hesitation in stating that our Safety performance has room for improvement. We have not been able to eliminate fatalities at Tata Steel. As Managing Director I have therefore committed to ensuring that Tata Steel is a zero fatality workplace within the next three years.

Emissions and Environment Management: Tata Steel's operations stretch from the mining of ore to the end consumer. The Company works on opportunities at its mines, along the value chain (that is in processing of raw materials, the smelting process to finished steel production). Our efforts are driven by our objective of minimising the environmental footprint of our operations. Accordingly, the coal and iron ore beneficiation projects continuously push the frontiers in effectively using every tonne of natural resource mined.

Tata Steel is the one of the lowest cost producers of hot metal in the world and the national benchmark in the iron & steel industry for Specific Energy Consumption CO_2 intensity through the BF-BOF route. This achievement notwithstanding, the Company had set targets for matching emission levels to global benchmarks. It also adopted the audacious target of confining overall Dust levels to those achieved before the commencement of the expansion projects. These plans have determined all our

investment decisions in the last six years.

Equipment for emission control continued to be commissioned and stabilised during the year. This has yielded a gradual but clear sustainable trend in Tata Steel's environment performance. Our Research & Development efforts to reduce the Coke rate led to the development of dual flux pellets, a first in the world, and continuous improvements in the quality of pellets. We also achieved an improvement in Lime quality and the reduction of Lime fines in our new kilns thereby improving material efficiency.

Expansion in capacity has substantially increased the generation of solid waste. We are acting on two fronts to mitigate this impact - reducing resource use and waste generation, while also exploring opportunities to enhance waste utilization in downstream applications. The goal is to reuse 99% of the solid waste generated through innovative technologies developed by cross-functional efforts. We are also in the process of restructuring our Industrial By-products Management Division for unlocking the intrinsic value of our by-products.

Research & Innovation: We would like to continuously work at achieving breakthroughs in the areas of process & product technology and innovation. Our country needs us to use the best minds to catapult us to a path of high growth and sustainable development. The number of improvement and excellence projects accomplished during the year and the capacity of our R&D team makes me believe we at Tata Steel have the capability to make such a contribution.

Corporate Social Responsibility (CSR): Efforts to rationalise and streamline our CSR spend to areas of high impact, both in terms of quality and scale, is being supported by nationally renowned experts, who have agreed to serve on our newly formed **CSR Advisory Council**. Our core areas of intervention remain Livelihood, Education, Employability, Health and Drinking Water, supported by initiatives for Renewable Energy, Sports and Adventure, Rural Infrastructure Development and Ethnicity through which we reach out to about 2500 villages touching more than 1.5 million lives.

Looking forward, while steel demand in India remains resilient, the rate of growth of demand has slowed. This is felt through the slowdown in construction and infrastructure activities, de-growth of the automotive sector and delays in investment spend by the corporate sector. Steel consumption therefore remained largely unchanged compared to the previous year.

Tata Steel's focus remains on India's long-term growth story given that India has a much lower steel intensity in the economy compared to the global average. This is bound to grow significantly. In line with the projected demand for steel, the Company's Crude Steel production grew by 2.9 MTPA in 2013-14 and we continued to push for the completion of the first phase of our Kalinganagar project as per schedule.

The perceived imbalance between steel demand and new capacities being created, part of the steel business cycle, does impose a significant pressure on the supply side. The constant gap between availability of steel and rise in its demand is going to remain an enduring challenge for all steel manufacturers globally.

The last reporting year was challenging as India experienced its second year of sub 5 % growth. Despite these impediments Tata Steel outperformed the market in most regions in terms of volume growth. A depreciating rupee gave India, for the first time, the opportunity to become a net exporter of steel. Going forward, global steel demand growth is expected to remain around 3% with only a few regions (India, Middle East & SE Asia) showing signs of demand growth in excess of 5 %.

In the medium-term the Indian economy is expected to remain fragile with uncertain growth rates. Our excellence journey must therefore provide breakthroughs and improvements. We intend to customize our improvement programmes to bring technology to the core of our activities, transform mind-sets to continuously anticipate requirements, and innovate to meet the needs of our customers.

At the same time as trustees of the Company's stakeholders we must preserve the Company's core values and adhere to its ethical standards to ensure the continued good health and sustainability of our century old corporation.

With Best Regards

TV NARENDRAN

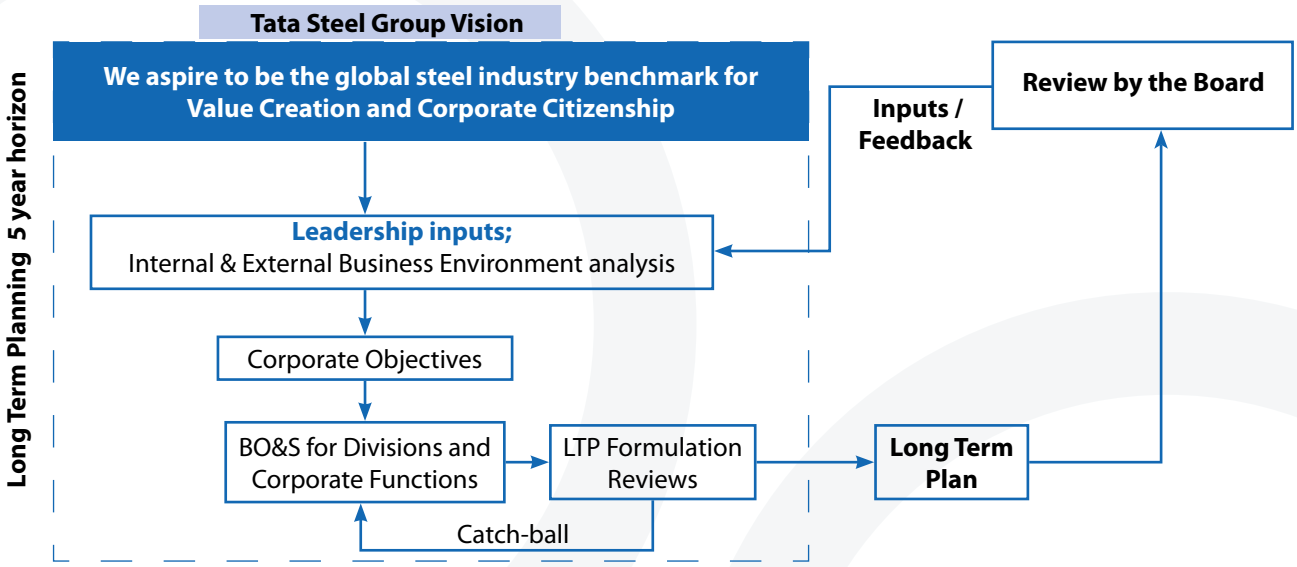
STRATEGY AND ANALYSIS

VALUE CREATION AND CORPORATE CITIZENSHIP IS THE APPROACH ADOPTED BY TATA STEEL TO DELIVER SUSTAINABLE LONG-TERM VALUE TO ITS STAKEHOLDERS, AS MAINTAINED IN ITS VISION STATEMENT: **"TO BE A GLOBAL BENCHMARK IN VALUE CREATION AND CORPORATE CITIZENSHIP".**

The Company is of the view that sustainable value creation cements the trust and confidence of its stakeholders, which in turn allow for continual growth and engagement.

Tata Steel Limited has a production capacity of 9.7 MTPA at Jamshedpur. In the next five years, Tata Steel in India is expected to be a 16 million-tonne entity. This will be added through two phases, of 3 MTPA each, at its greenfield project in Kalinganagar, Odisha. Stage-wise commissioning of the first phase of the project, with a blast furnace of 4330 cum capacity, is expected to commence by the end of 2014-15. As it grows Tata Steel intends to operate with benchmark efficiency and raise performance standards - through the continuous pursuit of excellence - to be the most valuable steel company globally.

OVERVIEW OF STRATEGY MANAGEMENT SYSTEM AT TATA STEEL



Key impacts on sustainability and effects on stakeholders

Through a materiality exercise in 2012-13 Tata Steel revisited its key sustainability issues, impacts and their effects on stakeholders through an external agency, while continuing to map material issues based on inputs and feedback from stakeholder facing functions as part of its planning process, such as Marketing & Sales, Human Resources Management and its Mines & Collieries where active stakeholder engagement mechanisms are in place.

Sustainability Issues	Sustainability Impacts	Effects on Stakeholders	Corporate Objectives
Governance	• Leadership Policy and oversight on sustainability • Promoting Ethical Behaviour • Responsible Public Policy Advocacy • Stakeholder Identification and Management • Sustainability Reporting and Disclosures	• Stakeholder trust and confidence • Brand Value/ Reputation • Access to Capital	• Be amongst the top three Indian steel producers in volume & No. 1 position in profitability

Sustainability Issues	Sustainability Impacts	Effects on Stakeholders	Corporate Objectives
Operational Excellence	• Resource Conservation • Emission reduction • Climate Change mitigation	• Sustainability of Raw Material Supply • Business Sustainability • Water Sustainability	• Improve Environmental performance
Employees	• Skill Development and Training • Occupational Health & Safety	• Employee Happiness	• Improve our Safety & Health performance • Improve proficiency & engagement of employees in existing operations and Greenfield Projects
Supply Chain	• Health & Safety • Human Rights	• Safe Working Conditions • Protection of Human Rights	
Community	• Benefit sharing • Local Infrastructure Development	• Community Happiness	• Impact the lives of communities around our area of operations & ensure compliance to statutory conditions
Products and Customers	• Value Creation • Resource Footprint	• Market Share • Brand Value/ Reputation	• Be top 2 in chosen segments/ customers

Approach to prioritising challenges and opportunities

To support its objective of sustainable value creation, Tata Steel's existing policy statements provide a direction for each of the corporate objectives and related strategies. The corporate objectives and strategies are cascaded to the action level through sub-strategies and improvement projects. Tata Steel's has embedded its risk register in its plans, which is then reviewed at various levels.

The Business Planning Framework at Tata Steel garners inputs from the external environment (macro-economic outlook, Government policies, stakeholder expectations and materiality), internal environment (survey findings, feedbacks from assessments) as well as directional inputs from its leadership and long-term plans.

Tata Steel's overall strategic priorities are formulated through it "Strategy Management System", which has three major components namely "Vision", "Long Term Plan" (with a five year timeframe), and "Annual Business Plan" (one year timeframe).

To meet its strategies, sub-strategies and means are formulated as necessary. Apex Committees, Divisional and other review forums are held at fixed intervals to maintain oversight on relevant objectives and strategies, including flows into the Management Information System (MIS). Performance on policy items is measured through the MIS.

Apex Committees

Sustainability Impacts were grouped by the Materiality exercise into three categories -

1 FOCUS | 2 TRACK | 3 DISCUSS

This distinction was made on the basis of how frequently these issues should be tracked and reported to the top management of the Company.

Sustainability Impacts under the Focus category are reported monthly by issue owners and the sustainability team, as well as reviewed quarterly by the top management.

Impacts to be "tracked" are monitored through bi-annual reviews of issues owners and the sustainability team, besides an annual review by top management.

Those to be "discussed" are reviewed annually by the owners and the sustainability team with exceptions required to the reported to the top management.

Sustainability Impacts under the FOCUS category	Long Term Objectives/ Targets
Improve Environmental Performance	
• Emissions	Continuously reduce GHG emissions per ton of steel produced and sustain Indian benchmark level through BF-BOF route
• Resource footprints during the entire product lifecycle	~ 99 % Solid Waste Utilisation To produce clean coal with 8 % ash
Community	
• Community involvement, engagement and satisfaction • Local infrastructure development • Land acquisition and R&R • Benefit sharing/socio-economic benefits	Impact the lives of community around our area of operations by improving the HDI
Governance	
• Stakeholder identification and management	Align corporate objectives to stakeholder expectations
• Promoting ethical behavior	Improve effectiveness of the Management of Business Ethics (MBE)
Employees	
• Capacity building of employees	Improve employee productivity

In line with its vision to be a global steel industry benchmark in Value Creation and Corporate Citizenship as well as a member of the World Steel Association (worldsteel) and a signatory to its Sustainability Charter, Tata Steel aspires to meet the global benchmarks for corporate citizenship.

Key conclusions about the progress of sustainability impacts and related performance

Corporate Key Performance Indicators	UoM	2011-12	2012-13	2013-14
Governance				
EBIDTA	Rs bn	116	117	132.8
EBIDTA %	%	34	31	32
Products and Customers				
Service Delivery (FP) – Overall DDP	%	96	96	97
Service Delivery (LP) – DDP for distributors	%	97	98	98
Quality – Customer Claims	ppm	584	809	679
Value transfer to customers	% of NTO	1.2	1.5	FP: 3.6 LP: 1.7
Operational Excellence				
Specific CO_2 Emissions (Reduction in Coke Rate)	tCO_2/tcs	2.5	2.52	2.43
Environment performance management (100 % utilisation of Solid Waste)	%	75	86.7	93
Employee Health & Safety				
Loss Time Injury Frequency Rate (LTIFR)		0.51	0.48	0.50
Fatality	Nos.	7	6	12
Community				
Expenditure on the community	% of PAT	2.19	3.37	3.31

	UoM	2011-12	2012-13	2013-14
Expenditure	Rs Crores	147	171	213

Raw Material Conservation

Process interventions aimed at ensuring raw material security include extension of mine life. These interventions ensure that customers receive their products uninterrupted. The same intervention is also intended to reduce the footprint over the Life Cycle of the product.

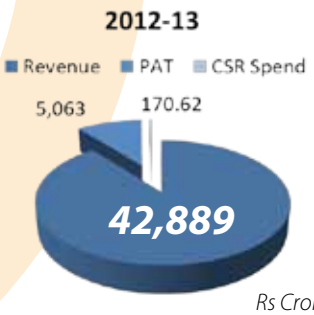
Operational Excellence

Trend of specific CO_2 emissions from Jamshedpur Steel Works improved considerably in the last quarter of 2012-13 and continued in 2013-14 resulting in the Steel Works closing the year with the lowest ever specific CO_2 emission (2.43 tCO_2/tcs) and energy intensity (6.017 Gcal/tcs). Jamshedpur Steel Works also touched its lowest ever Specific Water Consumption at 5.58 m^3/tcs, achieved earlier in 2009-10.

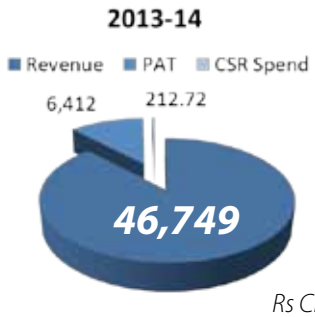
Benefit sharing with the Community

Against the 2% mandated by the Government of India, Tata Steel spent 3.31% of its PAT on the community, having substantially enhanced the corpus for several schemes. As the Company's sales saw a 14% increase and Revenues grew from Rs 4,43,600 million in 2012-13 to Rs 4,85,011 Million in 2013-14, Tata Steel's CSR spend soared from Rs 171 crores in 2012-13 to Rs 213 crores in 2013-14. To evaluate the impact of its initiatives HDI was measured in 230 villages around Jamshedpur, Noamundi, Jharia and West Bokaro.

Rs Crores



Rs Crores



Rs Crores

Tata Steel's Sustainable Livelihood initiatives, Infrastructure Development and Employability Training programmes also grew during the year. The largest proportion of the CSR spend was allocated to infrastructure development at 38.5%.

Agriculture Development

- Covered 5032 acres through Agriculture Development initiatives
- Created 92 ponds and 400 tubewells, 123 borewells, 152 irrigation structures and four rainwater harvesting structures
- Under the National Wasteland Development Mission converted 13000 acres into productive land
- In 2013-14 about 200 metric tonnes of cashew grown by the farmers earned them Rs 1.2 crores

Infrastructure Development

- 2357 additional lights illuminated 600 villages in 2013-14

Skill Development

Centres set up for IT, hospitality, textile, cosmetology etc. with partner organisations

Education

- Jyoti Scholarships for meritorious students from economically and socially challenged families continued to be scaled up in 2013-14 accounting for 3169 scholarships awarded in the reporting year against 2477 in 2012-13
- Pre-Matric Coaching Classes were also expanded to cover 10372 students in 2013-14 from 5006 students in 2012-13.

Initiatives for Agriculture Development covered 5032 acres, supported by the creation of 92 ponds and 400 tubewells, 123 borewells, 152 irrigation structures and four rainwater harvesting structures being installed. Since 2005-06, Tata Steel has under the National Wasteland Development Mission converted 13000 acres into productive land. In 2013-14 about 200 metric tonnes of cashew grown by the farmers earned them Rs 1.2 crores.

Installation of solar lights also saw a wider reach with 2357 additional lights illuminating 600 villages in 2013-14. Skill Development Centres were set up for IT, hospitality, textile,

cosmetology etc. with partner organisations.

An important focus area for the Company is Education, where the number of Jyoti Scholarships for meritorious students from economically and socially challenged families continued to be scaled up in 2013-14 accounting for 3169 scholarships awarded in the reporting year against 2477 in 2012-13. The reach of Pre-Matric Coaching Classes was also expanded to cover 10372 students in 2013-14 from 5006 students in 2012-13.

Risks and opportunities arising from sustainability trends

Tata Steel's strategy in India is focussed on the domestic market, where both the rate of growth of demand due to much slower economic growth and availability of raw materials constitute sustainability risks. Demand growth in the short term in India is not expected to keep pace with the additional capacities coming on stream resulting in a downward pressure on steel prices.

In addition, regulatory risks continue to pose enormous challenges with non-availability of encumbrance free land for mining and allied activities likely to affect operations, scrutiny and reopening of old regulatory issues disrupting mining operations, change in mine allocation process means for New Leases, a move towards auctioning of existing mining leases under deemed renewal, sustainability of mining from existing leases operating under deemed renewal and threat of the Government policy on de-allocation of Coal Blocks.

Delivering on planned growth targets:

Tata Steel plans to expand its flat products production capacity through a greenfield project, being executed at Kalinganagar, Odisha. This greenfield facility will mainly produce flat products and will be executed in two phases of 3 MTPA each. By the end of FY16 the first phase of the project will be complete. The second phase of this project would be taken up subsequently, which will take Tata Steel's production capacity from the current 10 MTPA to a total of 16 MTPA. *(Also refer to pages 10 & 11, 26, 55, 86 and 89 of the Annual Report 2013-14).*

Sustainability Impacts and Related Risks	Risk Mitigation Strategies and Process Interventions
Environment Management • **Emissions** • **Waste** • **Water and Wastewater** *(Refer page 57 of the Annual Report 2013-14)* ❑ License to operate ❑ Suspension of operation or reduction of production *(Refer page 94 of the Annual Report 2013-14)* ❑ Rise in the water bill	• Reduction of carbon rate in CSI area • Upgradation of existing APCEs & installation of new efficient APCE under the 2.9 MTPA expansion • Maximise commercial usage of utilisation of LD Slag & BF slag (Reuse & Recycle) • Implementation of Engineering Solution for Zero Discharge of Effluents • Reduce Specific Water Consumption • Capex Projects & Improvement Projects taken for improving environmental performance (including Jamshedpur, KPO, out locations) & ensuring statutory compliance
Resource consumption and availability of inputs required for steel making at optimum costs *(Refer page 22 of the Annual Report 2013-14)* • Raw Material self sufficiency • Volatility in iron ore and coking coal prices	• Expanding mining capacity to meet production requirements • R&D initiatives to maximise usage of resources as per natural occurrence • Advanced beneficiation techniques for processing iron ore mined as per natural occurrence

Environment Regulations • Renewable energy regulation (RPO) • Carbon Tax • PAT under NMEEE of NAPCC	• Use of variable speed drives installed with Electric Blower in I Blast Furnace, Induced Draught Fan of LD3 – 2 vessels and adoption of solar photo-voltaic panels for street, corridor and office illumination. • Reduction of Coal consumption in Boilers by maximising by-product gases is a priority.
Marketing & Sales *(Refer page 24 of the Annual Report 2013-14)* • Losing the opportunity to build /add capability and capacities to serve future automotive business • Inability to capitalize on full premium potential of brands (Tata TISCON & Tata Astrum) • Drop in HRC prices and a sharp deterioration in Chinese macro economic conditions	• Value creation for automotive customers through enhanced offerings – VAVE, VMI, Shaped Blanks, CST & Technology Day with specific auto majors and through Driving Steel seminar • Expedite investment in KPO phase 2 downstream • Enhance capacity & quality augmentation of Service Centres of EPAs along with source authentication needs for Tata Astrum customers • Conduct Retail Value Management (RVM) program to increase Reach in Tier 3 / 4 cities & Rural areas. • Roll-out unique product / service offerings to strengthen the TISCON brand – CAB in retail, SuperLinks, Foundation rebar, etc • Enhance Branded, Automotive & Value Added Industrial product segment play to stay ahead of the commodity curve
Governance • Legislative move / voluntary actions by industry bodies towards reducing the compensation differential between permanent and contract employees	• Contract Workforce Management - facilitate creation of conducive work environment
Financing growth strategy through credit and internal accruals • Growth and expansion activities	• Financial closure for its expansion project in Odisha • Taking advantage of favourable credit and liquidity conditions • Accelerate cash flow improvement projects

(Also refer to the Annual Report 2013-14 (i) Risks and Opportunities – page 22 to 25 and (ii) the Management Discussion & Analysis – pages 73 to 98).

Risk Management Structure

Tata Steel has an evolved Enterprise Risk Management mechanism. At the base of the risk governance structure are the risk owners of the respective divisions/ business units. Other parallel functions that are also responsible for Risk Management include Chief, Corporate Strategy & Planning, the Company Secretary and Chief, Corporate Sustainability.

Correlation analysis is conducted for financial risks, with comprehensive scenarios produced for other risks. Risk Heat Maps are pre-dominantly used for prioritizing risks, while Event Tree Mapping is used for studying the spectrum of consequence/ impacts of risks and Cause-Effect diagrams for arriving at the root causes of the risks and to develop effective mitigation strategies.

To provide a structured approach to risk management, workshops for operational, market and strategic risks are conducted across divisions annually and key risks identified, assessed, and their mitigation strategies developed.

Strategic Approach to leveraging opportunities

Customer Centricity

During the year, the Company reorganised its Marketing & Sales organisation in line with the market segments. The Marketing and Sales team continued to explore newer market opportunities while the strategy and market research team maintained an overview on the market outlook, risks & opportunities to develop strategies to enable the Company to ensure sustained operations and use of available opportunities in the best possible manner.

The Company also continued to focus on operational excellence aimed at resource efficiency, energy efficiency, along with recovery, reuse and recycling of waste to minimise its ecological footprint.

Raw Material self-sufficiency

Ramp up and stabilisation of India's largest pellet plant to its rated production of 6 MTPA along with production of 'olivine' and limestone mix-fluxed pellets for the first time in the country optimised use of agglomerated materials at the large blast furnaces.

In 2013-14, the blast furnace burden at Tata Steel's facilities in India consisted of up to 45% pellets – the first such regime in large blast furnaces in the country – and amongst few worldwide.

Reduction in resource consumption for continued availability of inputs required for steel making at optimum costs

Tata Steel is working on a beneficiation plant to enable it to use relatively low-grade iron ores. About 45-50% of the Company's coking coal requirement is met from its own mines, and balance from imports. Tata Steel expects pressure on steel prices going forward. It is therefore in the process of augmenting captive coal supply by de-bottlenecking West Bokaro.

Reduction in Emissions

To reduce emission, Tata Steel is driving greater energy efficiency as well as the use of alternative energy sources. In 2013-14 Tata Steel achieved a lower Specific Energy Consumption CO_2 intensity of 2.43 tCO_2/tcs, an Indian benchmark through BF-BOF route against 2.53 tCO_2/tcs in 2012-13.

Focus on Operational Excellence and Cost Improvement

Tata Steel's 'Kar Vijay Har Shikhar (KVHS)' – an accelerated TQM initiative for continuous operational improvements – is its vehicle for continuous innovation in process and operational excellence. Through its cost improvement initiatives, Tata Steel achieved savings of Rs. 16.14 billion against a plan of Rs. 14.12 billion in 2013-14. KVHS contributed Rs. 11.70 billion towards cost improvements in the 2013-14.

Adding capabilities and capacities to serve future needs of customers

JCAPCPL a joint venture with Nippon Steel Sumitomo Metal Corporation (NSSMC), has added a relevant new technology to Tata Steel's portfolio. Besides benefits through incremental revenues and margins, the Company now has the capability to produce high-end cold rolled products indigenising products currently imported by automotive customers.

Regulatory environment

Tata Steel engaged in stakeholder consultation during a baseline (April 2007-March 2010) study for the Perform-Achieve-Trade (PAT) scheme for 2012-15 by the Government of India to promote energy efficiency in addition to initiatives that led to improvements in its operational performance.

Innovation, product development and the TQM journey to achieve mid-term objectives and goals

Once the first phase of the Kalinganagar project commences operations with its state-of-the-art mill configuration, Tata Steel will have the ability to meet a significantly higher proportion of products required by customers in both existing as well as new segments. These are to be supported by downstream processing facilities at its External Processing Agents to provide last mile processing and customisation.

Tata Steel has demonstrated the ability to innovate by branding steel, shaping the channel, entering new segments by developing new products, and increasing participation in value chains through services and solutions. **To further strengthen the spirit of innovation and flow of benefits to the Company, a two-pronged approach to innovation was adopted in 2013-14.**

The Company has strengthened its patent registration process resulting in a rise in the number of patents filed and received.

1

Inside the factory gate the Research & Development Department will use the new Life Cycle Analysis vertical and the Innovation Council to strengthen the process of understanding consumer needs, generate actionable insights and drive New Product Development.

2

Outside the factory gate innovation is being driven by Marketing & Sales through Project Innovent;

3

This will lead to creating a funnel of innovative offerings for its chosen segments. Forums such as Mind over Matter and Tata Group's Tata Innovista are also platforms to capture the capability of young innovators.

Tata Steel's TQM journey, which is central to its business excellence process, aims to build the DNA internally. It plans to continuously ingrain the TQM thinking process in every employee and process by reengaging with the Tata Business Excellence Model in 2014-15. Simultaneously it will take on the task of building people capability and is therefore revitalising the current training process. To increase customer centricity, the Company will deepen its collaboration with customers and also have them participate in its overall value chain, through robust knowledge sharing processes using new and evolving techniques and methods.

2 | ORGANISATIONAL PROFILE

TATA STEEL REALIGNED ITS MARKETING & SALES ORGANISATION

SUPPORT FACILITIES ADDED UNDER THE 2.9 MTPA EXPANSION PROGRAMME

HIGHEST EVER CRUDE STEEL PRODUCTION OF 9.16 MTPA WAS ACHIEVED

TATA STEEL BECAME SELF RELIANT FOR IT'S COKE REQUIREMENTS

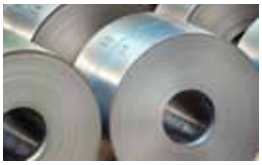
A public limited company headquartered in Mumbai, India, Tata Steel Limited adopted a hybrid organisation structure during the year with the Managing Director and Group Executive Director, Finance & Corporate, reporting to the Board.

The reporting year was also marked by technological transformation, new operating regimes, ramp up of facilities and enhanced performance, leading to an overall increase in production and sales volumes at its principle mining and Steel Works all located in the Indian states of Jharkhand and Odisha. The successful ramp up of the new facilities under the 2.9 MTPA expansion programme led to an increase of 1.03 million tonnes (growth of 13%) in crude steel production in the Financial Year 2013-14.

The overall sales mix of Tata Steel Limited in 2013-14 was 67% Flat Products and 33% Long Products. The main products offered were Hot Rolled Coils & Sheets, Cold Rolled Coils & Sheets, Galvanized Coils & Sheets in Flat Products and Rebar & Wire Rods in Long Products.
The first full year of operation at Tata Steel's new state-of-the-art "I" Blast Furnace, along with the downstream facilities, LD#3 – the new Steel Melting Shop – and TSCR, translated into over 8.5 million tonnes of Steel being sold, the highest ever production of 9.16 million tonnes of Crude Steel during 2013-14 while saleable steel production was 8.93 million tonnes higher by 1.0 million tonnes over 2012-13. Sales increased by 14% to 8.52 million tonnes in the Financial Year 2013-14 (FY14) from 7.48 million tonnes in Financial Year 2012-13 (FY13). With the new TSCR Mill, the product mix has expanded to include HR coils up to 1680 mm in width and also higher strength materials.

Tata Steel realigned its Marketing & Sales organisation in 2013–14 to improve customer centricity further. The Flat Products and Long Products Divisions were merged to create three new verticals

MAIN MARKET SEGMENTS SERVED	PROFIT CENTRES	PRODUCTS	RETAIL BRANDS
• Automotive • Construction • Consumer Goods • Engineering • Packaging • Material Handling • Energy and Power • Agriculture • Railways • Capital Goods	Flat Products	HR, CRCA & Galvanised Products Automotive Steels	• Tata Shaktee • Galvano™ • Tata Steelium • Nest-In • Tata Astrum
	Long Products	Rebars & Wire Rods	• Tata Tiscon • Tiscon Readybuild • Pravesh**
	FAMD*	Chromes Concentrate, FeCr, FeMn, SiMn, Dolomite, etc.	• Tata Silcomag • Tata Ferromag • Tata Tischrome
	Tubes Division	Conveyance Tubes, Precision Tubes & Structural Tubes	• Tata Structura • Tata Pipes • Tata Precision Tubes
	Bearings Division	Bearings and Races	• Tata Bearings
	Wire Division	Steel Wires	• Tata Wiron
	Agrico & Retail Initiative	Agricultural implements, Hand tools & 'SteelJunction' stores selling steel intensive consumer products	• Agrico • Tata Agrico Grasshopper



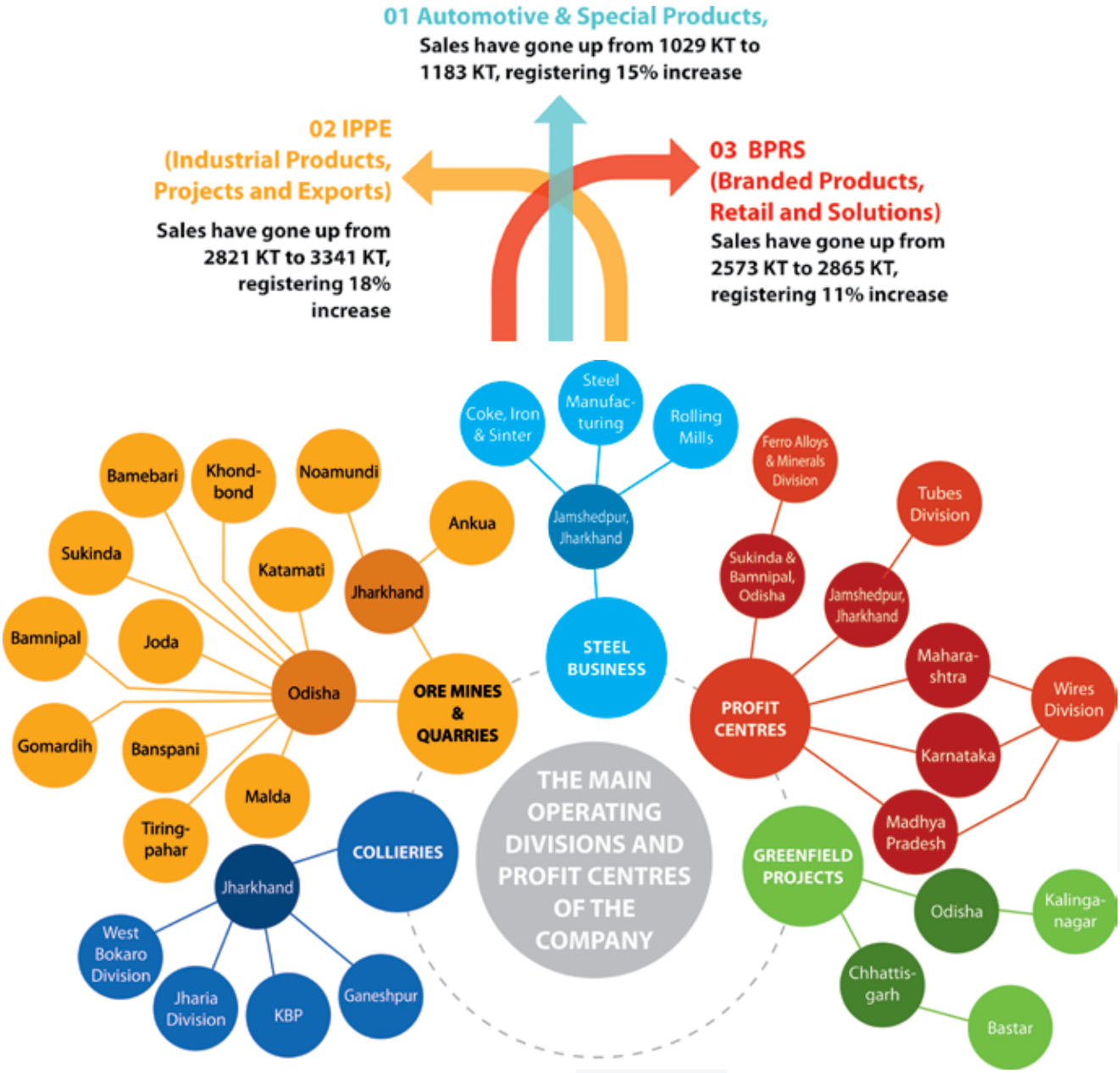
* In 2013-14 Tata Steel's Ferro Alloys & Minerals Division launched two new Ferro Alloys brands Tata Ferromag and Tata Tischrome.

To continuously enhance the product quality, work closely with customers and offer an array of services to them (rather than just selling the products), Tata Steel remains committed to its customers and maintains a long term relationship with them. The commitment to quality of its products and differentiated services helps Tata Steel earn a premium over its competitors.

Tata Steel's branded products and solutions touch ~ 2.5 million consumers in rural markets and about 5,000 ECA customers every year. By actively responding to changing customer demands and expectations, the Company has expanded its distribution network, strengthened existing brands and won several brand awards. The branding initiative has contributed significantly in differentiating its products from the competition. Making inroads into the SME segment and a significant retail presence has helped Tata Steel sell more volumes directly to the consumers. All these efforts have resulted in a significant increase in the sales volume, despite the prevailing poor market conditions in 2013-14.

Value To Customers	B2C Business	B2B Business
Convenience in procuring products	Bundled offer (TISCON + WIRON), (TISCON + SUPERLINKS) Branded exclusive outlet (Experience Zone), SHAKTEE Shop, Website, Enhanced Reach (RVM) for delivery	Customer Service Teams for Auto customers, Theory of Constraints (TOC)
Ease of Use	Product Application Group (PAG) support (Ask Expert program), NEST-in housing solutions, Mitr certified masons, Customer Service Engineers	PAG dedicated to customers, ACE + service centers
Higher Value	Unique offers – Selling by piece, Recommended Consumer Price, Customer Service Engineers, Bundle offers, Superlinks, Wider sheets in Tata Shaktee	Localization through high end products, CAB, Customized length
Availability as per need	Replenishment offer to Distributors & Dealers which improve availability at Retail shops significantly	Reliability offer, Vendor Managed Inventory, Replenishment for CAB Centre, Replenishment for Steelium
Value Added Products	SHAKTEE Wider sheets, Thinner GC, 6mm diameter Rebar, Fe500D rebar	High-end Automotive Products, Higher width LPG steel sheets, Many new products in Hot Rolled category
Safety, Security & Environment	TISCON Superlinks, Roof Junction	VAVE, Lead free GP products, WR Mechanical descaling - no need of acid pickling, Suraksha Program, Pilfer - proof packaging, ROHS compliant GP Products
Knowledge & Capability	Gurukul, RAISE (Responsible Architectural Initiatives and Structural Engineering)	Wire2Win, LINKS, Pathshala, VIU for Galvano
Peace of Mind	Branded invoice, SHAKTEE – thickness & Zn coating printing on sheets, Selling by Piece, RCP, Brand marking for authenticity	Availability of material
Aesthetic	Colour coated roofing (DURASHINE)	-

The continued focus on customer service excellence and proactive market development yielded the following results in 2013-14:



The organization at a glance

Particulars	UoM	2011-12	2012-13	2013-14
Crude Steel Production	Mt	7.13	8.13	9.16
Saleable Steel Production	Mt	6.97	7.94	8.93
Iron ore Production	Mt	13.19	15.01	17.36
Coal Production	Mt	7.46	7.30	6.97
Gross Revenue	Rs Crs.	37,028	42,889	46,749
Net Turnover	Rs Crs.	33,933	38,199	41,711
Total No. of Employees	Nos	35,793	35,905	36,199
Employee Compensation	Rs Crs.	3,047	3,609	3,673

Particulars	UoM	2011-12	2012-13	2013-14
EBITDA	Rs. Crs.	11,559	11,698	13,281
EBITDA	%	34%	31%	32%
Exceptional Income (Expenses)	Rs. Crs.	511	-675	-142
Profit Before Tax	Rs. Crs.	9,857	7,837	9,714
Profit After Tax	Rs. Crs.	6,696	5,063	6,412
Net Fixed Assets	Rs. Crs.	29,873	36,107	44,175
Capital Employed	Rs. Crs.	81,634	86,836	93,379
Net Worth	Rs. Crs.	54,491	57,485	63,423
Debt	Rs. Crs.	26,172	27,508	27,917
Equity	Rs. Crs.	3,246	3,246	3,246
Net Debt Equity	Ratio	0.41	0.44	0.41
Research & Development	Rs. Crs.	52.98	59.73	80.51
Market Capitalization	Rs. Crs.	45,808	30,383	38,247
Basic Earnings Per Share	Rs/share	67.84	50.28	64.21
Dividend Rate	%	120%	80%	100%
P/E Ratio	Times	6.93	6.21	6.13

Research and Development Expenses: Increase in R&D expenses is primarily due to revenue expenditure in a new scheme for producing Clean Coal with an 8% ash content. It included the Chemical Leaching Pilot Plant, Organo Refining Pilot Line and a Roll-to-Roll Pilot Coating Line.

Exceptional Income (Expenses): The exceptional items in Financial Year 2013-14 represents provision on account of diminution in value of investments of - Rs. 97.53 crores in TAYO Rolls Limited, Rs. 24.71 crores in Strategic Energy Technology Systems Private Limited and Rs. 19.52 crores in Gopalpur SEZ Limited.

The exceptional items in Financial Year 2012-13 primarily reflect the diminution in the value of the investments in TSKZN (Rs. 687 crores) partly offset by the profit on sale of stake in Sila Eastern Pvt. Ltd. (Rs. 2.7 crores).

Changes during the year

Support facilities added under the 2.9 MTPA expansion programme 2013

- Installation of 0.7 mtpa capacity 5 metres tall Stamp Charge Coke Oven Battery No. 10 with pushing, charging and quenching emission control systems
- Two 600 tpd capacity, suspended cylinder Lime Kilns
- Second strand of TSCR
- Online continuous emission monitoring system for stack emissions and ambient air quality
- Coromax Technology for Power Saving in ESP at Sinter Plant No. 3
- Composting Plant for Canteen waste

2014

- Installation and commissioning of secondary emission control system at LD # 1
- Installation of Nozzlex addition facility in tilters at LD # 1
- Installation of Multifunctional gauge for Finishing Mill at the Hot Strip Mill
- Installation of Variable Frequency Drive with Inverter Duty Motor for FD fans at Power House No. 4

G Blast Furnace: A major shutdown and revamp of the G Blast Furnace was completed during the year.

Coke Oven Battery #11 commissioned: With the commissioning of the Coke Oven Battery #11, the last milestone project of the 2.9 MTPA expansion programme, the Company became self-sufficient for its coke requirements and the stable operations of the Jamshedpur Steel Works. The 0.7 million tonnes per annum is the largest coke oven complex at the Jamshedpur Works.

Blast Furnace 'Blown in' at Jamshedpur Works: The relined 'F' Blast Furnace was 'blown in' during the year. The 'F' Blast Furnace had an initial capacity of one million tonne per annum and was 'blown out' on April 15, 2012.

Merger of Tata Metaliks Limited (TML): a subsidiary of the Company and one of the largest producers of Foundry Grade Pig Iron in India, along with its subsidiary TMKPL Tata Metaliks Limited was merged with Tata Steel Limited in April 2013 under a Scheme of Amalgamation to be sanctioned through a court approval process.

3 REPORT PARAMETERS

THIS IS THE FOURTEENTH CONSECUTIVE ANNUAL REPORT; THE LAST REPORT WAS PUBLISHED FOR 2012-13.

TATA STEEL CONDUCTED A REVIEW OF MATERIALITY IN 2012-13

AS PART OF ITS MEMBERSHIP OF WORLDSTEEL AND AS A SIGNATORY TO THE WORLDSTEEL SUSTAINABILITY CHARTER IT MONITORS PERFORMANCE BASED ON THE WORLDSTEEL SUSTAINABILITY INDICATORS.

THE COMPANY HAS ADOPTED THE WORLDSTEEL METHODOLOGY FOR MEASURING PERFORMANCE

Report Profile

This Corporate Sustainability Report for Tata Steel Limited standalone covers the period April 1, 2013 to March 31, 2014. It has been prepared as per the Global Reporting Initiative (GRI) G3.1 guidelines and the Mining and Metals Sector Supplement, as well as reflects the Company's commitment to the Principles of the United Nations Global Compact and worldsteel sustainability indicators. This is the fourteenth consecutive annual report; the last report was published for 2012-13.

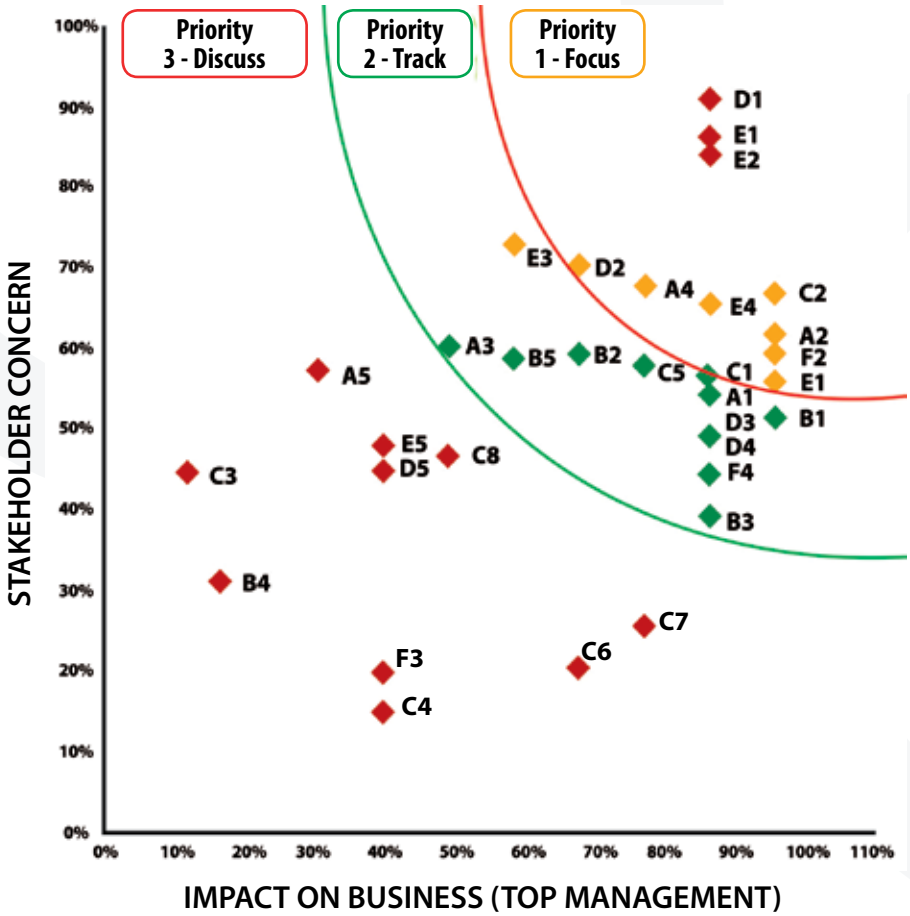
Materiality

Tata Steel conducted a Review of Materiality in 2012-13 to obtain inputs from external stakeholders and peer companies on sustainability issues of concern, which would assist the Senior Management in defining material sustainability issues.

An objective of this study was to determine the extent to which sustainability issues impact the business of Tata Steel Limited. The study clearly identified the sustainability issues that were of concern to stakeholders and also established the business case for sustainability. The number of sub-issues that were important were significantly large for Tata Steel to establish a basis for identifying the top 6-12 issues that it should focus on, around which it could build into its strategy and hence its reporting. Thus, there was a need to identify those critical issues and sub-issues that were "material".

The process used to determine materiality was plotting a scatter diagram. The score obtained by each sustainability issue along two parameters the Stakeholder Level of Concern and the Impact on Business yielded Tata Steel's Materiality Map.

MAP-1: MATERIALITY ANALYSIS



A1 Leadership Policy and oversight on sustainability
A2 Promoting Ethical Behaviour
A4 Stakeholder Identification & Management

C1 Occupational Health & Safety
C2 Capacity Building of Employees

D1 Emissions
D2 Environment Performance Management

E1 Land acquisition and R&R
E2 Community Engagement and Satisfaction
E3 Benefit Sharing
E4 Local Infrastructure Development

F2 Resource Consumption

Sustainability Impacts in Focus

From the materiality map it is evident that there are 10 sustainability issues (within the red curve on the top right hand side of map) that have a high business impact and rank high on the level of concern expressed by the external stakeholders. Also, since sharing of socio-economic benefits with the community is marginally outside the red curve and has a very high stakeholder concern this should also be considered in the focus group.

Occupational Health & Safety - almost on the borderline of the priority 1 group in the map because of high top management rating (also rated as a priority by the officers) is considered under the focus group. Tata Steel therefore focusses its efforts and strategises around these material issues. These issues are reviewed monthly by respective issue owners/corporate sustainability team and reported to the top management on a quarterly basis.

Management Endorsement- The map clearly identifies 12 material sustainability issues based on the level of stakeholder concern and impact on the business, the top management reviewed these material issues to determine whether any issue needs to be excluded or included in this set.

Scope and Boundary

This report includes Tata Steel's Steel Business Unit, Raw Materials operations, and three profit centres - Ferro Alloys & Minerals Division, Tubes Division and Wires Division. These account for over 99 % of total GHG emissions by the Company and ~ 90 % of the profits of the Company. The profit centres included contribute 5% or more of the Company's revenue.

Disclosures under Economic, Labour, Human Rights and Social cover all locations for Tata Steel Limited standalone. Those for Environment Performance/ Operational Performance cover all locations within the boundary of the report.

While compiling this report, the GRI principles of Materiality, Stakeholder Inclusiveness, Sustainability Context and Completeness have been applied. No significant change has been made in the scope and boundary from previous reports.

Metrics

Tata Steel has identified Key Performance Measures, which are globally accepted standards in areas of priority. As part of its membership of worldsteel and as a signatory to the worldsteel Sustainability Charter it monitors performance based on the worldsteel Sustainability Indicators. The Company has adopted the worldsteel methodology for measuring performance. Carbon emission intensity for the Steel Works, HMC and Tubes Division has been calculated as per Worldsteel Association's User Guide for 'CO_2 Emissions Data Collection', Version 6. Calculations for carbon emissions for all other locations are as per the GHG Protocol.

worldsteel ASSOCIATION

GREENHOUSE GAS PROTOCOL

Contact Persons:

Mr Shubhenjit Chaudhuri
Chief, Corporate Sustainability
Tata Steel Limited

Mr Kulvin Suri
Chief, Corporate Communications, India & SEA
Tata Steel Limited

Email: sustainability@tatasteel.com

Sustainability Indicators of World Steel Association (methodologies cover steel making)

- CO_2 Emissions Intensity for Steel Works
- Energy Intensity for Steel Works
- Material Efficiency for Steel Works
- Environment Management System deployment
- Loss Time Injury Frequency Rate
- Employee Training
- Investments in New Products and Processes
- Economic Value Distributed

Independent Assurance

Tata Steel continues to seek independent assurance for its Corporate Sustainability Report. Accordingly since 2008, Tata Steel appointed DNV.GL, represented by DNV GL Business Assurance India Private Limited, as the independent assurance provider.

GRI Index

Refer pages: 115-122

4 GOVERNANCE

A HYBRID ORGANIZATIONAL SETUP WAS ADOPTED BY TATA STEEL IN 2013-14

A NEW CORPORATE SOCIAL RESPONSIBILITY COMMITTEE OF THE BOARD WAS CONSTITUTED IN 2013-14

AN APEX COMMITTEE WAS FORMED IN 2013-14 TO PROVIDE GUIDANCE ON THE MANAGEMENT OF BUSINESS ETHICS

Organisational Structure

A hybrid organizational setup was adopted by Tata Steel in 2013-14 to effect greater agility and responsiveness at the top decision making positions in the face of the vast complexities of the business environment and the breadth that Tata Steel's operations in India are assuming. It has the Managing Director and Group Executive Director (GED-Finance & Corporate) at its top most position, reporting to the Board of Tata Steel Limited.

The Company has a Non-Executive Chairman. As on 31st March 2014, the Company has 13 Directors on its Board, of which seven Directors are independent. *(Ref: page 102 of the Annual Report 2013-14)*. Mr Hemant M Nerurkar superannuated on 31st October 2013 from the services of the Company and with effect from 1st November 2013 Mr T V Narendran was appointed Managing Director, India & South East Asia, Tata Steel Limited.

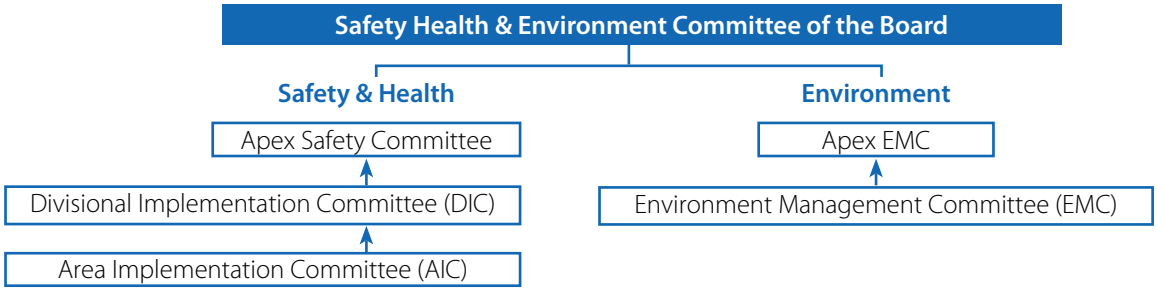
Leadership, Policy and oversight on Sustainability

Based on Tata Steel's Vision Statement and Mission (www.tatasteelindia.com) the Company's business excellence model has a three-pronged focus: Sustainability, CSR and Health & Safety.

The Tata ethos, Company vision and goals serve as guiding philosophies for Tata Steel Limited, with the Tata Code of Conduct acting as its ethical roadmap. The performance of the Company on the various issues linked to Sustainability is governed at various levels of the organisation including the Board level through several focused committees.

Corporate Social Responsibility Committee: The decision to constitute a Corporate Social Responsibility (CSR) Committee was taken during the reporting year as required under Section 135 of the Companies Act 2013. The main responsibility of the Committee would be to formulate and recommend to the Board a CSR Policy, to ensure that CSR activities are being undertaken as per the policy and to review and monitor the CSR policy at periodic intervals. This is in addition to the Sustainability Policy and Social Accountability Policy that the Company already has.

The Governance Mechanism to monitor, review and deploy necessary measures for issues related to Safety, Health and Environment, is depicted in the following flow chart:



Apex level Committees: At the corporate level the Managing Director chairs, among other committees, the Apex R&D Council, Apex TQM Council and Quality Boards involved in reviewing the status of the overall learning, innovation and improvement initiatives in the organisation.

In Financial Year 2013-14, an Apex Ethics Committee was formed to provide guidance on Management of Business Ethics (MBE) as well as on related policies. In addition, an Ethics Committee, comprising four Vice Presidents, was constituted to ensure uniformity in consequence management.

Tata Steel's Affirmative Action programmes endeavours to mainstream disadvantaged and marginalised communities through a structured and planned mechanism. The Affirmative Action Apex Committee maintains oversight over these programmes. Tata Steel has spent more than 3% of its profit on CSR during 2013-14 and continues to look at investment in society and environment as a pre-profit exercise, aiming to give back to society.

Stakeholder Identification and Management

Tata Steel stakeholders, both internal and external, are those who have an influence over the Company's business and who in return are impacted by the Company's operations.

The Materiality exercise categorised its external stakeholders into three clusters:

- **Business Partners** (investors, employees - non-officers, trade union workers and contracted laborers - and suppliers)
- **Civil Society** (NGOs working on social & environmental issues, community)
- **Influencers** (regulators, politicians, media, industry associations, customers)

Sustainability through Operational Excellence

Departmental TQM Councils periodically review and assess Environment, Occupational Health & Safety, Ethics, CSR and other improvement initiatives.

Sustainability Reporting and Transparency

Tata Steel submits performance related information as a Climate Action Member of worldsteel Association. It currently holds the chair for Environmental Policy Committee (EPCO).

Tata Steel is also an active member of the steel industry's "Energy Operating Committee" – forum to share performance and enablers and form industry opinion for advocacy. Tata Steel has supported Bureau of Energy Efficiency (BEE) as a member of the industry expert group in firming up the stance through sharing of information and knowhow. The Company publishes its annual sustainability report which is available on its website.

Tata Steel is a member of:

- World Steel Association (WSA)
- Confederation of Indian Industry (CII)
- Federation of Indian Chambers of Commerce (FICCI)
- Federation of Indian Mineral Industries (FIMI)
- Global Compact Network India (GCNI)
- The Energy and Resources Institute (TERI)

Ethics

The Tata Code of Conduct (www.tatasteelindia.com/corporatecitizen/pdf/TCOC.pdf) guides all business actions at Tata Steel. All officers must provide a written consent to it while non-officers are covered through an agreement with the Unions. It is applicable to all contract employees, contractors, vendors, suppliers, third-party representatives of Tata Steel, its joint ventures and subsidiaries. Strategies and objectives based on guiding philosophies,

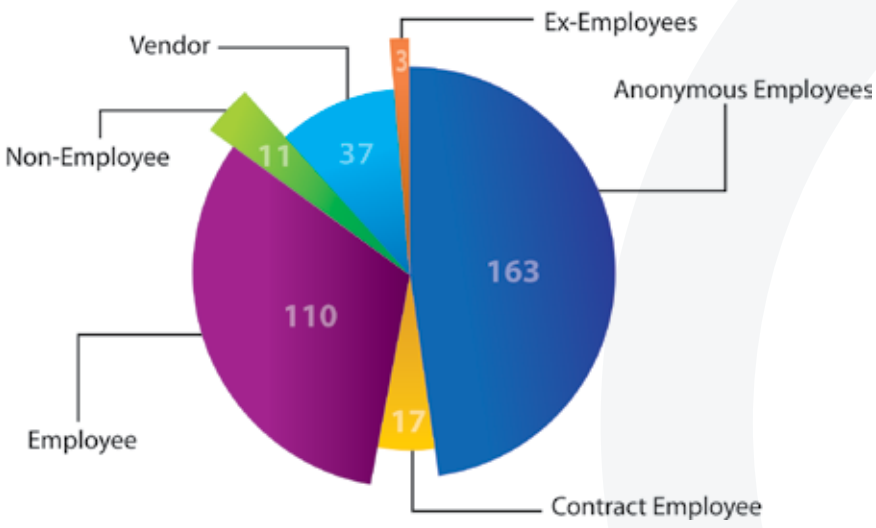
Company objectives and Departmental objectives flow into the Annual Business Plan (ABP) of the Corporate Ethics Department. The ABP is aligned with the four pillars of the Management of Business Ethics, namely: Leadership, Compliance Structure, Communication & Training and Measurement.

Leadership: In 2013-14 Tata Steel's zero tolerance to unethical conduct was further reinforced with the inclusion of a dedicated slot for an Ethics Pause in the monthly MD Online programme (a live videocast forum allowing all company employees to interact with the Managing Director). A representative of the senior management explains the meaning and importance of one clause of the Tata Code of Conduct (TCoC) or an organizational policy/ guideline through live examples.

In addition to the release of the Anti Sexual Harassment Initiative Policy and guidelines, Internal Complaint Committees were formed at 13 locations of Tata Steel in accordance with the provisions of the 'Prevention of SH Act 2013', meetings conducted with Area Chiefs to review the MBE activities in their area, Round Table held on Ethics and the annual Ethics Month observed in July to promote ethical behavior and re-emphasizes the importance of TCoC.

Compliance Mechanisms: senior level officers of the Company were induced as Divisional Ethics Coordinators and posters with details of the DEC placed in all departments. 'Peep Holes' were inserted in offices, cabins, rest rooms, etc. The Whistle Blower policy, third party helpline and protection given to the Whistle Blower encourage all stakeholders to bring ethical violations to the notice of the Ethics Counsellor (EC) and the Management. The Company has seen a spurt in the number of concerns raised, though most were through the third-party helpline. The Company has also instituted a reward and recognition system for whistle blowers. Employees must also report and periodically update any conflict of interest.

STAKEHOLDER WISE CONCERN RECEIVED



Communications and Training: tremendous attention was accorded to training all new recruits (Cadre, Lateral and Contract employees). Ethics has been introduced in the standard training programme, Vendor Meets and in MASS Meetings at the shop floor across the locations. In all such sessions the Dos & Don'ts of TCoC are reinforced.

Ethics and TCoC Training	UoM	2013-14
Officers, Non Officers, Vendors and Contractors	Numbers	14669

Measurement of Effectiveness: Tata Steel has defined the responsibilities, accountabilities and reporting lines in all divisions, has dedicated help desks, focal points, ombudsman and a third party helpline for reporting concerns. It conducts an internal MBE Survey to measure effectiveness.

Among the improvements undertaken during the year were e-billing system for Service purchase requirements, blocking of generic IDs, horizontal deployment of the Travel System and attendance recording system at Tata Centre.

Action against violation of Tata Code of Conduct

Disciplinary action is taken in the event of a violation of the code of conduct in the form of a warning or dismissal based on the zero tolerance policy. In 2013-14, the Company de-listed 15 vendors for non adherence to TCoC

For speedy resolution of ethical concerns, a Daily Management system was instituted to monitor and track the resolution time. While the total number of concerns received in 2013-14 rose with training and awareness, a reduction in the concern resolution cycle time was achieved from 60 days to 47 days.

Category	Initiatives
Deployment	Special sessions on "Prevention of sexual harassment and workplace etiquette" were introduced.
	Importance of Ethics was reinforcement at the Annual Vendors Meet
Training	Ethics awareness was made a part of induction programme for all new recruits including contract employees of the Company and also for the people transiting from operative to middle management level or from workmen to officer level.
	Ethics awareness is a part of mandatory safety training module for contract employees.

Indicator	UoM	2011-12	2012-13	2013-14
Concerns Received	Nos.	209	212	341
Average Resolution days	Days	-	60	47

Compliance with laws and regulations

A mid-term appraisal of trials of the online compliance tracking software "Legatrix" in May 2013 established its efficacy. The software is now being rolled out across the Company's divisions. Once fully operational, "Legatrix" would become a single window for (a) tracking compliances, (b) conduct of reviews/detailed analysis (c) identifying areas of concern (d) generating automated compliance reports (e) repository of documents related to statutory compliances. It can also be extended beyond statutory compliances to incorporate international best practices.

No monetary fines or non-monetary sanctions were imposed on Tata Steel during the year for non-compliance to environmental laws, health & safety violations, discrimination issues, etc.

Stakeholder Identification and Management

Tata Steel has formal mechanisms to engage with both internal and external stakeholders. For the internal stakeholders - the officers and non-officers - it has well defined processes to convene meetings, including a minimum of 56 meetings of its three tier Joint Departmental Council (JDC).

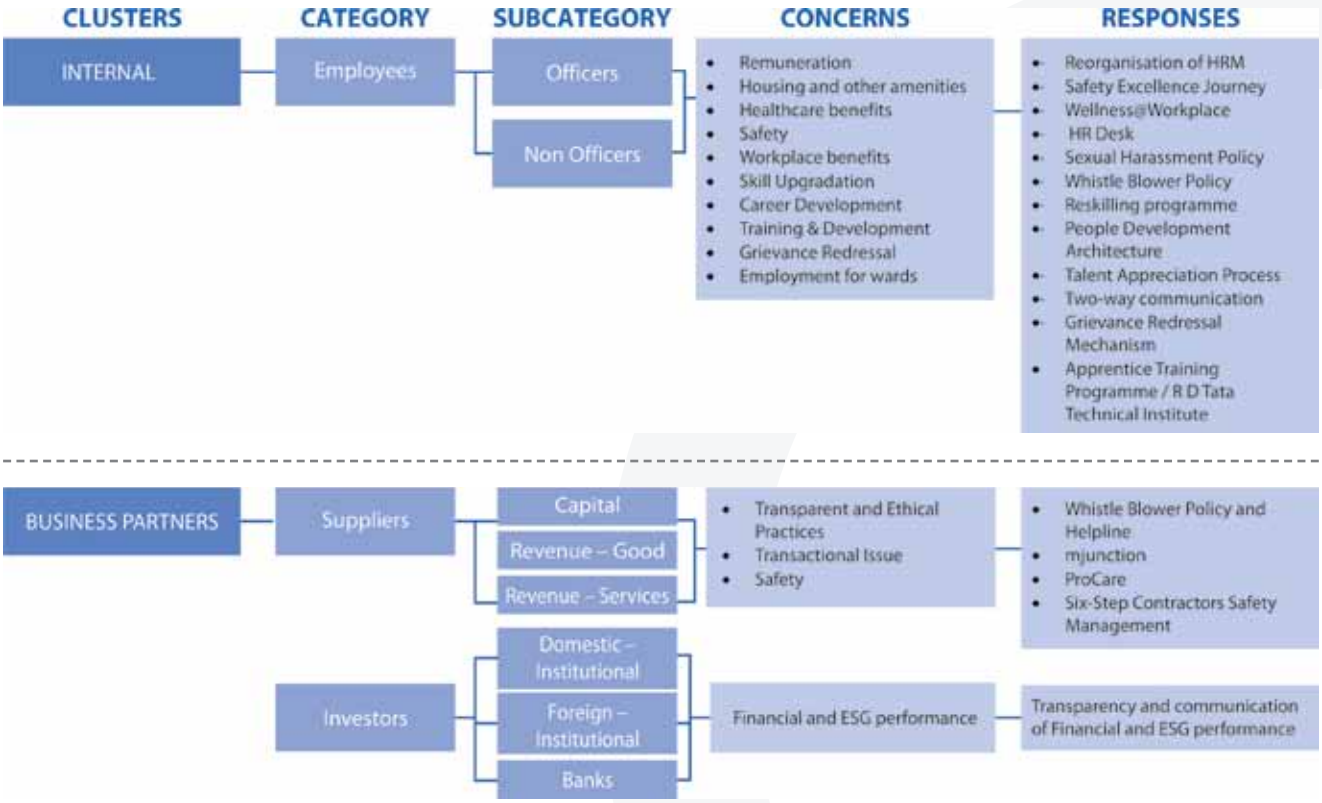
Tata Steel's long standing commitment to participative management has ensured ~ 86 years of industrial harmony.

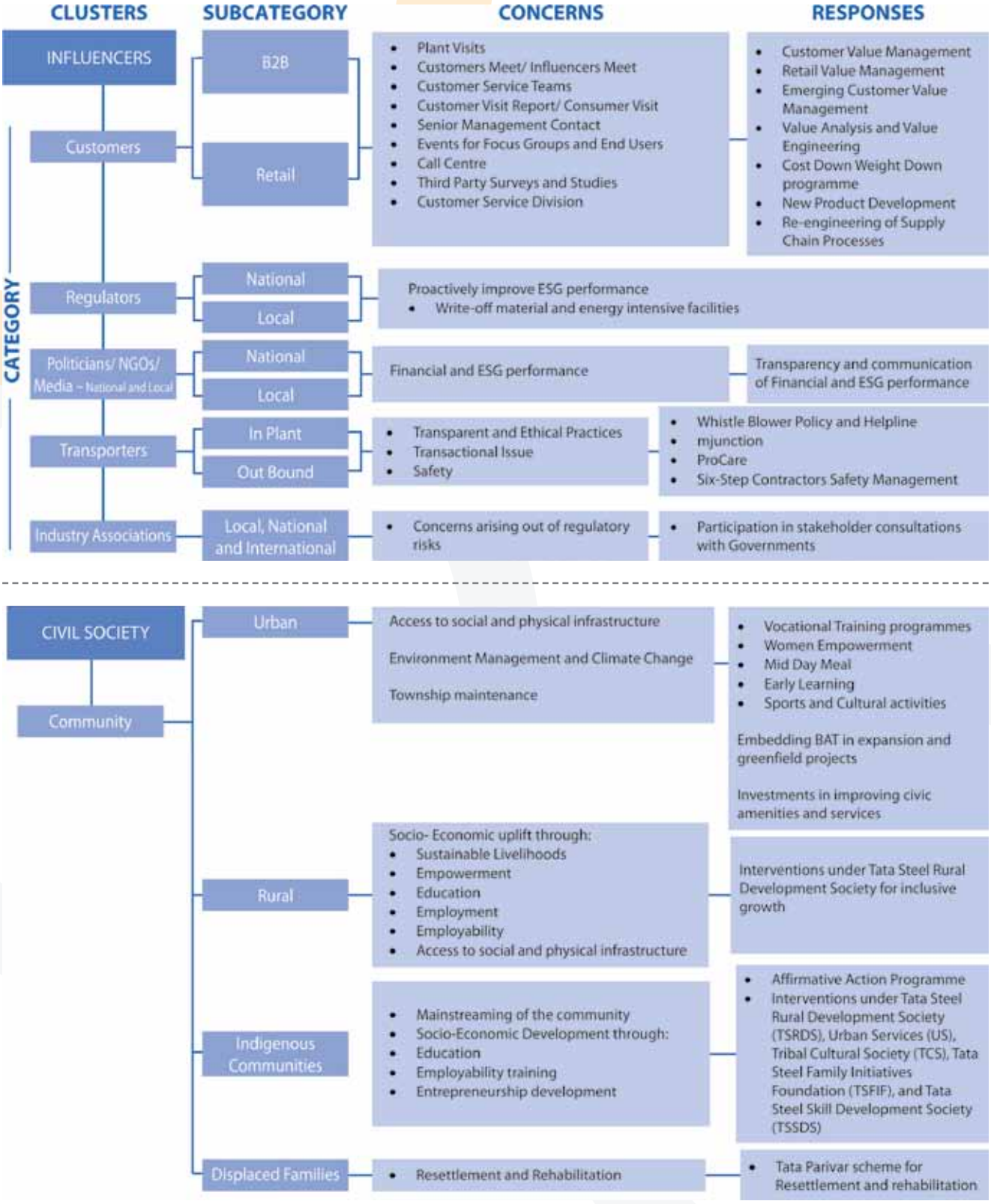
Minimum notice period(s) regarding significant operational changes

Organizational changes are in line with the policies of the Company, agreements with the various Unions and Works Standing Orders. In all cases, basic requirements such as, minimum notice period as specified is given and the employee is also rehabilitated in new assignments through a standardized procedure of training and awareness. The frequency of engaging with the external stakeholders varies as per the nature of the cluster, with the Company conducting day-to-day interactions with both vendors and members of the communities where it operates at the departmental level.

Senior representatives of the Company engage with local communities directly and through formal meetings convened with village mukhiyas, tribal leaders and opinion makers.

stake holder map




CLUSTERS
SUBCATEGORY
CONCERNS
RESPONSES
CATEGORY
INFLUENCERS
Customers
B2B
Retail
Plant Visits
Customers Meet/ Influencers Meet
Customer Service Teams
Customer Visit Report/ Consumer Visit
Senior Management Contact
Events for Focus Groups and End Users
Call Centre
Third Party Surveys and Studies
Customer Service Division
Customer Value Management
Retail Value Management
Emerging Customer Value Management
Value Analysis and Value Engineering
Cost Down Weight Down programme
New Product Development
Re-engineering of Supply Chain Processes
Regulators
National
Local
Proactively improve ESG performance
Write-off material and energy intensive facilities
Politicians/ NGOs/ Media – National and Local
National
Local
Financial and ESG performance
Transparency and communication of Financial and ESG performance
Transporters
In Plant
Out Bound
Transparent and Ethical Practices
Transactional Issue
Safety
Whistle Blower Policy and Helpline
mjunction
ProCare
Six-Step Contractors Safety Management
Industry Associations
Local, National and International
Concerns arising out of regulatory risks
Participation in stakeholder consultations with Governments
CIVIL SOCIETY
Community
Urban
Access to social and physical infrastructure
Environment Management and Climate Change
Township maintenance
Vocational Training programmes
Women Empowerment
Mid Day Meal
Early Learning
Sports and Cultural activities
Embedding BAT in expansion and greenfield projects
Investments in improving civic amenities and services
Rural
Socio- Economic uplift through:
Sustainable Livelihoods
Empowerment
Education
Employment
Employability
Access to social and physical infrastructure
Interventions under Tata Steel Rural Development Society for inclusive growth
Indigenous Communities
Mainstreaming of the community
Socio-Economic Development through:
Education
Employability training
Entrepreneurship development
Affirmative Action Programme
Interventions under Tata Steel Rural Development Society (TSRDS), Urban Services (US), Tribal Cultural Society (TCS), Tata Steel Family Initiatives Foundation (TSFIF), and Tata Steel Skill Development Society (TSSDS)
Displaced Families
Resettlement and Rehabilitation
Tata Parivar scheme for Resettlement and rehabilitation

Participative Management and Employee Engagement

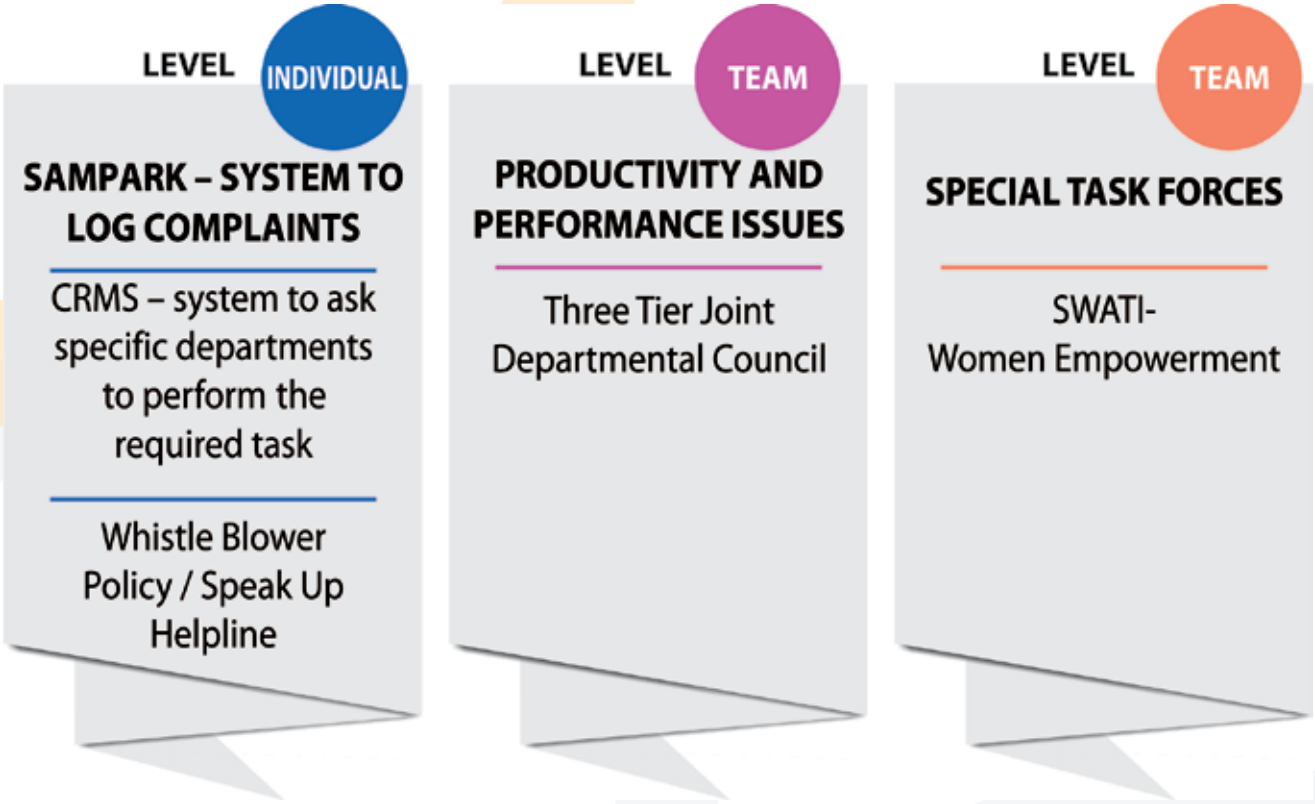
Tata Steel has a wide range of initiatives to recognise and reward its employees as well as to address their environment, health and safety recommendations. These include policies to support the work climate, deployment of environment, health and safety management systems such as ISO 14001, OHSAS 18001, an Annual Safety, Health and Environment Plan for every unit, work climate improvements and employee support services through the **Parivesh** scheme. The principal mechanism to receive employee recommendation is the three-tier Joint Works Council.

As a specific project undertaken in 2013-14, the employee reward and recognition process **"SHABASH" was revamped** to make it more attractive based on inputs received from the employees through an employee opinion survey and focussed group discussions.

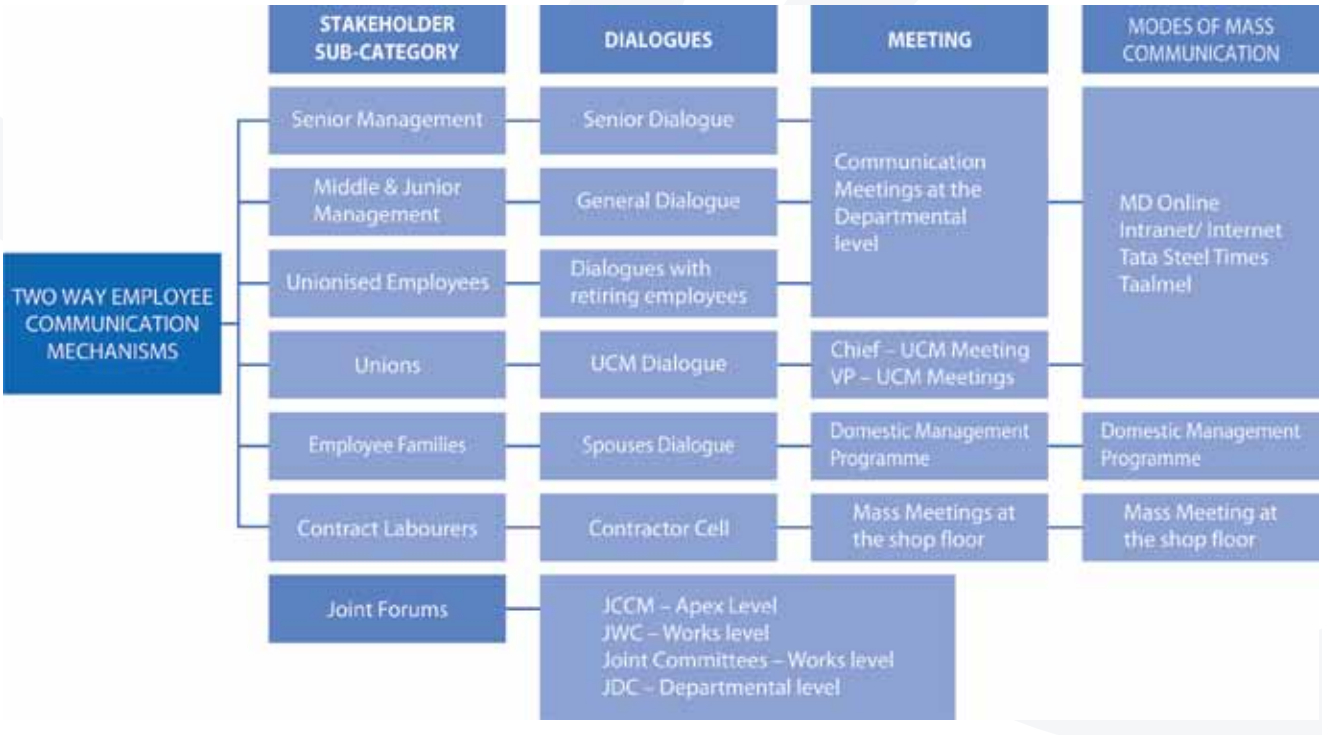
Employee Connect: A unique initiative was initiated for addressing informal issues of both Officers and Non-Officers. While an IT based system called **Employee Contact Programme (ECP)** was established for Officers For Non-Officers a similar programme has been piloted in 2012-13 and measured as a KPI in the ABP.

The objective of ECP is to improve the connect of Line Managers & HR executives with the employees at large by listening to their issues and redressing them in a time bound manner. The IT based platform enhances the effectiveness & efficiency of the endeavour. While on one hand it leads to resolution of the immediate / pressing concerns of the employees, on the other hand the data generated is analysed in order to bring policy level changes in HR processes if needed.

Employee Governance Redressal Mechanism



Two way Employee Communication Mechanisms:



Supplier Engagement Mechanism

INITIATIVES	OBJECTIVES
Supplier Relationship Management	To maintain & maximize the potential value of the relationship with Supplier partners to deliver enhanced value to our users & supplier partners on a continual basis.
Vendor Development	To introduce new vendors with world class technology and processes so as to have the best in class vendors in the vendor panel. This also provides opportunities for the existing vendors to benchmark their processes against the best in the field.
Vendor Discovery	Vendor Search is a continuous and on-going process rather than a one-time activity.
Quality Assurance	To achieve consistency in quality of bought out materials and services through cross-functional collaboration with users & suppliers of selected materials and services.
Vendor Capability Enhancement Programme	• Strengthen the capacity, capability and management practices of Vendor Partners • Enable them to become more efficient and better equipped to meet the increased requirements of Tata Steel. • To bring efficiency in the entire value chain and create an environment conducive to an efficient way of working to deliver quality goods and services • Impart targeted training to cater to the requirements at various levels in vendor's organization to foster and promote inclusive development.
ProCare	A front end Customer Service wing of Procurement Division it serves both internal departments and external vendors
E Proc (B2B Forum)	eProcurement System is an online Procurement system that has been

Sumilan with vendor partners:

In 2013-14 Tata Steel's Corporate Safety Department introduced 'Sumilan' a communication forum. Conducted every month it ensures regular interaction with vendor partners specifically in the area of Safety. It encourages them to share their best practices, recognises good work as well as provides an opportunity for discussing important issues.

Civil Society

Tata Steel collaborates and partners with a large number of NGOs to implement its CSR Projects. Among Tata Steel's key partners are the National Commission on Population, Sir Dorabji Tata Trust, PRATHAM; Pan IIT Alumni Reach for India (PARFI); Indian Institute of Hardware Technology, Nettur Technical Training Foundation, David and Lucile Packard Foundation, National Horticulture Mission Wasteland Development, American India Foundation and SEARCH, Operation SMILE Train, etc.

The Company also promotes and propagates the principles of the United Nations Global Compact and is a member of the UNCG CEO's Water Mandate.

Influencers

R&D extensively engages in collaborative projects with various national and international institutes like NML, IITs, regional and foreign universities for research and development.

It participates in various forums of World Steel Association utilises the available opportunities in advocating a proactive approach for the abatement of Climate Change. It engages with academic & research institutions such as the Indian Institute of Technology, Kharagpur, Indian Institute of Science, CSIE, National Metallurgical Laboratory and the Indian Institute of Metals. The Company has signed 25 research agreements in the last three years. Most collaborations are fully sponsored by Tata Steel for which the Company owns the Intellectual Property Rights with the collaborator.

Direct engagements with policy makers in 2013–14

Bilateral Offset Credit Mechanism (BOCM)

Solution proposed by Tata Steel
A technology shortlist have been published for consideration of appropriate policy level interventions to facilitate technology exchange

Bureau of Energy Efficiency (BEE) has launched the Perform-Achieve-Trade (PAT) scheme for 2012-15 to promote energy efficiency through the trading scheme

Solution proposed by Tata Steel
Target-setting work for PAT phase-II (post Apr 2015) have been initiated; changes in energy trading scheme would be taken up based on the experience of PAT phase-I

Amendment of Energy Conservation Act 2001
Solution proposed by Tata Steel
Revision of provisions

5 ECONOMIC PERFORMANCE

DURING THE LAST FINANCIAL YEAR, TATA STEEL OUTPERFORMED THE MARKET IN INDIA.

THE MARKETING AND SALES FUNCTION OF THE COMPANY REORIENTED ITS APPROACH.

SUPPORT TO LOCAL (JHARKHAND BASED) VENDORS WAS INCREASED THROUGH AN INCREASE IN LOCAL BUYING.

IN LINE WITH ITS AFFIRMATIVE ACTION PLAN, TATA STEEL INCREASED THE VOLUME OF BUSINESS WITH VENDORS HAVING 75% OF THEIR WORKERS FROM THE SCHEDULED TRIBES AND SCHEDULED CASTE (SC/ST) CATEGORY.

Financial Year 2013-14 has been a challenging period due to subdued economic growth arising from higher inflation, higher interest rates, lower industrial growth and lower investments in the country, along with the poor condition of the global economy. Increasing coal and fuel shortage hurt economic and industrial activity in the country, including the steel industry. Globally, iron ore and coking coal prices were very volatile in the last year, though both are not expected to increase significantly from current levels

There is however hope that the Indian economic growth trajectory would see an uptrend once stability is achieved. It is expected that economic reforms would receive a push in 2014-15, which would help restart the investment cycle in India. This should in turn boost steel demand, infrastructure activity and consumer spending. An improvement in the automobile and consumer durable sectors - focus areas for Tata Steel is expected to raise the demand for steel. The demand for Long Products is expected to be relatively better with construction activities and planned infrastructure growth picking up. However, both Flat and Long products will be under significant supply pressure on account of the addition of new capacities.

Economic Performance

During the last financial year, Tata Steel outperformed the market in India where the Company is focused on its domestic markets. This was as a result of continued enhancement in product quality, working closely with customers and offering them an array of services. The Company's branding initiative has contributed significantly to differentiating its products from the competition.

An upside was provided by the depreciating rupee allowing India - for the first time in recent years - to become a net exporter of steel products in 2013-14. The Company therefore recorded an EBIDTA of 32% in year 2013-14, up by 1% from 31% in 2012-13.

Enhanced availability of saleable material along with marketing initiatives in Emerging Corporate Accounts (emerging customers with sizeable volumes and customised service needs) enabled the Company to sell additional volumes in 2013-14. The average net realisation of the Steel Business remained low due to depressed prices on account of tepid demand throughout 2013-14.

Reorienting the Marketing and Sales approach

Given the challenges ahead, the Marketing and Sales function of the Company reoriented its approach to develop strategies that respond to demand and expand market access. The function has been re-aligned from a product-based to a customer-based marketing approach for establishing stronger relationships with the customer. The objective is to extend the function so that the Company's product mix is aligned with customer specific needs. The re-alignment, which reflects dominant customer segments, is aimed at bringing in better synergy and providing a one-stop experience for customers.

The following new verticals were created: i) Automotive and Special products; ii) Branded products, Retail and Solutions; iii) Industrial Products, Projects and Exports. The re-alignment ensured that despite one of the worst years

for the Auto Industry, Tata Steel recorded a 15 % increase in sales to automotive segment over Financial Year 2012-13 by engaging with customers through cross-functional teams.

Market Presence

In 2013-14, Tata Steel embarked on a long-term procurement transformation initiative, targeted towards achieving best-in-class process excellence in preparation for a multi-site operating setup. A structured Vendor Development Programme was launched under its Supplier Relationship Management (SRM) programme, the objective of which is to work collaboratively with those suppliers that are vital to the success of the organization. The programme includes a vendor academy and vendor development initiatives at its greenfield site in Kalinganagar. Support to local (Jharkhand Based) vendors was increased through an increase in local buying. In the reporting year, of the 4999 active vendors 1376 (31%) were from Jharkhand only.

In line with its Affirmative Action Plan, Tata Steel increased the volume of business with vendors having 75% of their workers from the scheduled tribes and scheduled caste (SC/ST) category to Rs 31.05 crores and those with a minimum 50 % SC/ST ownership to Rs 6.19 crores. The Company has an SOP for development of SC/ST vendors.

Tata Steel has followed an integrated value management process from mining to downstream value-added products and services. Process interventions focus on sustainable mining that are in compliance with all clearances and in the interest of mineral development and conservation. The Company does not endorse the EITI but it reports on all taxes, royalties, fees and land use payments paid to individual governments.

Indirect Economic Impacts

Supply Chain : In creating greater value for its customers Tata Steel has chosen to enhance the capacity and capability of its channel partners. It has de-commoditise steel through value added products and customized solutions supplied through its authorized service centres across the country. Its ACE+ centres for Tata Steelium and processing units for Tata Astrum along with Roofjunction, Nest-In and Superlinks have created a network of partners capable of delivering differentiated products.

Local Communities : The Company's community based interventions focus on the 4Es – Education, Employability, Employment, Entrepreneurship along with a fifth E – Ethnicity.

Its Affirmative Action programme ensures that members of socially and economically less privileged communities receive focused attention and benefit from positive discrimination in the procurement process to become entrepreneurs.

The Company has established vocational training institutes in Jharkhand and Odisha, supports nearly 800 Self Help Groups with 9700 women and has created more than 150 irrigation structures which encourage farmers to adopt second and third cropping.

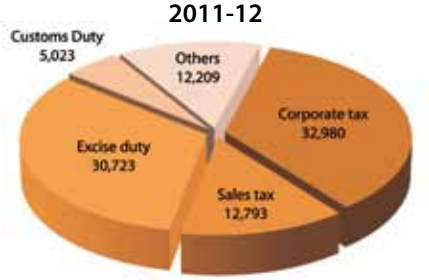
Direct economic value generated and distributed

Rs. Million

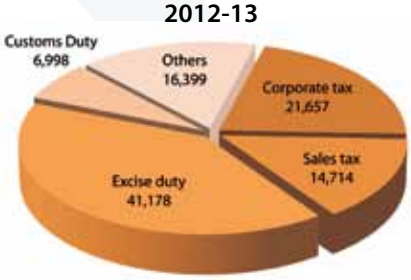
Key Economic Indicator	2011-12	2012-13	2013-14
Economic Value Generated (A)	**3,83,076**	**4,43,600**	**4,85,011**
a) Revenues [Note 1]	3,83,076	4,43,600	4,85,011
Economic Value Distributed (B)	**3,32,147**	**4,04,690**	**4,33,924**
a) Operating Cost	1,81,649	2,40,058	2,55,813
b) Employee wages and benefits	30,473	36,085	36,731
c) Payment to providers of capital	24,836	25,893	27,094
d) Payment to government	93,726	1,00,946	1,12,165
e) Community Investments	1,464	1,708	2,121
Economic Value Retained (A-B)	**50,929**	**38,910**	**51,088**

Note - 1: Revenue figure includes sales tax

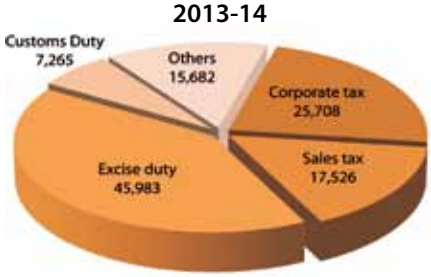
2011-12



2012-13



2013-14



(All figures are in Rs. Million)

Rs. Million

Tax paid to government	2011-12	2012-13	2013-14
	93,726	**1,00,946**	**1,12,165**

While Tata Steel did not receive any financial assistance from the Government during the reporting year, the Company leveraged Rs. 2.74 Crores from Government and donor agencies for CSR work in the areas of health and education..

The Company did not make contributions to political parties during the year.

Operating Costs: Operating cost includes the cost of service contracts, which also includes the cost of non-employees employed by service providers. However, costs of service contracts, which are of capital in nature is capitalized and does not form part of operating cost.

Increase in Payment to Government: Increase in Corporate Tax is primarily due to increase in profit. Increase in Excise Duty & Sales Tax is due to increase in Turnover.

Implications of regulations to mitigate Climate Change

Renewable Energy Certificate trading under Renewable Power Obligation (or "RPO") to promote contribution of renewable energy in grid mix will impact the cost of all consumables and raw materials required for production. In addition the introduction of maiden Carbon Tax on Coal since July 2010 to fund clean energy projects, targets for energy efficiency under Perform-Achieve-Trade (PAT) also contribute to costs and environmental strategy development. As a stakeholder in the consultations prior to the introduction of the PAT, during its modernisation and expansion programme in the last decade Tata Steel focussed on reducing its dependence on fossil fuel for energy.

Tata Steel's emphasis on enhancing energy efficiency during smelting to reduce the Carbon rate, raw material beneficiation, reduction of coal fired boilers as well as carbon efficiency during production are all part of its strategy to achieve greater energy efficiency and consequently mitigate the impact due to Climate Change. Tata Steel publishes its Carbon Disclosure every year under CDP.

BENEFIT SHARING WITH THE COMMUNITY

Tata Steel has operated in the very communities is now co-exists in for over a hundred years. Therefore apart from viewing the Company as a principal employer in the region, the local population also considers it a significant business partner.

The focus areas for Tata Steel community interventions are Livelihood, Education, Health, Drinking Water, Renewable Energy (Solar Street Light) and Ethnicity. The effectiveness of its various interventions is measured by the success rate of the programmes, both tangible as well as intangible.

Over the year the Company has established subsidiaries that have added to the economic development of the region and enhanced employment opportunities in the organised sector. It has also attracted other Tata group companies and business associates to the region. Jamshedpur today has large companies, medium scale companies and thousands of small businesses making it a vibrant industrial hub.

Tata Steel's HR processes capture the number and percentage of employees under different categories and at different locations. A sizable number of Junior Engineer Trainees and Trade Apprentices are selected every year and provided training in-house before being absorbed by the organisation. In the selection of Trade Apprentices positive discrimination is exercised. Those who may not qualify attend a bridge course run by Tribal Cultural Society to improve their skills.

Making entrepreneurs from traders:

As part of its effort to de-commoditise steel and shift from products to solutions, along with enhancing the reach, Tata Steel has been working with its channel partners to convert its dedicated channel partners into service providers. Its Cut to Length sheets/slit coils from certified service centers customise Cold Rolled branded products, Tata Steelium and Tata Galvano, to the requirements of its customers. The launch of Tata Astrum to meet the needs of the SME segment along with products such as Superlinks have enable the channel partners to move up the value chain, becoming entrepreneurs from steel traders.

Expanding the local procurement base:

Under Project PRIDE the vendor development team (including vendor discovery) has been expanded, with the thrust being placed on developing local vendors for the greenfield project at Kalinganagar. It has successfully created a vendor panel for all service categories with a mix of both Jamshedpur and Kalinganagar Project (KPO) based vendors. PRIDE members along with the Vendor Development Cell are also evaluating local KPO based vendors. A total of 34 vendors were called for site visits at the Kalinganagar Plant. Subsequently 23 were shortlisted for vendor site visits in Cuttack, Rourkela and Bhubaneshwar.

Of the total share of procurement 150 suppliers are tier 1 or critical suppliers, many of who are based within the states of Jharkhand and Odisha where Tata Steel operates.

Sustainability impacts of the SRM programme in 2013-14 also include a more than 100 tonne reduction in Carbon footprint through the refurbishment of the discarded CRM solid rolls by a roll manufacturer for reuse in other mills.

The Division also established a source for Aluminium wires from a Jharkhand-based vendor as opposed to procuring it from the western part of the country. It resulted in a reduction of carbon emissions by 411 MT CO_2/annum.

Employment and Employability Initiatives

Tata Steel's emphasis on local hiring is growing in tandem with its initiatives to enhance the employability of local youth. 16.20 % of Tata Steel's employees are from the SC/ST community. The Company also has many second and third generation employees.

Tata Steel's HR processes capture the number and percentage of employees under different categories and at different locations. A sizeable number of Junior Engineer Trainees and Trade Apprentices are selected every year and provided training in-house before being placed with the organisation. In the selection of Trade Apprentices positive discrimination in favour of the SC/ST community is exercised. Also those who may not qualify attend a bridge course run by Tribal Cultural Society to improve their skills.

AA workers in the Workforce	UoM	2011-12	2012-13	2013-14
Total Men on Roll	Nos.	35793	35905	36199
Total (SC/ST)	Nos.	5622	5864	5879
%SC/ST in workforce	**%**	**15.71**	**16.33**	**16.20**

Nearly 2000 youth were trained in 2013-14 through skill interventions, 600 of who were gainfully employed with an average salary range of Rs 6,000 – 8,000 per month.

Employability Training	2011-12	2012-13	2013-14
Vocational Training for Youth	2807	2225	1743
SC/ST Youth Trained	1074	781	467
Gainful Employment for youth	833	597	600

Local Infrastructure Development

Tata Steel's peripheral infrastructure development efforts intensified to focus on access to safe drinking water and a light source after dark. In 2013-14 the Company established 2357 solar lights.

Physical Infrastructure Development	UoM	2011-12	2012-13	2013-14
Solar Lights in Jharkhand and Odisha	Nos.	671	1769	2357
Hand Tube Wells	Nos.	229	372	400
Deep Bore Wells	Nos.	15	89	123
Rooftop Rainwater Harvesting structure	Nos.	2	4	12

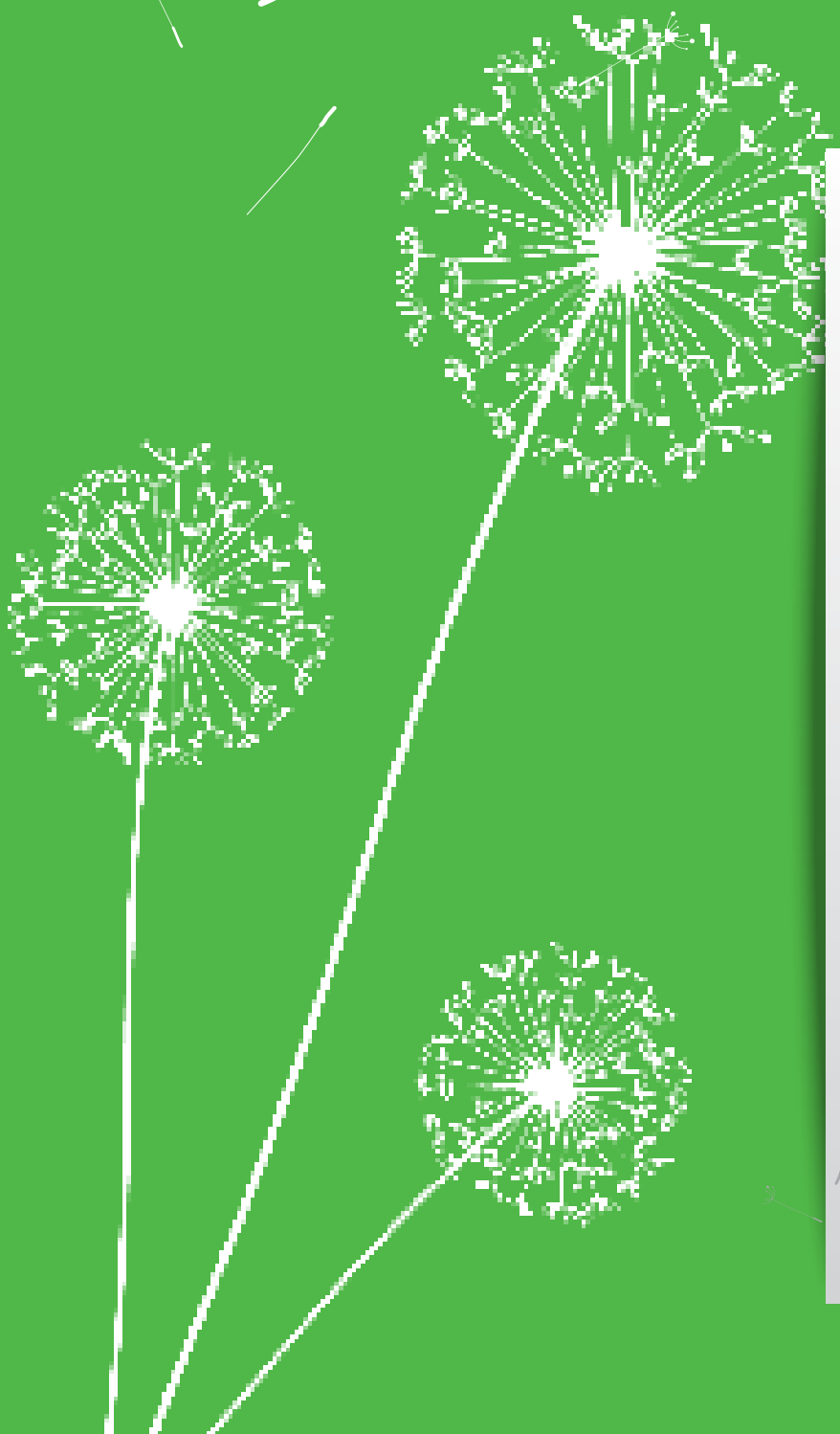
The Company's Solar Light project has transformed lives of villagers, allowing women to engage in income generation activities and augment their family income. The academic performance of school students has also seen an improvement, as they are now able to study longer, beyond daylight hours. At the same time families who have access to solar power can save the money spent on kerosene for oil lamps, further adding to their disposable incomes.

At Kalinganagar where the Company is setting up a greenfield project, students in remote rural villages suffer due to erratic power supply. In 2013-14 solar lanterns were gifted to 199 school students while 13 toppers of the Jyoti Fellowship Test - seven from colleges and six from schools - were gifted tabs. This is the third consecutive year that students of Kalinganagar have received the award.

Though implemented through the year, the pace of Tata Steel's drinking water project accelerated prior to the summer months to ensure that villages, especially schools within them, have access to water before peak summer. In addition, based on stakeholder consultations the Company renovated ponds, and implemented minor irrigation projects.

An allocation of Rs 10 crores was also made for the Water Treatment Plant at the Tata Parivar Colony at Gobarghati in Odisha. This project will be implemented in the next reporting year.

6 OPERATIONAL EXCELLENCE



TATA STEEL'S CRUDE STEEL PRODUCTION ROSE TO TOUCH 9.16 MILLION TONNES IN 2013-14.

TATA STEEL'S CO_2 EMISSION INTENSITY DROPPED TO 2.43 TCO_2/TCS IN 2013-14 AGAINST 2.53 TCO_2/TCS IN 2012-13.

SPECIFIC ACTIONS TAKEN IN 2013 ENHANCED SOLID WASTE UTILIZATION TO 93% AGAINST 87% IN THE PREVIOUS YEAR.

COMMISSIONING OF WATER RECOVERY AND RECYCLING UNITS UNDER THE 2.9 MTPA PROJECT RESULTED IN A DROP IN SPECIFIC WATER CONSUMPTION AT THE STEEL WORKS.

ABOUT 80% OF TATA STEEL'S TOTAL SITES HAVE ALREADY ACHIEVED ZERO DISCHARGE.

AVERAGE ANNUAL EFFLUENT DISCHARGE HAS DROPPED BY ~50% FROM 4.6 IN 2011-12 TO 2.3 M^3/TCS IN 2013-14.

Tata Steel reiterated its commitment to its environment responsibilities with the new management team re-endorsing the Environment Policy in 2013-14. The three elements of this policy are (a) proactively dealing with Climate Change, (b) continual improvement in environment performance so as to (c) be valued by the communities where it operates.

The key material impacts of Tata Steel's operations that straddle both the mining and metal businesses are resource consumption, energy conservation, emission reduction and environment performance management - namely waste utilisation, water consumption, discharge of effluents and responsible mining.

A primary steel manufacturer, the key natural resources used in the production of hot metal are iron ore, coal and limestone. Tata Steel's captive mines meet its entire requirement of iron ore and about half its coal needs. The Company relentlessly focusses on improving raw material yield, improvements in resource efficiency in hot metal production including reduction in energy use and emissions, as well as operational excellence at every stage in the production process.

At Jamshedpur Steel Works, Vice President (Shared Services) is responsible for the Environment and Energy Management functions relevant to Climate Change.

New developments in the national & global regulatory landscape with respect to Climate Change are tracked to ensure the current strategies meet the requirements for future preparedness.

Tata Steel has achieved ~50% reduction in specific energy consumption in last 30 years; and ensured compliance to the PAT (Perform Achieve & Trade) target and national goal (National Action Plan for Climate Change-NAPCC). It has, as a result, derived commercial benefits from the reduction in energy cost as this accounts for about half the cost of steel production.

This continuous thrust on process improvements, technology upgrades, in-house R&D, use of the intuitive knowledge of the shopfloor as well as innovations have made Tata Steel one of the lowest cost steel producers in the world.

Tata Steel's Corporate Strategies to improve environmental performance are:

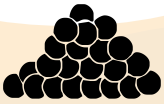
- Reduction of the carbon rate in Iron Making area
- Upgradation of existing APCEs & installation of new efficient APCE under the 2.9 MTPA expansion project
- Maximise commercial usage of utilisation of LD Slag & BF slag (Reuse & Recycle)
- Implementation of Engineering Solutions for Zero Discharge of effluents
- Reduce Specific Water Consumption
- Projects & improvements to enhance environmental performance & ensure statutory compliance

The operationing environment:

The amount of CO_2 emissions emanating during steel making varies depending on the quality and quantity of raw material consumed and process efficiency. While Tata Steel's Vision is to be a global benchmark in steel making, including raw material efficiency and emissions levels, the quality of indigenous ores pose a great challenge to meeting this objective. The high ash content in Indian coals and high alumina content in iron ore render them inferior to raw materials available from assets overseas. The presence of alumina and ash is detrimental to resource productivity and energy efficiency in steel making.

Tata Steel has therefore identified specific areas for continuous improvement over the long term. In 2013-14 improving yield at the raw material units, optimized procurement of raw materials, reduction in coke moisture, reduction in fuel consumption rates in the Blast Furnaces, optimization of solid fuel rate at the Sinter Plants, faster turnaround time and process efficiency in various production processes, improvement in logistics and various other services etc, continued to be prioritised.

INITIATIVES IN 2013–14 AND THEIR INTENDED BENEFITS:

Unit	Process	Strategies for performance improvement	BENEFITS
Raw Materials 	Improving mine yield	Project Propel for benchmarking mining practices	To achieve benchmark level mining practices
	Minimising the resource footprint	Resource conservation and waste utilisation such as iron ore briquettes and Jhama coal	Mine life extension
Sinter Plant 	Agglomeration of iron ore fines and iron values from solid waste	Reduce use of lump ore, fuel rate as well as recovery of iron values from in-process waste	Resource conservation and higher efficiencies in the production of hot metal
Coke Ovens 	Stamp charged coke ovens batteries	Use of inferior grades of indigenous coking coal for production of Metallurgical Coke	Business sustainability through enhanced raw material security and cost control
	Coke Dry Quenching technology	Energy efficiency	Reduction of carbon emissions, prevents loss of energy and water in the form of steam which is used for power generation
	COGD with Waste Heat Recovery	Emission Reduction & Energy Efficiency	Reduction of SO_2 emission while using as fuel in downstream processes and offsetting CO_2 emission
Pellet Plant 	Agglomeration of iron ore fines	Use of iron ore fines	Increase mine life and yield
		Improve quality and strength of agglomerate	Enhanced resource and energy efficiency of blast furnaces
Blast Furnaces 	Improve resource efficiency to improve raw material security	Large capacity high top pressure blast furnaces	Enhanced process efficiency through reduction in Carbon Rate and enhanced productivity
		Electric Blower	Efficient blowing, speedy recovery from process disturbance
		LCI Drive for Electric Blower	Electricity conservation
		Top Recovery Turbines	Power generation from waste energy
		Heat recovery from hot Flue gases of Stoves	Enhanced energy efficiency
		Online granulation of Blast Furnace Slag	Enhance use of waste (granulated BF Slag in Cement making)

Achievements in Operational Excellence in 2013–14

Tata Steel's crude steel production rose to touch 9.16 million tonnes in 2013-14 against 8.13 in 2012-13 and 6.855 in 2010-11 with the ramp up of 'I' blast furnace, which had added 2.9 MTPA to its crude steel making capacity in 2012-13.

The year continued to see a significant amount of stabilization and new learning at the new facilities and augmented units.

Raw Materials:

The increase in production at Tata Steel's raw material locations under the 2.9 MTPA expansion programme and the stabilization efforts at these new units enabled optimisation of the quality of raw material feed to the steel plant – with respect to alumina in iron ore and ash in coal.

Coke, Sinter and Iron:

With the ramp up of the Pellet Plant, the largest in India, a new operating regime was established for blast furnace. Greater understanding of higher pellet use in the blast furnace burden was leveraged to achieve a pellet use of up to 45%.

At the same time R&D efforts ensured a technological breakthrough with the production of dual flux pellets, resulting in productivity being ramped up from 15 t/m^2/day in 2012-13 to 22.2 t/m^2 /day in 2013-14. Improvement in the pellet quality and pellet strength also led to a reduction in the Coke rate – a critical parameter for both energy efficiency and reduction in emissions.

Coke dry quenching technology to recover waste heat and improve blast furnace efficiency was retrofitted in the coke plant, a 20-year-old facility. Almost 20% of the coke for hot metal production is dry quenched at Tata Steel, an area the Company intends to continue to progressively invest in for operational excellence.

A significant improvement was achieved in the quality of Lime produced for fluxes enabling a reduction in the generation of lime fines at the Lime Plant. At the Sinter Plant an improvement project helped lower the solid fuel rate and higher utilisation of solid waste.

Steel Making & Rolling:

The new LD#3 steel making facility and Thin Slab Caster and Rolling line allowed the Company to introduce new products for the automobile and white goods sectors, reducing their dependence on imports. The Company also enhanced its product portfolio across existing lines.

Resource Conservation

Innovation is a vital element of the Company's plans for creating value for all stakeholders. Tata Steel's Research and Development efforts focus on process and product improvements and efficiency in line with its long-term strategy for raw material sufficiency and sustainability. The objective is economic mineral beneficiation by maximising yield, and reducing the resource and carbon footprint of the Company.

Iron Ore

Raw Material scarcity and the depletion of high-grade ores are a risk that the Company continuously addresses by improving mine yield, use of run of mine and adopting technologies to improve use of iron ore fines in the production process.

Pelletisation of iron ore fines allows Tata Steel to use the fines in its blast furnaces. Tata Steel had judiciously stored iron ore fines with the long-term view that technology advancement would allow use of this dust. During the year technological challenges in pelletizing were overcome and improvements in pellet quality enhanced use of pellets in the Blast Furnace burden as well as increased the productivity of the blast furnace. Reduced fuel usage in agglomerate production lead to energy conservation at the Steel Works. Injection of pellets reduced the need for additional sinter production, resulting in savings in energy.

Coal

The domestic steel producers face the challenge of optimising the use of indigenous coal, high in ash content. It is imperative to judiciously blend indigenous coals with low ash imported coal to improve productivity at the hot metal stage.

Another aspect continuously addressed is reduction in the moisture content in coke to improve throughput of the blast furnaces. During the year an improvement project successfully reduced coke moisture from 4.05% to 2.85% at Battery #10. Improvements brought the Carbon Rate in I Blast Furnace down from 580 in 2012-13 to 568 in 2013-14.

In 2013-14 the process of iron ore slime beneficiation was developed and proven in the pilot scale. Key inventions for resource conservation were energy efficient pig iron ingot design, dual flux for iron ore pellets and Submerged Entry Nozzle Design.

Area	Improvement Project	Progress in 2013-14
Coke	Development of methodology to produce coke with CSR>70, CRI>28, AMS>52mm for stamp charging technology	Two pilot trials done
Iron making	Reduction in slag rate (solid waste) from 280 kg/t to 240 kg/t	Plant trial is on
Lime	Increase lime fine consumption at Sinter Plant	Lime consumption increase by 97 tpd to 530 tpd

Mining

The Raw Material Division launched Project Propel in 2013-14. An IT based Raw Material Information System (Study & Management Approval) Study was implemented and the Company's top management approved IT enabled Integrated Mine Planning and Scheduling from evaluation to modelling of exploratory data, mine-selection, pit design, mining progression and closure to increase the life of mines and yield.

Specific improvements in processes were initiated to assess and manage risks associated with overburden, waste rock, tailings, sludges and other residues.

Iron and Steel Making

Tata Steel's new Blast Furnaces - 'H' and 'I' - are the only furnaces in the country with production capacities in excess of 3 MTPA.

During the year distribution and charging practices were adjusted to achieve higher productivity levels even as new learning was established under the new regime of operations.

The best performance in India on the 3800 m^3 BF was achieved with BF productivity touching levels of 2.8 t/m^3/day with Pulverised Coal Injection (PCI) rates of 165 kg/thm at 15-16 % ash in the coke.

Environment Management

Energy efficiency and abatement of GHG emissions

In the last three years, Tata Steel has commissioned new energy efficient facilities that have successfully reduced the carbon rate at its Steel Works. This is in continuum with the over decade long transition from the use of coal as fuel to waste heat as a source of energy. As a result both the carbon rate and specific energy consumption of the Steel Works have improved, impacting its CO_2 emission intensity favourably.

The Company's dry quenching facility recovers sensible heat from hot coke and feeds it to the boiler to generate steam. The advantages of the technology - improved coke strength and negligible moisture in the coke - lead to improved operational efficiencies and blast furnace productivity.

Tata Steel's CO_2 emission intensity, which dropped to 2.43 tCO_2/tcs in 2013-14 against 2.53 tCO_2/tcs in 2012-13, is expected to continue to trend down maintaining the position of the Jamshedpur Steel Works as the national benchmark in the Indian Iron & Steel sector (fossil fuel based BF-BOF route). This reduction in CO_2 intensity was achieved as a result of an improvement in the fuel rate at its blast furnaces due to higher use of agglomerate, ramp-up and process stabilisation.

Tata Steel is committed to further reducing the plant specific energy consumption to 5.675 Gcal/tcs from its current level of 6.017 Gcal/tcs.

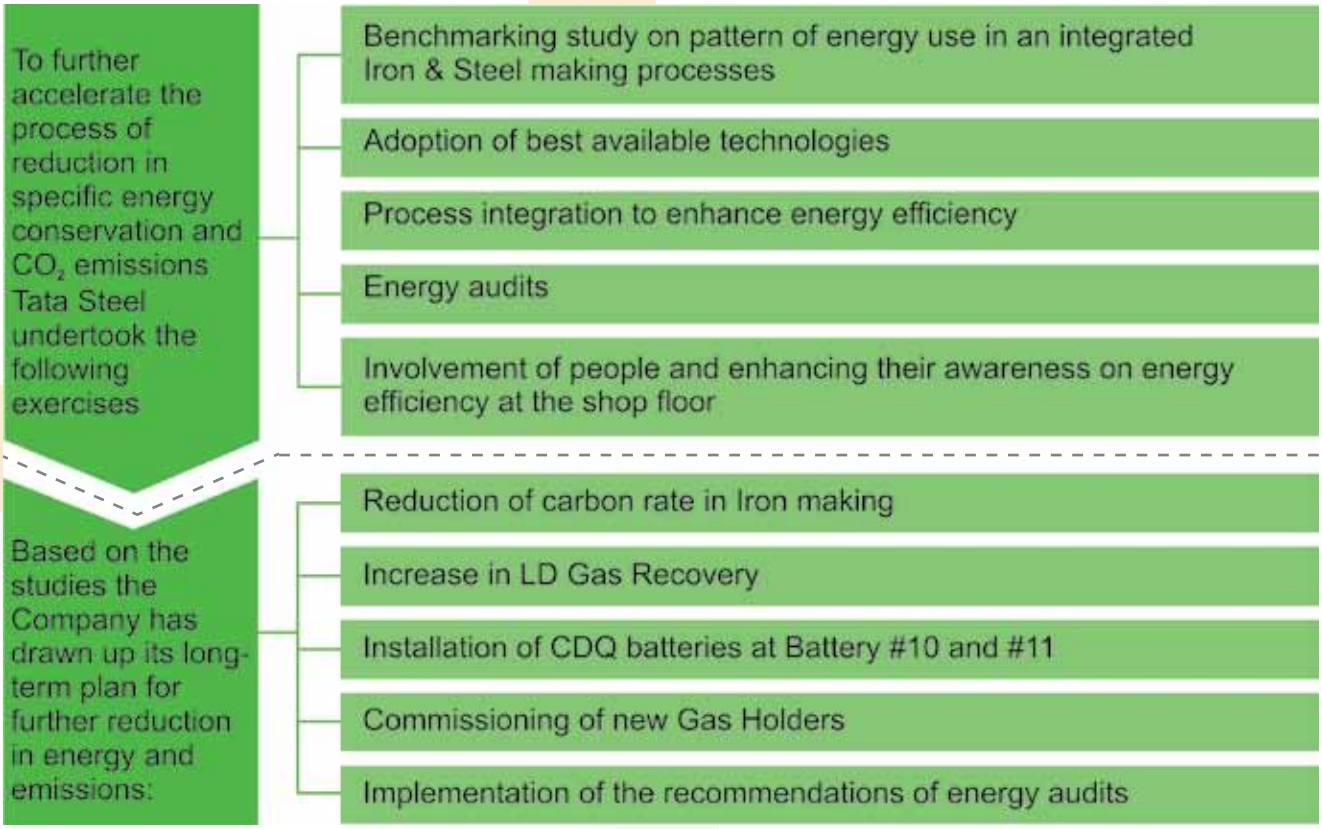
Tata Steel GHG Emission (Good is: ⬇)

Particulars	UoM	Absolute Emission (tCO_2e)		
		2011-12	2012-13	2013-14
Absolute GHG Emission	Million tCO_2e	21.6	24.3	25.8

GHG Emission Intensity Jamshedpur (Good is: ⬇)

Parameter	Specific Generation (tCO_2/tcs)		
	2011-12	2012-13	2013-14
Scope 1	2.27	2.31	2.23
Scope 2	0.11	0.14	0.14
Scope 3	0.11	0.07	0.06
Overall	2.50	2.53	2.43

Steel manufacturing is a CO_2 intensive process and other GHG account for a negligible part of the emissions



	UoM	2011-12	2012-13	2013-14
CFC -11 Equivalent Refrigerant Consumption	Kg	73.92	52.91	68.11

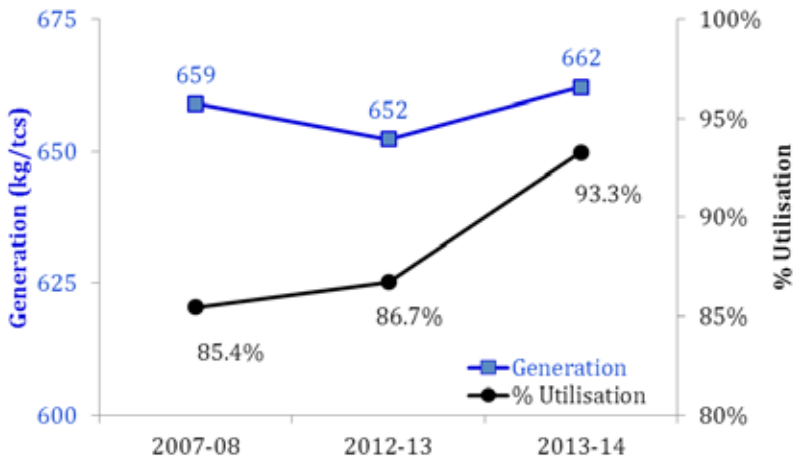
Solid Waste Utilisation

Specific actions taken in 2013-14 in three broad areas enhanced solid waste utilization to 93% against 87% in the previous year. Waste Utilisation exceeded 95% during the second half of the reporting year. The focus areas were: use in Sinter making, Secondary Products, and other solid wastes depending on their end use.

To meet its challenge of 100% Solid Waste Utilisation, the Company launched the Solid Waste unit with a target of 100% LD Slag utilisation through the principle of Recovery & Reuse using technology and cross functional coordination.

The Company also initiated the process of repositioning its Secondary Products business (now known as Industrial By-products Management Division) in 2013-14 to focus on developing markets for LD Slag utilisation. Among the achievements during the year was the signing of a MoU with a cement maker, progress towards accreditation by IRC (Indian Road Congress) for use of LD slag in road construction and trials for rail ballast making with Research Design & Standards Organization as a nodal agency.

While eight projects have been syndicated, others are under evaluation. When implemented these projects are expected to significantly increase solid waste utilization.



Water and Effluent discharge

Tata Steel has set itself the target of zero effluent discharge. About 80% of its total sites have already achieved zero discharge. Work is in progress to make two sites Zero Effluent Discharge – this includes the Jamshedpur Steel Works.

In 2013-14 wastewater recovery and distribution from four new catch pits was operationalized at Jamshedpur Steel Works, taking the effluent recycled from 14% in 2012-13 to 23% in the reporting year. The outcome has been a drop in the makeup water requirement to 5.58 m^3/ tonnes of crude steel.

With recycling infrastructure being augmented in phases over the last three years the average annual effluent discharge dropped by ~50% from 4.6 in 2011-12 to 2.3 m^3/tcs in 2013-14.

Enhancing the Green Cover

After the completion of the expansion project a special afforestation drive was initiated to improve the green cover within the Jamshedpur Steel Works. 13,034 saplings were planted in the Steel Works in 2013-14 and another 26,242 saplings were planted at an ecologically restored dumpsite. The dust suppression and slope stabilization initiative within the Steel Works led to 33,800 m^2 of ground being covered with grass and shrubs. An initiative to convert a wasteland into a landscaped expanse ensured that the water bodies remained untouched.

Tata Steel's long-term strategies to improve environmental performance include:

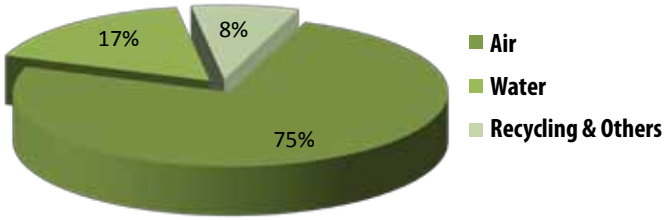
- Progressively complete upgradation of the rest of the existing APCEs
- Maximising commercial use of Slag
- Reduce water consumption by maximizing recycling of effluents

Environment Expenditure

Tata Steel spent Rs 4.6 billion in 2013-14 on environment expenditure. A significant part of this was spent at the Jamshedpur Steel Works.

Capital Expenditure on Environment at the Jamshedpur Steel Works

Scope	UoM	2011-12	2012-13	2013-14
Total	INR Billion	3.9	4.3	4.6



No monetary fines or non-monetary sanctions were imposed on Tata Steel during the year for non-compliance to environmental laws or statutory conditions.

Resource Efficiency

A Raw Material Consumption Tata Steel Indian Operation (Good is ⬇)

Particulars	UoM	2011-12	2012-13	2013-14
Iron Ore	Million Tonne	12.189	14.159	16.008
Coke	Million Tonne	3.815	4.543	4.790
Limestone and Dolomite	Million Tonne	2.446	2.889	3.023
Spelter, Sulphur and other materials	Million Tonne	1.325	1.549	2.530
Coal	Million Tonne	1.115	1.065	1.212
Ferro Manganese	Million Tonne	0.025	0.022	0.026
Zinc and Zinc Alloys	Million Tonne	0.022	0.022	0.022

Consumption of Industrial Gases at Jamshedpur Steel Works (Good is ⬇)

Particulars	UoM	2011-12	2012-13	2013-14
Oxygen	Million Tonne	1.37	1.47	1.73
Nitrogen	Million Tonne	1.05	1.34	1.63
Argon	Million Tonne	0.01	0.01	0.02

Consumption of sand in underground collieries (Good is ⬇)

Particulars	UoM	2011-12	2012-13	2013-14
Sand	Million Tonne	0.75	0.58	0.65

Tata Steel does not use secondary products (Purchased Steel Scrap) in the manufacture of hot metal, however in downstream processes such as its Wire Division regenerated HCL (external party) is used (67.8% in FY14) with fresh HCL in the manufacturing processes. Within its manufacturing process Tata Steel does recover metal components from by-products for reinjection into the blast furnaces.

Reduction in generation of Waste Pickle Liquor (WPL)

A substantial increase in the production capacity of the Wire Division also led to a high consumption of acids (HCl) and chemicals for descaling and pickling of wires. To minimize generation of waste pickle liquor the Wire Division is regenerating 90% of the acid and reusing it. There is a mismatch in the quality of the regenerated product due to its low Fe content and that required by the plant, which requires is to be addressed. The Division is reducing WPL generation besides reusing it in an intermediate process at the GI and Patenting Line to improve its Specific Acid Consumption.

Particulars	UoM	2011-12	2012	2013
Regenerated HCl (Good is: ⬆)	Tonne	2,667	2,530	4,248

World's first dual flux pellets

A significant breakthrough in 2013-14 by Tata Steel was the discovery of 'dual flux' for the pelletisation of iron ore fines, boosting productivity in a dramatic fashion. It has led to a 4% decrease in the generation of fines and a decrease in fuel consumption by 29 kg/tonne of hot metal, effecting savings in natural resources and a reduction of carbon emissions.

Conventional fluxes do not work well with Indian iron-ore fines due to their high alumina content. Tata Steel's team created a new flux combination comprising two distinctly different minerals, one a silicate and the other a carbonate material. The silicate mineral flux (pyroxenite) has for the first time in the world been used as a fluxing agent. The innovation resulted in a 12% increase in the productivity of the pellet plant, from 17.6 tonnes/m2/day to 19.7 tonnes/m2/day.

A novel means to cluster ferro-alloy fines

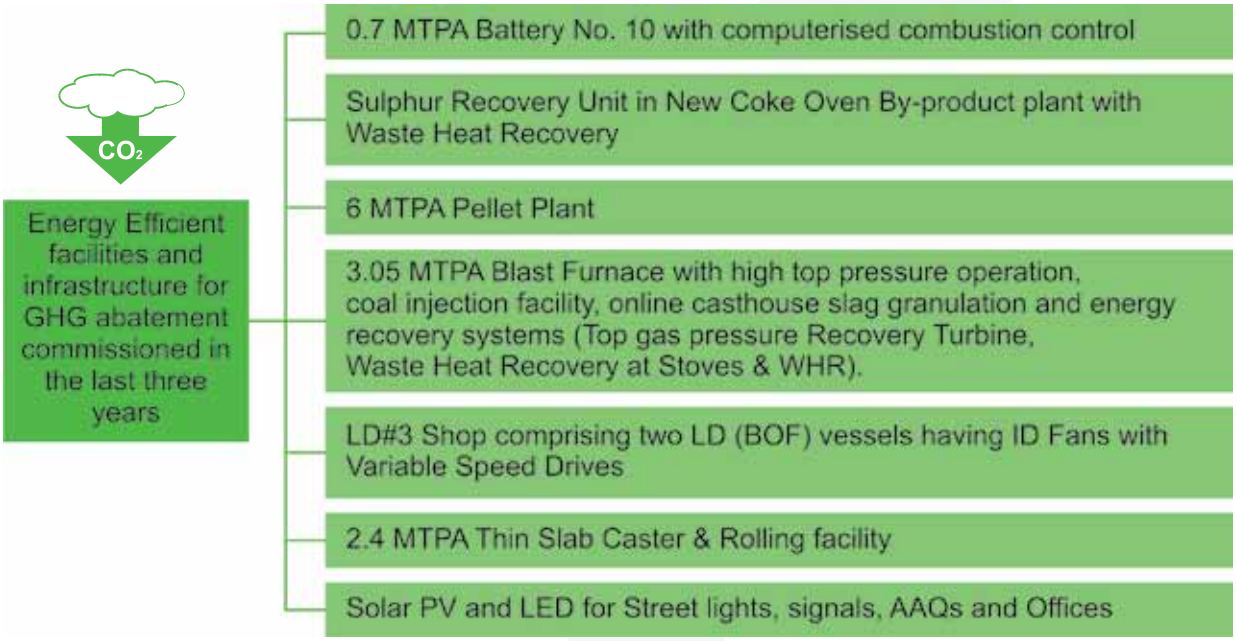
By finding a novel way to cluster ferro-alloy fines, an important raw material in the manufacturing of high-quality steel, Tata Steel has cut down on production costs, minimised in-process losses of raw material, and reduced the environmental load of its product.

Energy Conservation to reduce GHG emissions to mitigate Climate Change

Tata Steel's Policies on Energy and Environment drive its commitment to conserving scarce energy resources, implementing world class operating practices, and adopting best available technologies for energy efficiency and abatement of Carbon dioxide, the principle GHG emission in steel making.

Tata Steel ranks first among Indian materials companies and in global steel companies in carbon disclosures of CDP 2014. The disclosure included a risk & opportunity assessment and its business impact, enhanced coverage of Scope-3 emissions was included and was verified by a third party.

Initiatives to reduce GHG emission include best practices and learning from global leaders, adoption of Best Available Technologies and adoption of new and emerging technologies.



Under its focussed improvement programme Kar Vijay Har Shikhar (Conquer Every Peak) guidelines were issued for assessing the impact of improvement projects on CO_2 emissions. The assessment tool was integrated in other improvement projects.

Direct Energy Consumption by Primary Energy Source

Indian Operations (Good Is: ⬇)

Particulars		Quantity (UoM)			Energy Input (PJ)		
	UoM	2011-12	2012-13	2013-14	2011-12	2012-13	
Coal Coking & Cokeries	Million Tonne	5.39	5.57	6.32	147	152	173
Coal - BF Injection	Million Tonne	0.87	0.95	1.20	21.86	23.86	30.14
Coal - Middling & ROM	Million Tonne	0.10	0.11	0.07	1.69	1.96	1.29
Furnace Oil	KL	15,424	13,064	13,446	0.63	0.53	0.55
LPG	Tonne	7,624	7,645	7,222	0.37	0.38	0.35

Energy Intensity in Steel Making (Jamshedpur Steel Works) (Good Is: ⬇)

Steel Works, Jamshedpur	UoM	2011-12	2012-13	2013-14
Energy Intensity	GJ/tcs	25.49	25.47	25.19

Energy Consumption at Jamshedpur Steel Works (Unit: PJ, Good is: ⬇)

	2011-12	2012-13	2013-14
Gross Energy input			
Coking Coal	93.27	95.79	118.58
Coke (incl. Petroleum Coke)	44.59	61.24	52.05
C.I. in BF & consumption at SP	24.37	23.88	30.26
Middling Coal	1.67	1.94	1.20
Anthracite Coal	0.00	0.49	1.12
Propane	0.23	0.39	0.34
HSD	0.23	0.29	0.26
LDO	0.07	0.08	0.04
Energy Export & Sale			
B.F.Gas	9.08	9.34	10.03
Coal Tar	1.69	0.61	1.46
C.O.Gas	0.77	0.72	0.84
L.D.Gas	0.20	0.22	0.11

Indirect Energy Consumption Indian Operations (Good is ⬇)

Particulars	Quantity (GWh)			Primary Energy Input (PJ)		
	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
Purchased Electricity	2,546	3,348	3,494	25.58	33.64	35.11

Steam Coal consumption at Jamshedpur Steel Works:

Parameter	UoM	2011-12	2012-13	2013-14
Middling Consumption (Good is: ⬇)	Million ton	0.099	0.108	0.065

Projects to improve energy efficiency in 2013–14

CDQ Technology: After the success of the CDQ technology in Batteries 5,6 & 7, which conserves energy, reduces carbon emissions and reduces water consumption, the Company will commission CDQ facilities in Battery 10 and 11 over the next five years. It will help in reducing the carbon rate, improve emissions and process efficiency of the Steel Works.

Reduction in coke moisture at Batteries 5,6 & 7: Higher moisture levels in coke translate into higher consumption of Coke in the Blast furnaces. Coke Dry Quenching, which reduces coke moisture while simultaneously generating steam, for operating other plant, has reduced energy consumption at the Steel Works.

Steam Generation

Parameter	UoM	2011-12	2012-13	2013-14
Steam generation through CDQ at Batteries 5, 6 & 7 at Jamshedpur Steel Works (Good is: ⬆)	tph	17.31	45.86	75.13

Successful implementation of Leaner Chemistry of Rebars: The manufacture of Fe-alloys, which is purchased by Tata Steel, consumes a high level of energy both in terms of power and coke. By reducing the use of Fe-alloys while ensuring the desired chemistry of rebar the Company is ensuring lower energy consumption in its manufacturing at Jamshedpur Steel Works.

Power generation from TRT

Parameter	UoM	2011-12	2012-13	2013-14
Power Generation through TRT at G, H and I Blast Furnaces at Jamshedpur Steel Works (Good is: ⬆)	MW	11.98	14.75	23.45

Reduction in blowing time in LD1: a reduction in the cycle time of blowing at LD1 has reduced energy consumption of the process.

Reduction in blasting energy consumption: the introduction of the "Unitronix blasting system" has increased productivity at the West Bokaro open cast mine requiring less blasting material and reducing energy consumption.

Speed increase in 10 mm section at New Bar Mill: an increase in the speed of rolling of TMT bars - an energy intensive process - has lowered energy consumption at the finishing mill.

Use of Solar Energy: Solar PV with efficient LED lights for street lighting, usage of natural daylight through light tunnels, solar thermal geysers in guest houses and Company hospitals increased solar power generation by 3.8% in 2013-14 over 2012-13.

Use of washery rejects as fuel: the 2X10 MW power plant at the West Bokaro colliery is run on washery rejects.

Energy Conservation at Jamshedpur Steel Works (Good is:⬆)

Major Energy Conservation Measures	Energy Savings (TJ/yr)		
	2011-12	2012-13	2013-14
Increase Agglomerate in burden of Blast Furnace by augmenting capacity of agglomerate production: introducing of carbon friendly pellet making facility	71	1230	2386
Power Generation from TRTs through waste energy recovery	1057	1299	1829
Increase BF productivity by commissioning high efficiency Blast Furnaces with high top operation, high agglomerate in burden, coal injection and automation	-	555	1338
Coke Dry Quenching to reduce moisture and lower coke requirement with steam generation from sensible heat recovery Coke Oven Batteries Nos.5, 6 and 7	395	1043	1708
Installation of Variable Speed Drives (LCI drives) for 2 x 21.5 MW Blowers of I BF, 1 x 21.5 MW standby blower for H & I BFs, 2 x 2.4 MW I.D.Fans of LD3 (BOF vessels)	0.2	849	723

Waste Heat recovery from flue gases of Hot Stoves at "I" Blast Furnace	-	689	634
LP steam usage to keep PRDS on Hot Standby and generating additional electricity at Power House No.5	251	251	251
Regenerative burners for Lean Gas at Hot Strip Mill	415	402	442
Switch over to Torpedo Ladles for Hot Metal transfer	165	188	212
Thin Slab Caster & Rolling to conserve sensible heat of Slab	0	0	139
Solar Photovoltaic energy generation (on-site)	0.8	1.1	1.3
Total Benefits	**832**	**6,507**	**9,663**

Impact of GHG Abatement projects at the Jamshedpur Steel Works (Good is: ⬆)

Strategy & Projects	GHG Abatement ('000 tCO_2/yr)		
	2011-12	2012-13	2013-14
Mitigation of Climate Change through Adoption of Best Available Technologies			
Increase Agglomerate in burden of Blast Furnace by augmenting capacity of agglomerate production: introducing of carbon friendly pellet making facility	0.7	195.8	356.7
Power Generation from TRTs through waste energy recovery	98.9	121.5	171.1
Increase BF productivity by commissioning high efficiency Blast Furnaces with high top operation, high agglomerate in burden, coal injection and automation	0	55.5	133.8
Coke Dry Quenching to reduce moisture and lower coke requirement with steam generation from sensible heat recovery Coke Oven Batteries Nos.5, 6 and 7	29.8	78.7	128.9
Installation of Variable Speed Drives (LCI drives) for 2 x 21.5 MW Blowers of I BF, 1 x 21.5 MW standby blower for H & I BFs, 2 x 2.4 MW I.D.Fans of LD3 (BOF vessels)	0.02	79.5	67.7
Waste Heat recovery from flue gases of Hot Stoves at "I" Blast Furnace	-	73.7	67.9
LP steam usage to keep PRDS on Hot Standby and generating additional electricity at Power House No.5	23.5	23.5	23.5
Regenerative burners for Lean Gas at Hot Strip Mill	21.3	20.7	22.7
Switch over to Torpedo Ladles for Hot Metal transfer	16.5	18.8	21.2
Thin Slab Caster & Rolling to conserve sensible heat of Slab	-	0	13.9
Solar Photovoltaic energy generation (on-site)	0.07	0.10	0.12
Total Benefits	**191**	**668**	**1,008**

Climate Change Mitigation by GHG Abatement through Product Stewardship, Jamshedpur Steel Works (Good is: ⬆)

Strategy & Projects	GHG Abatement ('000 tCO_2/yr)		
	2011-12	2012-13	2013-14
Mitigation of Climate Change through downstream abatement			
1. Cast-house Online Granulation of Blast Furnace Slag for increasing usage in Cement Making			
• New Online Slag Granulation in "I" Blast Furnace	-	170.6	186.0
• Replaced Online Slag Granulation in "F" Blast Furnace	-	0.0	8.3
2. Utilisation of LD Slag in Cement making enabling downstream emission abatement	0.1	0.8	17.5
3. High Strength Steel (HSS) for construction (Fe500, Fe600 grades) and automotive sectors (C-MN 440 grade)	509.8	632.7	604.0
Total Benefits	**509.9**	**804.1**	**815.8**

High Strength Automotive Steel and VAVE solutions:

Thinner High Strength Steel (HSS) are lighter than conventional grades, thus while reducing the overall kerb weight of the vehicle they do not compromise on its strength and stability. Tata Steel's Value Added Value Engineered (VAVE) solutions also enable downstream consumers to use less quantity of steel without compromising the quality of its products or services. The outcome of both is a reduction in the weight of the vehicle, improved fuel efficiency and abatement of GHG emissions.

Initiatives to reduce indirect energy consumption

160 ideas were signed off for 2013-14, of which 16 were implemented, resulting in savings of Rs 42 crores.

The Travel Management System and initiatives such as videoconferencing, carpooling and introduction of a bus service within the Steel Works are aimed at reducing indirect energy consumption and the Company's carbon footprint.

	UoM	2011-12	2012-13	2013-14
Business travel	Tonnes of CO_2e	4806	7851	7252

Coastal shipping emerges as a third mode of transportation

Tata Steel has sought to make best use of India's 7,551 km of coastline and about 14,500 km of navigable inland waterways. Currently only 7% of India's domestic cargo is transported via coastal shipping, or short-sea shipping compared to developed economies - such as, EU which transports 42%, China 43% and US 15% via their waterways. India's freight transport relies heavily on road (57%). Tata Steel transports 63% of its goods by rail and 37% by road.

In 2013-14, for the first time the Company transported 5980 tonnes of HR coils through a custom designed Rail-Sea-Road multimodal logistics flow to its Cold Rolling Complex (CRC)-West at Tarapur. The system also reduces idle freight while adding advantages such as improved productivity, lower yield losses and negligible damage to the goods, apart from the environmental benefit of reducing the Company's carbon footprint.

Air Quality

Tata Steel uses on-line monitoring and mobile monitoring vans for town mapping, online monitoring of major stacks, continuous monitoring of ambient air quality and meteorological conditions. A Continuous Ambient Air Quality Monitoring System (CAAQMS) is being installed at the Jharia Division for online monitoring of the ambient air quality.

Dust Abatement:

Local communities surrounding steel plants are sensitive to particulate matters and hence dust abatement is an important subject for global steelmakers including Tata Steel. The Company monitors emission on a real-time basis and uses mobile monitoring vans for town mapping. Emissions from 41 stacks are continuously monitored and corrective action immediately taken, when required.

The rest of the stacks are monitored manually. As part of its plans the Company will add another 15 stacks to its continuous monitoring system.

ESPs at Sinter Plants are being upgraded in a phased manner and performance indicators introduced to continually assess their health for enabling timely intervention by maintenance teams.

C O Gas Desulphurisation with Waste Heat Recovery

A new facility for Coke Oven Gas Desulphurisation was commissioned during the year with Sulphur recovery at the New Coke Oven By-product Plant. Desulphurisation is also done additionally at the Cold Rolling Mill.

Air Emission (Good is :⬇)

	Unit	2011-12	2012-13	2013-14
Dust (Particulate Matter)	kg/tcs	0.79	1.00	0.88
SOx (Oxides of Sulphur)	kg/tcs	0.74	0.89	0.88
NOx (Oxides of Nitrogen)	kg/tcs	1.10	1.21	1.02
Dust Emission	Tonnes	5,660	8,162	8,091
SOx Emission	Tonnes	5,268	7,203	8,091
NOx Emission	Tonnes	7,841	9,853	9,340

Waste Generation

With the steel making production capacity now at 9.7 MTPA approximately 6 MTPA of solid waste will be generated. The waste primarily comprises two major components BF Slag and Sludge - produced during iron making - and LD Slag and Sludge - generated during steel making. Various operating units also generate other wastes such as Flue Dust, Mill Scale and Sludge, Muck and Refractory Wastes. This huge volume of waste not only requires proper handling or storage but more importantly minimisation and efficient utilisation.

Currently nearly all solid waste materials generated at the Steel Works are utilised or stored for future processing and usage. Sustained utilisation of LD Slag, which constitutes more than 30% of the solid waste, is a major vulnerability.

Waste generation at the Jamshedpur Steel Works (Good is :⬇)

	Material	UoM	2011-12	2012-13	2013-14	Disposal Method
	Non Hazardous Waste	Million Tonnes	4.45	5.25	5.99	Major portion: BF Slag sold to Cement makers; recycled in steel making; filling low land
	Hazardous Waste	Million Tonne	0.10	0.09	0.10	Major portion is sent to registered processors

No spills were reported in 2013-14 or hazardous material (as per Basel Convention) transported

Waste Generation in Mining (Good Is ⬇)

Material	UoM	2011-12	2012-13	2013-14	Disposal Method
Overburden	Million Tonnes	87.08	84.30	85.60	**Disposal method:** Onsite storage and Management of Overburden Dump (toe-wall, garland drain) **Associated Risk:** Water contamination due to run-off, Safety Hazard due to instability of dump slope and biodiversity threats – loss of habitats
Tailings	Million Tonnes	4.04	4.43	3.36	**Disposal method:** Onsite storage, de-watering, agglomeration and reuse; Management of Tailing Pond, Sale to 3rd party; Tailing from Washeries are sold **Associated Risk:** Land degradation, Air Pollution, Water contamination due to accidental discharge / overflow, Safety Hazard
Reject Coal	Million Tonnes	1.32	0.99	1.13	Used in captive power plants and sold outside

Improvement projects to Reduce (generation), Recover, Reuse and Recycle Waste

Higher solid waste utilization at Sinter Plants

A project in 2013-14 aims at utilisation of solid waste materials produced at its operating units by drying and homogenizing them for reuse in the sinter base mix. The two key wastes LD Sludge and GCP sludge will be dried and mixed with other solid wastes to form a homogenized blended mass. A feasibility study for use was completed. ESP flue dust, GCP and DE dust will be converted into micro pellets to be tried as Sinter Charge, besides using muck in sinter making once the study on its usability is complete.

Process optimization has led to an increase in solid waste utilization at the Sinter Plant from 75 Kg/t to 120 Kg/t , comprising various types of solid waste like LD slag, LD sludge, GCP sludge, Flue dust, etc. all containing high values of Iron, Carbon and CaO content.

Processing of LD Slag

Another project focuses on processing LD Slag at the Waste Recovery Plant (crushing and magnetic separation), making it phosphorous free and then reusing it in the steel melting shops as well as in sinter making.

Utilisation & Commercialisation of LD Slag

LF slag is rich in CaO (~50%) and thus can be used to replace direct addition of Lime.

The Company commissioned a facility to condition LD Slag and improve its utilisation, which has already increased from less than 30% in 2011-12 to nearly 100% in 2013-14. Most of this processed waste is likely to be used as construction aggregate.

Improvement projects led to higher waste utilization of LD Slag in sinter making - from 42 Ktpa to 165 Ktpa, replacement of limestone and sand in the cast-house with LD slag, a 20-fold increase of LD Slag usage in the Cement sector (58 Ktpa in 2013-14) and higher utilization of waste at its waste management site. Trials were undertaken to replace sand with slag in underground mine stowing.

Trials are also being conducted using a mix of LD Slag, Fly Ash and Granulated Blast Furnace Slag, with Alkali (NaOH and Silicate) as binder, to develop paver blocks. Discussions are also underway to market this product.

A study of solid waste best practices across the world revealed the possibility of Air granulation of LD Slag. Once granulated the slag can be used for road construction or in the cement industry. This method has added advantage of better metal recovery from slag hence it is being evaluated for implementation.

Tata Steel is engaging with the Jharkhand State Government, Department of Agricultural to promote the iron rich LD Slag as a soil conditioner.

Zero dumping of lime fines

Screening of Lime used in the steel making process results in the generation of Lime Fines. To ensure zero dumping of lime fine, Tata Steel initiated a project in 2013-14 based on a two-pronged approach: (i) action to reduce generation of lime fines and (ii) action to increase lime fines consumption in Sinter Making. As a result, the gap between generation and consumption has been narrowed to only ~50 tonnes per day, which after evaluation of the viability of the various options will be sold.

Granulated Blast Furnace Slag

Over 93% of the blast furnace slag is granulated before being sold to the cement industry as a clinker substitute, eliminating the need to use Limestone to produce clinker. This reduces CO_2 emission in cement production. Tata Steel supplies most of this granulated and dried Blast Furnace Slag to cement makers around its Steel Works at Jamshedpur.

Thermal use of 8th seam carbonaceous shale

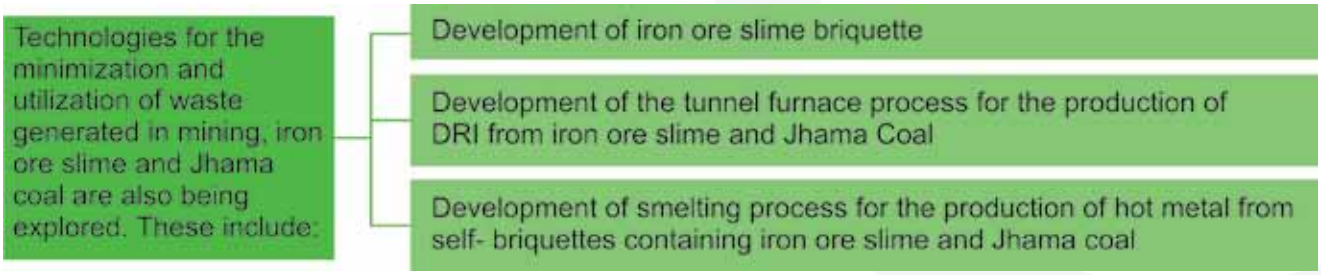
Carbonaceous shale, the overburden of coal seam with some carbon content and Gross Calorific Value value was earlier dumped at the West Bokaro colliery, since this material had no use. Experiments have established that it can be used for power generation and the Company is now developing a market for it.

Use of Jhama coal for Si-Mn production

A natural semi coke coal produce at Jharia Division, Jhama coal is not suitable for coke making, though it was partly used in Blast Furnaces as a replacement for imported material for pulverised coal injection. Jhama coal has been found to be suitable for Si-Mn production in the Ferro Alloys and Mineral Division. This unused material will now be consumed, reducing the cost of Si-Mn production.

Use of side slit for tube making

Sale of the side slit from an HR/CR coil in the external market as seconds or scrap led to loss in revenue due to wastage. The Division is now also using the sides slit to manufacture Tubes.



Use of Biogas: kitchen leftovers and waste is being used at Tata Steel's guest houses, canteens and will soon be extended to other facilities. This reduces the use of LPG gas as well as reduces generation of Methane, a greenhouse gas. The solid residue is used as manure.

Packaging of Products

Minimal packing, such as metal and plastic strapping along with HDPE fabric, is required for the transportation of steel. For high-end customers the Company has created a dedicated fleet of special covered vehicles. The Company is progressing replacing the use of wooden pallets with steel pallets.

Water Sustainability

Water sustainability is a corporate strategy for Tata Steel. The Company, which has achieved zero discharge in 80% of its sites, intends to make the Steel Works a zero effluent discharge site by recovering and recycling effluent from wastewater drains. Hence it is (i) augmenting the pumping and delivery systems, (ii) working internally to identify low end uses where such recovered effluents can be directly used without impacting the product quality and (iii) is setting up treatment facilities.

A new BOT plant was commissioned in 2013-14 and the Common Effluent Treatment Plant with RO is to be commissioned by the end of next reporting year. The Company is also exploring the feasibility of treating and reusing sewage and adopting dry systems to replace wet systems.

Improvement projects during the year included:

- Commissioning of the closed loop water systems in all new units;
- Conversion of open circuit systems to closed loop circuits;
- Augmentation of infrastructure to increased recovery & reuse of wastewater;
- Augmentation of rainwater harvesting infrastructure to make maximum use of rain and reduce run-offs;
- Chemical treatment to increase the Cycle of Concentration in cooling towers

Commissioning of water recovery and recycling units under the 2.9 MTPA project resulted in a drop in Specific Water Consumption at the Steel Works.

All locations, except the Indore unit of the Wire Division, receive water from surface water sources none of which have been affected due to its operations.

Water Withdrawal (Good is: ⬇)

	UoM	2011-12	2012-13	2013-14
Tata Steel	Million m3	66.8	72.4	77.0

	UoM	2011-12	2012-13	2013-14
Steel Works Jamshedpur	m3/tcs	5.83	5.92	5.58

Location	Water Source
Steel Works Jamshedpur	Rivers – Subarnarekha
FAMD SCM*	River – Brahmani
RMD Jharia*	Rivers – Damodar & Khatri
RMD OMQ	River – Baitarani
RMD WB	River – Bokaro
FAMD MGM	River – Baitarani
FAMD FAP Bamnipal	River – Brahmani
SM HMC	River – Hooghly
Wires Division	Ground Water for Indore unit
SM CRMB	Rivers – Subarnarekha
Tubes	Rivers – Subarnarekha
FAMD FAP Joda	River – Brahmani
SM CRCW	River – Surya

12% decrease in Specific Water Consumption at Hooghly MetCoke

Hooghly MetCoke is a zero discharge unit, based on the statutory requirement. HMC however reduced its Specific Water Consumption by 12% in 2013-14, from 0.57 m3/t in 2012-13 to 0.50 m3/t in 2013-14 through a reduction in its fresh water uptake.

The Division enhanced the capacity of an existing earthen storm water pond, created an embankment to prevent contamination of its water and connected rainwater harvesting systems in various buildings as well as Tata Power's Cooling Tower blow down water to the pond.

Waste water recovery and rainwater harvesting at the Steel Works

Wastewater recovery and distribution from four catch pits commenced in 2013-14, enhancing the specific effluent recycled by 43% over 2012-13 and reducing discharge by 35%.

A new Phyto-Desalination Laboratory was added to its Research & Development department in 2013-14 to treat wastewater generated from different units through Microbial Desalination and use the recovered water in field applications.

Total Water Recycled (Tata Steel)

Location	UoM	Good is	2011-12	2012-13	2013-14
Water Recycled	Million m3	⬆	18.22	15.02	16.70
Total Recycled as % of Makeup Water requirement	**%**	⬆	**21.4%**	**17.2%**	**17.8%**

Zero Discharge at the raw material locations

Slime is stored in zero-discharge slime ponds and then water recycled to ensure zero discharge of effluents. Rainwater harvesting structures reduce runoff water. Fixed water sprinklers were commissioned at Joda West Manganese Mines in 2013-14 and a multi-stage check dam built during the year.

In the collieries rainwater is harvested and stored in abandoned pits for industrial and domestic purposes. A pump and new tank were added in 2013-14 at the recirculation pond in the 10 MW powerhouse at Jharia. The capacity of the tank and pumps are such that water is re-circulated at a faster rate, allowing no overflow from the ponds to the nearby nallahs.

Rainwater is harvested at Sukinda in a pond near the slag dump along with water from its garland drain rather than allow it to flow into the river. The water is treated and tested to ensure it is free of Hexavalent Chromium before reuse.

Water discharged (quantity and destination)

Particulars	UoM	2011-12	2012-13	2013-14	Destination
Jamshedpur Steel Works, Jharkhand	Million m3	32.5	29.0	21.1	Subarnarekha & Kharkai rivers
FAMD - Sukinda Cr Ore Mines & Beneficiation, Orissa	Million m3	5.0	4.45	4.53	Damsala Nallah
Tubes Division, Jamshedpur Works, Jharkhand	Million m3	0.1	0.2	0.2	Subarnarekha river
Water discharge quality: The quality of the effluent conformed to prescribed limits					

Mechanical Dewatering Tailing Plant: Tailings generated from the existing thickener at the Sukinda Chromite Mine are sent to a filter press unit to separate the solid from the liquid. The separated water is recycled back to the process. Mechanical dewatering has eliminated the need to dispose the tailings (underflow of thickener) into a tailing pond, conserving water and land, preventing environmental pollution besides eliminating transportation to dispose off tailings.

In-situ dewatering of tailings at the Jharia Division, commissioned in 2013-14 by installing a Vibrating Screen, will improve the tailing collection by 40% within the plant and reduce the load on the tailing ponds.

Responsible Mining

A significant number of Tata Steel's mines have been operated by it in areas owned or leased by it for periods ranging from over 60 years to about 100 years. None of these are managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.

There are no National Park, Sanctuaries, elephant corridors and tiger reserves within 10 Km radius of core zones of the mines. Environmental compliance reports are available at www.tatasteelindia.com. The Company plans to support execution of a comprehensive Wildlife Management plan of the State Government.

The Company has conducted a robust review of the current approach to biodiversity management at Tata Steel in partnership with International Union for Conservation of Nature (IUCN). The project aims at baselining the Bio-Diversity at Tata Steel's areas of operations, through ground truthing studies, secondary research, including stakeholder interactions and understanding the eco-system services provided by the bio-diversity. The risks to bio-diversity and eco-system services from the Company's operations and community behaviour will be identified and a biodiversity conservation and management plan will be developed, which will also include capability building of local stakeholders including developing mechanisms for collaboration. One of the outcomes of this project would be a stand-alone Biodiversity Policy at Tata Steel.

Plantation is the chosen route for the reclamation and rehabilitation of mined land. Sir Dorabji Tata Botanical Park at Noamundi spread over an area about 45 acres and established in a mined out land, is a model for mined out land reclamation. In addition an area of 511 hectares known as Hill 1 and Hill 2 has been reclaimed at Noamundi. Likewise at the Jharia collieries the vast and verdant Sir Dorabji Tata Park, also a mined out area has been reclaimed while entire hills have also been reclaimed at the West Bokaro collieries.

Land Owned / Leased, Rehabilitation and Biodiversity Value

Location	Land owned/ leased (ha)	Forest Area (ha)
Jharia Colliery, Jharkhand	2,218	-
West Bokaro Colliery, Jharkhand	1,740	907
Sukinda, Chromite Mine, Odisha	406	74
Joda East Iron Ore Mine, Odisha	671	609
Noamundi IOM, Jharkhand	1160	762
Katamati IOM, Odisha	403	199
Khondbond IOM, Odisha	978	837
Joda (W), MGM, Odisha	1438	1167
Bamebari, MGM, Odisha	464	382
Manmora, MGM, Odisha	16	9
Malda, MGM, Odisha	822	579
Tiringpahar, MGM, Odisha	169	69
Gomardih Dolomite Quarry, Odisha	373	-
IOM: Iron Ore Mine		
MGM: Manganese Group of Mines		

Total land disturbed (hectores)

Location	Total land disturbed till 2013-14
Jharia Colliery, Jharkhand	Not Applicable
West Bokaro Colliery, Jharkhand	615
Sukinda, Chromite Mine, Odisha	206
Joda East Iron Ore Mine, Odisha	611
Noamundi IOM, Jharkhand	729
Katamati IOM, Odisha	137
Khondbond IOM, Odisha	212
Joda (W), MGM, Odisha	355
Bamebari, MGM, Odisha	189
Manmora, MGM, Odisha	13
Malda, MGM, Odisha	141
Tiringpahar, MGM, Odisha	52
Gomardih Dolomite Quarry, Odisha	63
IOM: Iron Ore Mine; MGM: Manganese Group of Mines	

Green Cover enhancement across all locations (Good is: ⬆)

Location	UoM	2011-12	2012-13	2013-14
West Bokaro	nos ('000)	85	96	85
OMQ	nos ('000)	22.5	37	29
Jharia	nos ('000)	50	30	15
Mn Mines	nos ('000)	97.6	123.3	101.5
Sukinda	nos ('000)	116.7	51.2	64.7
Sub-Total (1): Mining Sites	***nos ('000)***	***371.8***	***337.4***	***295.8***
FAP Joda	nos ('000)	1.5	1.8	*2.5*
HMC	nos ('000)	23	25	*3.8*
Steel Works, Jamshedpur	nos ('000)	15.6	45.9	*39.3*
Sub-Total (2): Mfg. Sites	***nos ('000)***	***40.1***	***72.7***	***45.5***

Jamshedpur Site	Plantation (Nos)			Green Cover developed (in Ha)		
	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
Steel Works (a)	8,096	10,552	13,034	5.1	4.0	8.1
Reclamation Site (JMD) (b)	7,534	35,377	26,242	4.7	12.4	-
Sub –Total (a) +(b)	15,630	45,929	39,276	9.8	16.4	8.1

Protecting the Eco system

Mining operation is restricted above the ground water table at all mines. There has been no intersection of ground water table. No natural watercourse or water resources are obstructed due to its mining operations. The water recovery and spillway system has been designed such that the natural water resources are not affected and no spill water from the mine goes beyond the lease boundary. Experts monitor ground water quality on a quarterly basis.

Ambient air quality is monitored regularly and the results are well within the limit prescribed. Periodically, the R&D department analyses the mineralogical composition of air samples in the mines. Measures to manage impacts on biodiversity include dust suppression, reclaimed out mine areas, landfilling and fly ash utilization.

Expanding underground conveyors at collieries improve air quality

Tata Steel's Jharia Division, which provides coal to the Steel Works, has five underground collieries. From four of them 100% of the raw coal produced in the mine is sent directly to two coal washeries via an extensive underground belt conveyor network system. In 2013-14, an underground tippling facility, a new belt conveyor and chutes were installed as well as the old belt network established at Sijua from where coal was transported by trucks. After it was commissioned 500 TPD of Raw Coal, or half the daily production of the colliery, is being transported underground to the washery, eliminating nearly 50% of the dust pollution load.

Dry fog system for dust suppression

Tata Steel's iron ore mines use fixed water sprinklers and a dry fog system, with dust suppressants, to minimise fugitive emission. Dry-fog and water sprinkling systems were installed at both coal washeries to arrest the dust released during their operation and to improve the ambient air quality.

Fly ash utilisation

In 2013-14, about 50,000 tonnes of fly ash was utilised from the Fly ash dump hill for stowing underground collieries. This will reduce high dust in summers, protecting communities residing in the vicinity.

Reclaiming Mined out areas

Environment Plantation on a massive scale continued to cover Tata Steel's lease area, with mined out areas being reclaimed and converted into forests, parks & gardens. Overburden and minerals rejects are dumped as per the mining plan and at earmarked dumping areas only. The slopes of the OB dumps are terraced. The inactive dump slopes are vegetated with native species. Tata Steel is taking all precautionary measures towards conservation and protection of endangered flora and fauna.

Vetiver plantation at Joda (East) Iron Ore Mine has stabilized the overburden dump slopes. The species 'Chrysopogon Zizanioides' commonly known as 'Vetiver' is also being horizontally deployed for stabilisation and reclamation of the overburden dump at Katamati and Noamundi. In addition an old Quarry at the Bamebari Manganese Mines is being reclaimed through backfilling.

Mined out areas in the collieries are reclaimed using coir matting on dump slopes to enhance stability before plantation for green coverage.

Engineered landfilling

The Sukinda Chromite Mines developed an engineered landfill system, where the sludge storage pond is lined with an impervious lining to prevent leakage of hazardous sludge into the ground and avoid contamination of the ground water. To prevent the discharge of extra overflow water from sludge pond during monsoon, two settling tanks were constructed and both were connected to the sludge pond by a brick wall drain.

Experimenting with Miyawaki Plantation

Recreating a forest by planting close together different types of trees, based on the potential natural vegetation (PNV) concept, is called the Miyawaki Method. It was used by Professor Akira Miyawaki in the 1980s in Japan to regenerate Japanese forests.

The method was not only capable of meeting the challenges of restoring indigenous ecosystems, and maintaining global environments, including disaster prevention and Carbon dioxide (CO_2) mitigation, but also speeds up the reforestation process as a dense mix of intermediate and late successional tree species are planted, based on a survey of the physical properties and vegetation in the area to be reforested.

In 2013-14 experimental application was initiated at Tata Steel's Joda (East) Iron Ore mine over 5,000 m2 of area under the guidance of an expert.

Transplantation at the Manganese Group of Mines

5,000 trees of the natural forest species, with girths of less than 30 cm, were prevented from being felled by the Joda West Manganese Mines. They were transplanted to a dumpsite. A survival rate of 52% was achieved.

7 LABOUR PRACTICES

TATA STEEL HAS BEEN PROGRESSIVELY RIGHT-SKILLING ITS EXISTING EMPLOYEES.

TATA STEEL'S SAFETY EXCELLENCE JOURNEY HAS LED TO A REDUCTION OF 88 % IN LOST TIME INJURY FREQUENCY RATES IN THE LAST NINE YEARS.

THE COMPANY'S STRUCTURED SAFETY TRAINING PROGRAMMES AND HEALTH CHECKS COVER 100 % OF THE CONTRACTORS' WORKFORCE.

THE HUMAN RESOURCE DIVISION IS CURRENTLY DEVELOPING FOCUSED THRUST AREA PROGRAMMES, CREATING DEEPER LINKAGES BETWEEN TRAINING AND SHOPFLOOR CHALLENGES.

Dignity of labour defines Tata Steel overall commitment to its employees, contractors' employees and the community. Hence the key principles it follows are transparency, fairness and equity in all its dealing with its employees.

An equal opportunity employer, Tata Steel's strives to be an employer of choice by attracting the best talent and ensuring a cosmopolitan workforce.

Objective	Corporate Strategy
Improve Proficiency & engagement of employees in existing operations and Greenfield Projects	• Contract Workforce Management - Facilitate creation of a conducive work environment • Enhance Employee Happiness & Engagement • Build talent pipeline for critical roles/ functions across levels to meet talent demand for growth projects/ current operations • Deploy structure, policies & manpower for Odisha projects

The Company's safety and occupational health responsibilities are driven by its commitment to ensure zero harm to the people it works with and to society. The Company has therefore given itself a target of establishing zero fatalities in the next three years.

In anticipation of it evolving into a multi-locational steel maker, in 2012 Tata Steel restructured its Human Resource Management function to proactively align the function with the business needs of the organisation and changes in the external environment. It has been structured to work as a partner with the business and effectively contribute towards the Company's goals through the use of greater analytics in the area. As part of the integration of the function it is also evolving towards a single window system for any issues relating to officers or non-officers.

The key focus areas of the Human Resources Division are: Employee Productivity, Employee Cost, Contract Workforce Management, Talent Management, Capability Building and Support to Growth Projects. Safety is a condition of employment at Tata Steel. It governed at Tata Steel by its Corporate Safety department. The mandate for this function is to "set objective targets, develop, implement and maintain management standards and systems, and go beyond compliance of the relevant industry standards, legal and other requirements". It strengthens safety practices in all Tata Steel's locations as well as those of its group companies.

Occupational Health & Safety

Tata Steel has two principle programmes to address Safety and Occupational Health, its Safety Excellence Journey launched in 2006 through an engagement with DuPont and the Wellness@Workplace programme, which monitors employee health through a health index. The latter is a risk control programme to educate, train and counsel members of the workforce, their families, and contractors' workers on prevention of serious diseases. The purpose is to strengthen health and lifestyle management.

Tata Steel's Safety Excellence Journey has led to a reduction of 88 % in Lost Time Injury Frequency Rates at Tata Steel in the last nine years. However, continued fatalities are a cause for concern. The highest number of fatalities was due to falling objects and road accidents, vehicles or moving equipment – both onsite and off site. The Company is working at building an interdependent culture to foster Safety as a value rather than a matrix. The top management has set the goal of achieving zero fatality in the next three years and is focussing vigorously in this area.

The Company's corporate strategies, aimed at improving its Safety performance, are:

- Improve Behaviour Safety
- Demonstrating Felt Leadership
- Improve organization infrastructure for managing safety
- Improve Process Safety and Disaster Management

The key focus areas to achieve these objectives are:

- Role modeling by leaders to improve Safety culture & performance
- Enhance accountability and commitment
- Develop infrastructure to improve rail and road safety
- Reduce density of Heavy Vehicles and Mobile Equipment
- Reduction of cycles
- Improve competency and cognitive skills
- Codify safe material storage and handling
- Reduce process incidents by implementing elements of process safety
- Adopt a risk based approach
- Institutionalise disaster management preparedness
- Move from compliance to commitment

In 2013-14 a wide range of initiatives were undertaken in these focus areas along with decadal analyses of Tata Steel's Safety performance, Hazard Category Wise Fatality Analysis, Supply Chain Wise Fatality Analysis. In addition, analysis of Loss Time Injury, Job Check Cycle, Near Miss and Low Fatality Risk Control for 2013-14 was conducted. These studies provided the basis for understanding gaps and identifying learning and improvement opportunities.

Employee Productivity

The principle challenge before Tata Steel is to raise its Employee Productivity to global benchmark levels in order to achieve its Vision of being a global steel maker.

The Human Resources Division has instituted programmes tailored to Tata Steel's current and future needs.

For its operation at Jamshedpur it is focussing on work practices improvements while the KPO organisation has been designed to achieve benchmark levels as operations commence.

To improve employee productivity at its existing operations in Jamshedpur Tata Steel has drawn up a roadmap, which includes benchmarking productivity and doing more with less numbers, identify work practice improvements, rationalise and reorganise the organisational structure, mechanization / automation, where necessary and strategic outsourcing or entering into joint ventures.

Contract Workforce Management

Among the largest industrial establishments in the region, Tata Steel has a high number of contractors' workmen deployed at its Steel Works. The primary concern of the Company is to drive Safety Behaviour among contract workmen, suitable amenities at their workplace and availability of opportunities to build the capacity of contract workmen engaged in its operations.

The Company's structured Safety training programmes and health checks cover 100 % of the contractors' workforce. It also ensures complete coverage under Provident Fund and Employee State Insurance of all contractors' employees. Tata Steel's Suraksha Scheme, introduced in 2012, provides further insurance cover for the worker and his/her family in the event of a mishap or fatality. A sustained focus on timely payment of employee compensation through bank transfers has ensured that 100% of contractors' employees who have served for a month or more receive their compensation via bank transfers. Contractors are required to ensure that new employees are eligible for bank transfers within a one-month window provided by Tata Steel.

Tata Steel's key areas of concern are safety, capability enhancement of the contract workforce and improving their working conditions by progressively creating amenities at par with that of its permanent workers. It is working on developing better communication platforms for safety communication.

Talent Management

Attracting talent in the metals and mining sector in India is getting increasingly difficult. Therefore attraction and retention of talent, employee happiness and engagement, building of talent internally through the development of leaders who will fill middle and top-level management positions in the future as well as meeting individual aspirations are the challenges Tata Steel is addressing today.

The first step is to attract the right talent at the entry level and hence among the foremost initiatives taken by the Company is to strengthen campus relationships and increase intake of talent through its preferred providers. To compensate for needs at the middle and senior levels, in light of its growth and expansion objectives, the Company hires laterally, with its HR practices focussing on seamless on-boarding of lateral hires.

To retain its talent the Company drives initiatives based on enabling continuous learning and education, developing talent across the pipeline, technical competency development and enhancing employee engagement and happiness based on concern areas identified via periodic surveys.

The Company increased the length of the maternity leave from 12 to 18 weeks as part of a proactive measure based on feedback from female employees.

In tandem with the ramping up of its operations and the need for talent to man various functions, Tata Steel is enhancing its attractiveness, value proposition and presence in technical and business school campuses, strengthening its mentoring system for fresh and lateral hires, focused career planning and job rotation for young and technical talent, leadership development across levels, besides focused efforts to improve gender diversity and representation of differently abled persons in the workforce.

Capability Development

With its facilities becoming more technologically intensive, Tata Steel had reskilled and redeployed experienced personnel in the new units. The principle challenge therefore is to continue to improve performance of existing units despite redeployment of experienced people in the new units. A large number of the existing employees are unskilled, high on age and low on education. Further the low attractiveness of the manufacturing sector among technical talent and the rapid growth in steel and mining has caused a shortage of technical talent in the market, exacerbated by comparatively lower availability of ready skills in the geographic region.

Right Skilling: To offset its recruit needs and in line with its no retrenchment policy, Tata Steel has been progressively right-skilling its existing employees. The HR Division has also developed customised training programmes for external recruits to ensure focus on on-the-job training and their cultural integration with the organisation.

Proficiency Enhancement: To improve the proficiency of its employees in areas where it impacts the departmental KPI Tata Steel has adopted the 4Q Model with KPI measures. The Enterprise Capability Building System is a scientific method for assessing development need as well as evaluating training effectiveness. ECBS ensures Systematic, Transparent and measurable gap analysis. During FY12-14, ECBS has been implemented in two divisions of the Steel Business Unit. 4135 employees were assessed and 1580 were trained to bridge the gaps identified.

Gender wise break up of training: Of the total employees trained in 2014-15, female employees comprised 4.8 %, amounting to 792 female employees out of a total of 16532 employees trained in 2014-15.

Enhancing technical capabilities: To tap into the technical capabilities of its young talent and to build a culture of innovation Tata Steel has created TechEx, a platform where creative ideas with working models having a potential of wide application in various manufacturing industries and community are exhibited by young trainees, employees of Tata Steel and its associate companies. It also drives capability building of distributors and external processing agents.

The Human Resource Division is currently developing focused Thrust Area programmes, creating deeper linkages between training and shopfloor challenges using the Abnormality Framework, institutionalising Tata Steel's Technical Competency Framework to achieve robust technical development and continuously advancing opportunities to contractors' employees and partners to develop capabilities.

Support to Growth Projects

The task of effectively managing the large inflow of workforce both at its brownfield operations in Jamshedpur and at the greenfield site in Kalinganagar (KPO) is extremely challenging. Apart from making available the requisite and competent manpower as per the commissioning schedule, the HR Division must expeditiously develop social infrastructure at Kalinganagar and ensure engagement of employees who arrive at the site.

The immediate challenge is to meet the ODR at KPO, manage the large inflow of various categories of employees and provide comfortable working conditions to them, prepare them for the commencement of operations through training not merely technical but also induction and behavioural training. At the same time to effectively tap the available local talent, the Company is focussing on changing the agrarian mindset of the potential workforce in to an industrial mindset.

To create a well-defined way forward Tata Steel has developed the operating models and organizational design of the O&M departments, finalized its compensation and benefits policy, revised the policy for cash in lieu of employment introduced for Displaced Persons (DPs) Manning, recruited 194 DPs so far with more due to be appointed as well as fulfilled 55 % of the manning need of officers in FY14. It has initiated recruitment of 322 diploma holders and has finalised the commissioning of manning support from Jamshedpur.

Aware that the key to the successfully commissioning is retaining this talent, the Company has initiated programmes for hassle free onboarding, has an HR service desk to handle grievances, customized the induction programme for KPO joinees, introduced programmes to upgrade skills of diploma holders and make them job ready by providing bridge training for gainful employment.





Equal Opportunity Employer

Tata Steel is an equal opportunity, merit-oriented, gender-neutral employer. Remuneration and career progression is based entirely on responsibility and performance.

Labour: Key Performance Indicators

Key Performance Indicators	2011-12	2012-13	2013-14
Total number of employees	35793	35905	36199
Number of Officers	4974	5358	5870
Number of Non Officers	30819	30547	30329
Number of contractual employees		213	223
Contractors Employees	Jamshedpur: 9010	Jamshedpur: 11029	Jamshedpur: 11126
	RMD: 11230	RMD: 10343	RMD: 8902
Contractors employees engaged in projects	Jamshedpur: 40273	Jamshedpur: 16441	Jamshedpur: 16596
	Odisha: 14000	Odisha: 40402	Odisha: 47687
Percentage of non officers covered by collective bargaining agreements*	100%	100%	100%
Total number of male employees	34048	33887	34098
Total number of women employees	1745	2018	2101
Total number of employees with disabilities	56	70	110
Total number of SC / ST Employees	5622	5864	5879
Total number of women employees in top management	2	4	5
Attrition rate	3.52%	3.01%	3.24%
Number of employees who took parental leave	26	35	35
Number of employees still employed to work after parental leave	25	34	35
Number of employees who continued to work 12 months after parental leave	25	34	35
Return to Work Rate	96	97	100
Retention Rate**	96	97	100

* Tata Steel has 26 unions across all locations

** Tracked by the leave code

Value of employee benefits	UoM	2011-12	2012-13	2013-14
Statutory	Rs Crores	438.2	482.5	525.4
Non Statutory	Rs Crores	381.8	430	460.3
Total	**Rs Crores**	**820**	**912.5**	**985.7**

Diversity Data	2011-12		2012-13		2013-14	
	Nos.	%	Nos.	%	Nos.	%
Male Employees	34048	95.12	33887	94.38	34098	94.20
Female Employees	1721	4.80	2018	5.60	2101	5.80
SC / ST Employees	5622	15.70	5864	16.30	5879	16.20
Disabled Employees	56	0.20	70	0.20	110	0.30
Total Employees	**35793**		**35905**		**36199**	

New Employees Hired in 2013 - 14		Age Group (in years)			
		Less than 30	30 - 50	Above 50	Total
Officers	Male	473	239	13	725
	Female	72	21	0	93
	Sub-Total	545	260	13	818
Non – Officers	Male	750	369	7	1126
	Female	109	24	0	133
	Sub-Total	859	393	7	1259
Grand Total	Male	1223	608	20	1851
	Female	181	45	0	226
	Total	1404	653	20	2077

Attrition Rate 2013 – 14		Age Group (in years)			
		21 to 30 years	31 – 40 years	41 to 60 years	Total
Officers	Numbers	126	44	20	190
	Rate	66.32%	23.16%	10.53%	-
By Gender	Male Nos.	-	-	-	148
	Rate	-	-	-	78%
	Female	-	-	-	42
	Rate	-	-	-	22%
Grand Total	Rate	-	-	-	3.24%

Key Training Indicators	2011-12	2012-13	2013-14
Total No of persons trained (Nos.)	14378	19090	21176
Percentage of employees trained (%)	41	53.17	58.5
Duration of Training (Hours)	1123600	1090656	1110350
Total No of Employees	35793	35905	36199
Training (Hours per employee per year)	31.39	30.38	30.67
Total number of Officers trained	3819	5800	6545
Total number of Non Officer trained	6170	8235	14631
Training (Hours per officer per year)	48.94	50.81	47.35
Training (Hours per non officer per year)**	28.56	26.79	27.45
Total Number of women employees trained	N/A	N/A	792
Total Number of Contract Workforce Trained*	-	37	2950
Percentage of employees receiving regular performance and career development reviews	85	91	99

***New Initiative in 2013-14**

**** Tracked by IRIS**

OCCUPATIONAL HEALTH & SAFETY

The Tata Steel Board, through the Safety, Health and Environment Committee maintains keen oversight over its performance. Accountability is maintained through its integrated Health and Safety Management System, with mechanisms for improvements and regular reviews by the top management.

The Managing Director heads the Safety Governance structure. It comprises six Apex Safety Sub committees with specific roles to address all issues related to Safety & Health.

A Vice President chairs each sub committees. A tracker has also been designed to evaluate the effectiveness of every safety review meeting chaired by the top management.

Safety awareness, which also covers 100% of the contract workforce, has resulted in Zero LTI in several units.

Every unit of the Company prepares an Annual Safety, Health and Environmental Plan plan, which is integrated with the Annual Business plan. The SHE (Safety, Health & Environment) Committee, consisting of union and management representatives, maintains oversight over all the aspects of safety. The major initiatives taken during the year were in the areas of workplace safety, contractor safety, road safety, rail safety, process safety, training and communication and health.

Safety Initiatives in 2013-14

Work Place Safety	• 150 improvement projects (Kaizens) implemented to reduce man machine interface
Contractor Safety	• More than 14000 contract employees covered under free annual health checkups • Safety Excellence Center conducted specialized training programmes with NTTF to impart job -specific training to contract employees
Road Safety	• Around 2500 Heavy vehicles not confirming to safety standards banned from plying inside the Steel Works. • Five projects executed to develop parking places, Peripheral roads, Pedestrian pathways etc., • CCTV cameras installed at vulnerable road junctions to monitor vehicular movement • 40 Hydra cranes replaced with F15 cranes owing to their poor safety design. • Speed monitoring initiated through night vision camera
Rail Safety	• GPS system and CCTV camera fitted on 59 loco engines. All heavy vehicles are covered. • Eight automatic point changers replaced the manual operation of loco track change
Process Safety	• Cross company audits initiated in Process Safety by experts from Tata Steel Europe. • Pre startup safety review made mandatory to start new / modified facilities. • Implementation of PSSR extended in 36 MSDs
Training & Communication	• Continuous on job refresher courses through class room training, tool box meetings, SOP, visual SOP, displays, banners, six directional risk assessments, audits, hazard hunts, etc. • Rigorous training on Life Saving Emergency Mitigation conducted for contractor employees • Serious incidents recreated and incident based videos shown during trainings and other mass gatherings • An NGO driven safety awareness project – Parivartan - was implemented at KPO to inculcate a community based safety culture

Behaviour Safety Management

Employees are objectively engaged in the promotion of a safety culture through Behaviour Safety Management. It is mandatory for every employee to participate through observations that identify unsafe acts and unsafe conditions, conduct contractor audits, conduct Job cycle Checks for SOP violations, fatal hazard hunts etc. They are also encouraged to actively participate in various safety and health promotional events and celebrations, such as National Safety Week, National Fire Safety Week, etc, held round the year.

Prevention of all injuries

Slip-Trip-Fall, Material Handling and dashing and collision were major causes for Loss Time Injury in 2013-14. Most incidents occurred due to behaviour issues. The Units requiring greater attention have been identified.

Fatality Risk Control Programme

Risk identification is an integral part of managing risk at Tata Steel. FRCP is a special proactive tool used by safety professionals for safety audits to find hidden fatality potential hazards using their in-depth knowledge and skill, which line managers cannot identify. The analysis of fatalities over the last 10 years sought to identify one or two key focus areas for improvement. It has given the Company the opportunity to plan for critical areas such as contractors' capability buildup, fool proofing against deviance of standards, etc.

A systematic and scientific approach to implementing various safety management systems such as i) confined space management; ii) energy isolation management; iii) management of working at height and; iv) Road Safety Management, has eliminated fatalities from most high hazard activities.

The FRCP analysis for 2013-14 helped spot areas of Low FRCP identification, some of which were a matter of concern. It also generated reas where effectiveness of FRCP is low.

The learning was the lack of seriousness accorded in certain units of the Company on the need for immediate remedial action against risks identified. In these areas line managers, responsible for Safety, need to drive the process with greater vigour.

Lack of orderliness resulting in unsafe conditions was the cause of the highest incidents of Slip-Trip-Fall in 2013-14. These were found to occur due to non-compliance with rules and procedures responsible for incidents in material handling and dashing/collision.

Reduction in Process Incidents

The gasholder explosion in 2013-14, the first such incident in the Steel Works over a century of operations, highlighted the need to augment process safety implementations with enhanced rigour. The prime reasons for the incident were loss of containment and subsequent explosion. Rigorous investigations also indicated that inadequate SOPs and laxity in SOP being followed account for 59 % of the total SOP related incidents.

Disaster Management

Gas pipelines at the Steel Works once laid on its periphery, are now in close proximity to the township that has grown around it. It poses a grave risk to the community in case of any gas leakage. In 2013-14, a peripheral gas monitoring system was put in place for continuous monitoring of the pipelines as well as to raise an immediate alarm in case of any gas leakage. The objective is to ensure maximum safety of the surrounding community at all times.

The Company also instituted a robust governance structure to handle emergencies. The Governance Structure supported by Emergency Support Services has two levels, the Strategic Level and the Operational Level. Tasks and responsibilities of these two levels and the support services have been assigned.

In addition to focussing on these areas, the Company intends to add greater emphasis on implementing PSRM at its new locations and during MSDs in 2014-15.

Safety integration into all business management process

Tata Steel's Safety Excellence Journey (SEJ) programme was extended to all its stockyards and External Processing Agents (EPAs) and channel partners, which has led to their operations being conducted more safely and efficiently as well as has improved customer satisfaction.

Safety Performance

Parameter	Category	UoM	2011 -12	2012 -13	2013-14
Near misses	Total Number	Nos.	6540	7957	8424
	Employees	Nos.	6540	7950	8424
	Contractors Workmen	Nos.	0	0	0
Incidents	Total Number	Nos.	1561	2048	1622
Injury Rate (LTIFR)	Total Number		0.51	0.48	0.50
	Employees		0.84	1.06	1.15
	Contractors Workmen		0.31	0.24	0.27
Fatality Rate	Total Number	Nos.	7	6	12
	Employees		0.03	0.02	0.02
	Contractors Workmen		0.01	0.01	0.04
Workdays lost	Total Number	Nos.	10973*	17191*	40948
	Employees	Nos.	-	-	24159
	Contractors Workmen	Nos.	-	-	15970

LTIFR is recorded as per worldsteel methodology. (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)

Location wise details

Location	Loss Time Injury			Fatality		
	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
Jamshedpur	80	97	103	5	3	5
Bearings Div	1	1	1			
CRC West	0	0	1			
CRM Bara	1	0	0			
Global Wires	1	1	1			
HMC	4	3	1			
Jharia	18	6	8			1
FAMD	2	2	3			
OMQ	8	4	7			
West Bokaro	9	2	5	2	1	1
KPO	3	14	29		2	4
TGS	3	3	1			
Tubes	2	3	4			1
Total	**132**	**136**	**164**	**7**	**6**	**12**

Wellness@Workplace

As a part of Tata Steel's corporate strategy preventive health surveillance of employees (which includes both statutory & non-statutory health check-ups), are systematically managed by Tata Steel's Wellness@ Workplace programme. The objective is to (i) transform high-risk cases to moderate risk and (ii) assess job stress at the workplace.

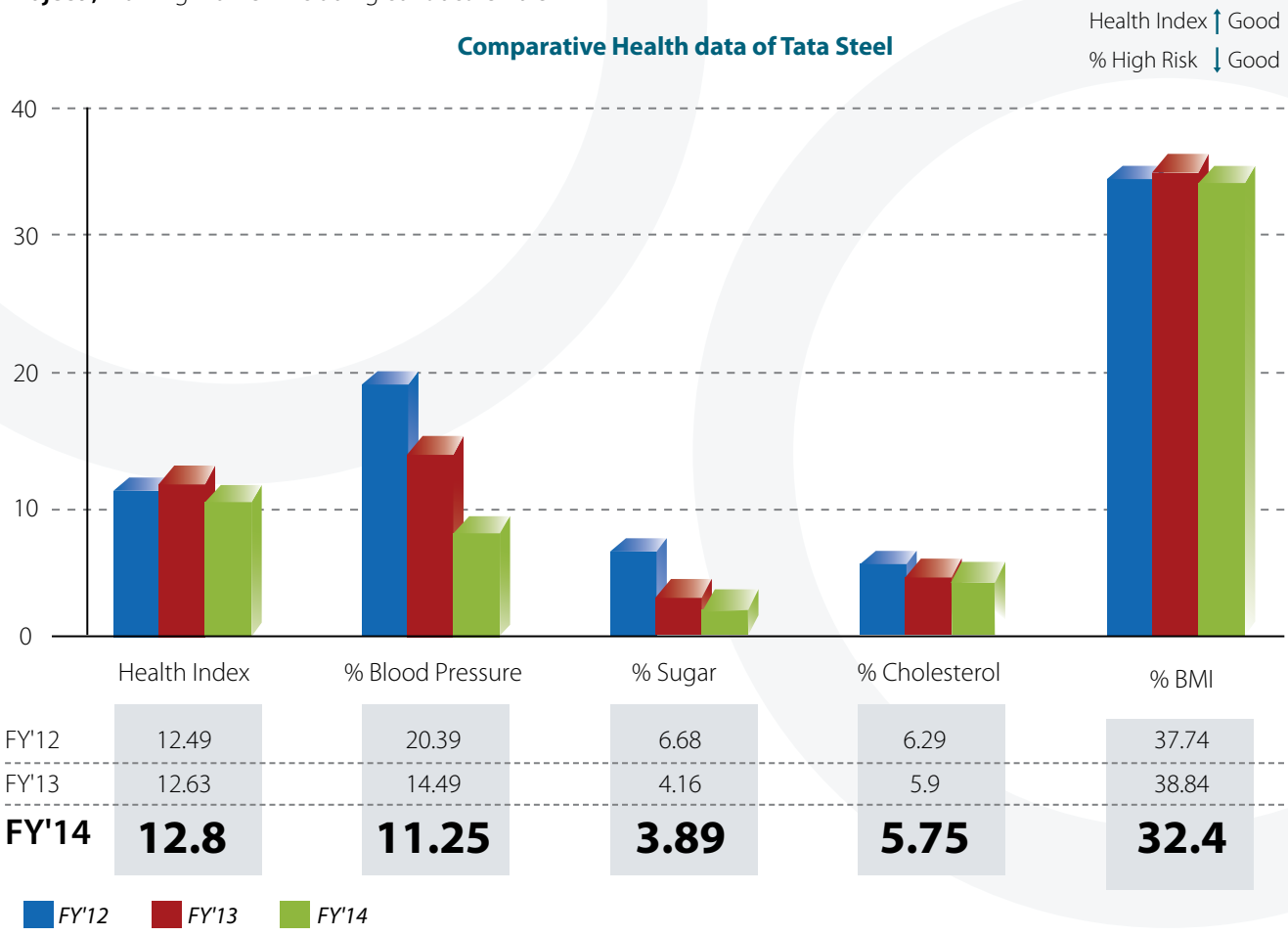
Occupational health risk for every position at the shop floor is being listed and tests and work practices constructed accordingly. The following tests were initiated at Jamshedpur Works:

1. Neurological test for persons exposed to manganese
2. Phenol in urine for workers exposed to benzene
3. Audiometric test for those who are exposed to high noises.
4. Pulmonary function test for those exposed to dust

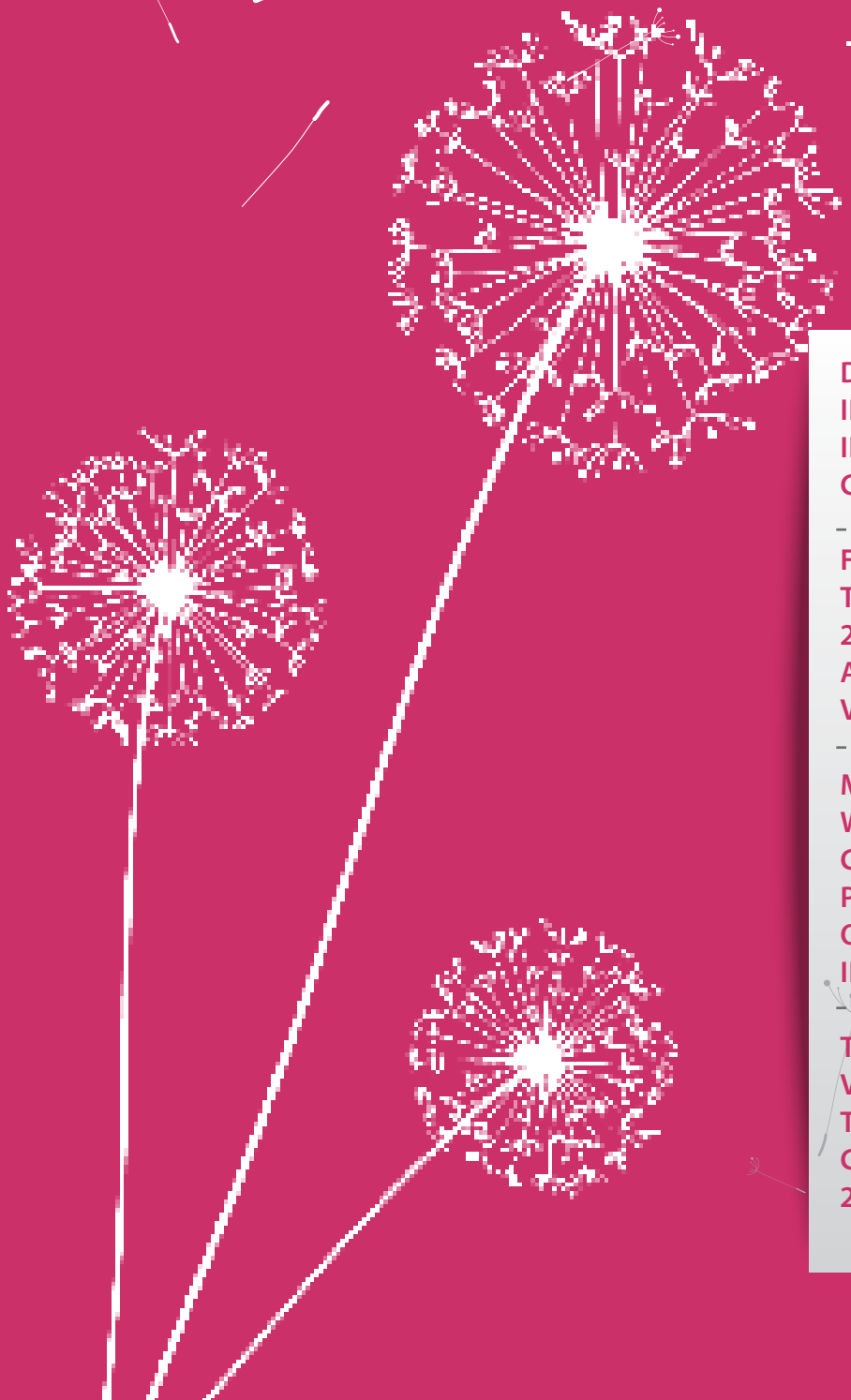
Under the **"Women Health Improvement Project",** working women including contract female employees were treated for Cardio Vascular diseases and a doctor@doorstep programme instituted in 2013-14 to focus on personalized health improvement.

As a result of these initiatives considerable improvement was seen in the health index of employees.

Comparative Health data of Tata Steel



8 HUMAN RIGHTS



DURING THE YEAR TATA STEEL INTRODUCED RISK ASSESSMENT IN BOTH IS PROCUREMENT AND CUSTOMER SERVICE DIVISIONS

FROM A NEED-BASED APPROACH TO VENDOR DEVELOPMENT IN 2013-14, TATA STEEL HAS ADOPTED A STAGE GATE APPROACH TO VENDOR DEVELOPMENT.

MODULES ON HUMAN RIGHTS WERE INCLUDED IN THE TRAINING CURRICULUM FOR SECURITY PERSONNEL (INCLUDING OUTSOURCED SECURITY) IN 2013-14.

THIRD PARTY COMPLIANCE VERIFICATION AUDITS TO THE SA8000 STANDARD WERE CONDUCTED ON 50 VENDORS IN 2013-14.

Tata Steel's operational area spreads across the states of Jharkhand, Odisha and a greenfield site planned at Chhattisgarh. All these state have a predominantly rural population, with 77% of Jharkhand's and 85% of Odisha's population living in villages. The per capita GDP of these states is among the lowest in the country. A significant part of their population, 26.2% in Jharkhand and 22.8% in Odisha, belong to socio-economically backward scheduled caste (SC) and scheduled tribe (ST) communities.

Socio – Economic indices	UoM	National	Jharkhand	Odisha	Chhattisgarh
Literacy Rate	%	74.0	67.63	73.5	71.0
Per Capita Income	INR/year	60972	31982	46150	46573
HDI	Index	0.519	0.464	0.442	0.449

Richly forested with villages, having poor access to centres of growth, the rural areas of these states have also been impacted by extremist activities. These factors further undermine the ability of the communities to benefit from development initiatives. Tata Steel's iron ore mines in Noamundi and Joda, Jamshedpur Steel Works, as well as Sukinda and Kalinganagar in the Jajpur district of Odisha have a indigenous tribes residing within their vicinity. Tata Steel's interventions are aimed at protecting their Ethnicity. They focus on enabling indigenous communities safeguard their rights, which include intellectual property, land rights, language and traditions.

The key human rights risks in these states are:

- Growing Income Disparity
- Extremist activities and social conflicts
- Land acquisitions issues
- Risk to Supply Chains and Outsourcing

Among the key challenges faced by Tata Steel in addressing the issues and concerns of the disadvantaged communities, especially some Particularly Vulnerable Tribes (PVTs) are:

- Inability of the community to access Tata Steel's development programmes
- Lack of business experience and resilience in developing entrepreneurs
- Extreme poverty pushes youth into immediate low pay earnings jobs, preventing their engagement in education and training
- Lack of industrial growth and non-availability of gainful employment opportunities even when necessary skills are developed
- Access to technical skills required for employment
- Lack of social sanction for local infrastructure development
- Lack of quality education in village schools
- Progress can be slow, especially as indigenous communities by nature shun external contact

Introduction of Risk Assessment in Supply Chain

During the year Tata Steel introduced risk assessment in both is Procurement and Customer Service Divisions to address high-risk areas along its Supply Chain. It has introduced mitigation strategies including due diligence of new suppliers before a gradual progression into being registered with the Company. Of ~700 significant suppliers 200 have been audited under SA8000 by an external agency.

Affirmative Action

Tata Steel's Affirmative Action Policy specifies the key thrust areas for safeguarding the rights of these disadvantage communities: (i) providing equal opportunity, (ii) training the socially disadvantaged, (iii) improving employability, (iv) encouraging entrepreneurs from socially disadvantaged communities for inclusion in the supply chain, and (v) assisting in upward mobility of talented youth.

Commitment to Affirmative Action

The Managing Director of Tata Steel heads the Affirmative Action governance structure at Tata Steel. The Apex Body comprises other members of the top management, with Vice President (Corporate Services) responsible for the roll out of all Affirmative Action initiatives of the Company. A share of the responsibility also rest with Vice President (HRM), Chief – Corporate Social Responsibility and Chief Procurement for driving different aspects of the programme.

In 2013-14 the positive discrimination measures introduced by Tata Steel for AA vendors were:

- Reduced payment period
- Waiver of bank guarantees

To facilitate the implementation of development and sustainable processes, a 13-member cross functional team has been formed. The Company exercises positive discrimination for potential employees from the SC/ST community.

	UoM	2011-12	2012-13	2013-14
Contract SC/ST employees companywide	Nos	21222	23476	26348

The Managing Director holds one-on-one dialogues with community leaders and their representatives, in addition to systematic engagement at the local level with village opinion leaders, youth and women of indigenous communities to capture their social and material aspirations. AA strategies and means are embedded in both the long-term and annual business plans, and are cascaded down to the operational level, with well-defined KPIs and targets. Tata Steel has 26 trade unions, representing 100% of its non-officers.

Integrating Human Rights in the Supply Chain

Tata Steel follows a structured approach towards evaluating and disclosing information related to assessment of significant business partners (suppliers and vendors) including human rights compliance based on the SA 8000 framework.

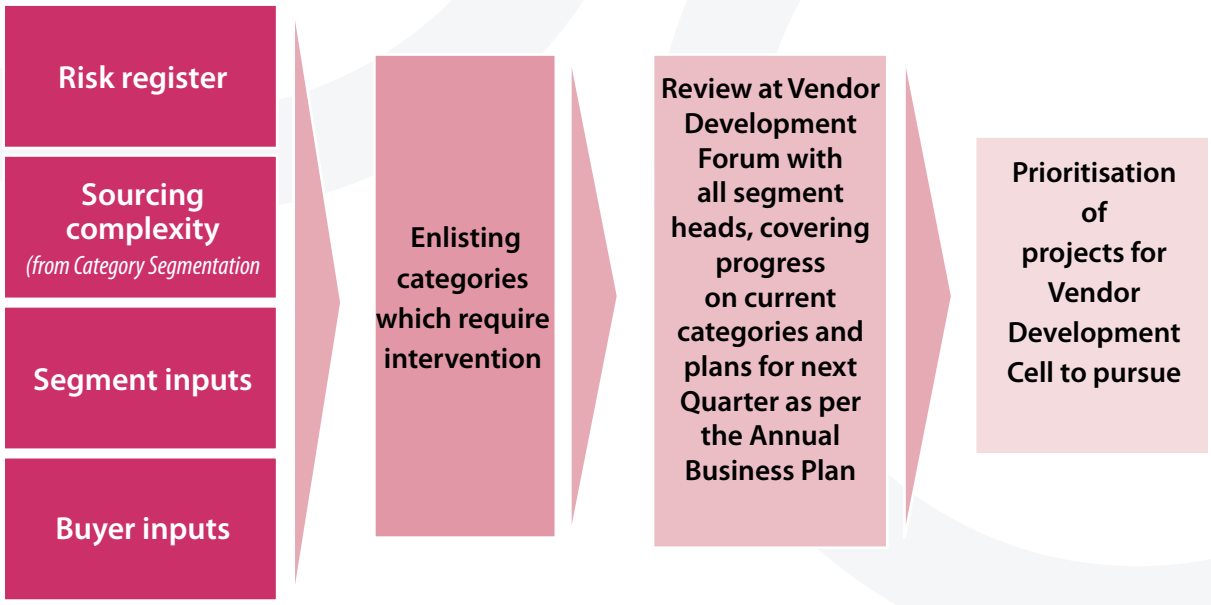
As an integrated steel manufacturer which owns and operates its mines Tata Steel's sustainability initiatives, including human rights, employee welfare programmes, safety and health responsibilities, go all the back to mineral extraction. Hence the focus on risk remediation and mitigation focus on outsourced products and services.

Tata Steel's e procurement platform requires self certification to SA 8000 and consent to the Tata Code of Conduct by all vendors so as to attract and develop socially conscious vendors.

Risk focus in new Vendor Development Mechanism

From a need-based approach to Vendor Development in 2013-14, Tata Steel has adopted a stage gate approach to vendor development. This includes a vendor search during during the first stage to identify low risk vendors.

Thereafter during vendor evaluation based on site visits in the second stage compliance to standards such as SA 8000, occupational health & safety, environment standards, tier-2 supplier management, etc are evaluated. A key priority is elimination of high risk sourcing with the first step in the prioritisation framework being a Risk Register. The function has been entrusted to the Vendor Development Cell created in 2013-14.



Prioritization framework to help Vendor Development Cell prioritise efforts

Sustainability trends de-risk the logistics chain

Customer Service Division (CSD) is responsible for handling Out-bound logistics - Delivery of Right Products and Documentation to customers on time. The scope of work covers planning, transportation and warehousing from External Processing Agents and Tata Steel's manufacturing plants. Tata Steel has implemented a Hub and Spoke (stockyard) model. The service is supported by a network of 20 stock yards across India, managed by third parties. While 65% of finished goods is transported through rail, 75% goes via hubs and stockyards.

In tandem with the increase in capacity at the Steel Works, the Division has expanded/ upgraded the capacity of the stockyards and warehouses. At the same time it has affected several initiatives to improve the environmental and social performance of its partners.

Transport Park: In line with Tata Steel's social accountability policy, both Transport Parks in Jamshedpur provide almost 500 heavy vehicle drivers with basic amenities, safety training and canteen services.

Some of the key activities undertaken in the Transport Parks in 2013-14 are:

- **Clinical management of sexually transmitted infections and related counselling through Khushi clinic to drivers:** 1938 drivers and others were covered through health awareness programmes (primarily on HIV/AIDS) through counselling, street plays, Lectures, Quiz Competition, Video shows and games.
- **Medical check ups:** this activity was upscaled with 9316 drivers undergoing medical check-ups, an increase of approximately 20% in number over the previous year.
- **Drivers' behaviour change communication towards safety:** Rigorous safety training, now mandatory for the drivers, covered 18537 drivers, almost twice the number covered in the previous year.
- **Special programmes:** Conducted regularly these covered aspects such as fuel management, safe driving for all.
- **New Transport Parks:** continuing with the philosophy of arranging amenities for drivers, new Transport Parks are being constructed at Jugsalai Muck Dump (JMD) gate and CRM Bara

(a) Warehouses

- **Medical Check Ups:** covered 1000 employees of Stockyard Consignment Agents/Handling Agents (CA/HA) in 2013-14
- **Enhancing capability and productivity:** special training programmes, tailored to their needs or identified gaps, are organized on Safety, EOT (Electric Overhead Travelling) Cranes
- **Welfare initiatives:** At the new stockyards projects such as Chennai, special care has been taken to ensure proper rest rooms and canteen facility for the drivers and stockyard employees.

	2011-12	2012-13	2013-14
Transporters			
Counselling -Khushi Clinic	-	-	1938
Medical Check-Up	4864	7978	9316
Training on Safety	21375	9249	18537

Creating Knowledge and Capacity on Human Rights

Empowering Panchayati Raj Institutions: Tata Steel conducts empowerment-cum-exposure visits for members of Panchayati Raj Institutions (PRIs) in Odisha. The purpose is to ensure participation of stakeholders in the developmental interventions through deliberations on the long-term development of villages and also on the role of PRIs in sustainable development of the state.

During the reporting year additional PRIs were trained taking the total number of individuals trained in Odisha to more than 100 PRIs.

Engaging with local leaders and village mukhiyas

Tata Steel invites tribal opinion leaders for interactions with its middle and top-level management. No incidents of violations involving rights of indigenous people were raised.

Training on SA8000

Training has been imparted to around 1100 inductees on various clauses of the Social Accountability 8000 Standard, effecting decent working conditions. Human Rights and SA8000 Training was attended by two batches of officers in 2013-14 as part of the Sustainability Excellence Programme. The module focused on human rights particularly, workplace related rights.

Security and Human Rights

Modules on human rights were included in the training curriculum for Security personnel (including outsourced security) in 2013-14. Till the end of the reporting year 337 or 64.19% of the security personnel of the Company and 587 or 73.37% of the outsourced security personnel were trained on human rights at Tata Steel's Security Training Centre. Top security officials of the Company rigorously cover the subject at every meeting with all security personnel.

Security Personnel are also apprised of the importance of ethical practices and the role of Security personnel in creating and safeguarding the image of the Company at workshops conducted on ethics.

Verification audits for screening

Third party compliance verification audits to the SA8000 standard were conducted on 50 vendors in 2013-14. Human Rights screening was introduced by the Customer Service Division for partners, stockyards, service centers and diversified stakeholder groups.

Safeguarding the right of a child to attend school

Tata Steel takes several initiatives to ensure that children do not drop out of school for reasons related to income disparities and economic penury of their families, which could force them into child labour.

- A mid-day meal kitchen is run in partnership with Government of Jharkhand and ISKCON Food Relief Foundation, to supply mid-day meals daily to nearly 50,000 students across 387 government schools in and around Jamshedpur, primarily serving the SC/ST community. The mid-day meal draws the children to attend school, apart from giving them the requisite nourishment for a healthy and productive life.
- Infrastructure support is provided to schools and colleges across all locations, including access to drinking water and sanitation facilities.
- Fellowships are provided to support the educational aspiration of children from socially and economically challenged communities.
- Tata Steel plans to set up two residential schools for

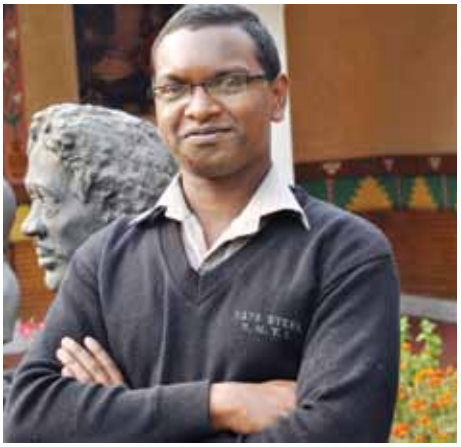
tribals, one each in Jharkhand and Odisha, catering to a total of 10,000 students. Government clearances are awaited.

- To enhance the quality of education in government schools Tata Steel has sought to adopt 1000 government primary schools in Odisha, touching the live of 150000 children, 30-40% of who belong to the SC/ST community.
- The Company will adopt and manage six Ashram Shalas for tribal children (100% SC/ST) in the Kolhan Region of Jharkhand currently administered by NGOs.

Financial inclusion to prevent forced or compulsory labour

Self Help Groups: Self Help groups have been found to be an effective mechanism to safeguard democratic rights, especially as they serve as agencies for collective bargaining at the grassroot level. Members of about 800 Self Help Groups supported by Tata Steel leverage this strength to earn a sustainable livelihood for their families.

Tata Steel is implementing the Modified Area Development Authority (MADA) project in tribal villages of select blocks in Dhanbad district. Funded by Department of Welfare, Govt of Jharkhand, the project aims to create livelihood opportunities for the tribals, mostly below poverty line. A self-help group 'Maa Tara SHG' was formed to help them gain access to their democratic rights as well as engage with local government agencies to benefit from development programmes.



The SHG constructed irrigation infrastructure as well as procured a pump set, urea and seeds to grow two or three crops in a year to earn additional money. Most of the members have gone back to farming their land rather than being forced to seek work as daily wage labourers even when they owned in excess of five acres of land. This has significantly impacted their quality for life.

Skill development and technical training: Youth are trained in various vocational trades at Tata Steel's operating locations. In addition the Company supports employability initiatives at technical institutes and skill development centres to help bridge the transition between education and employment.

Reviving ancient arts

Among Tata Steel's programmes for the revival, sustenance and promotion of tribal musical instruments was the successful revival of a string instrument of Jharkhand – 'Banam.' Several artists, who still practice this near extinct art, were invited to conduct classes for enthusiastic tribal youth on the art of playing 'Banam.' This sustained effort has also resulted in more than 50 persons learning how to play the instrument.

The elderly artists, who play the traditional musical instrument, wowed an elite audience at a function organized at India Habitat Centre. In the age group of 70 – 80 years, they infused so much energy in the performance, that the entire audience was enthralled. The artists have carried back a very positive message to the hinterland of the country.

9 SOCIETY

A CSR ADVISORY COUNCIL WAS SET UP IN 2013-14

MORE THAN 5000 ACRES OF AGRICULTURE LAND WAS BROUGHT UNDER SECOND AND THIRD CROP COVERAGE

FELLOWSHIPS WERE GRANTED TO ~ 3,000 SC AND ST STUDENTS IN THE THREE STATES OF JHARKHAND, ODISHA AND CHHATTISGARH

OVER 2000 YOUTH RECEIVED EMPLOYABILITY LINKED TRAINING

NUTRITIVE AND HYGIENIC MID-DAY MEALS REACHED ~ 50,000 STUDENTS OF GOVERNMENT SCHOOLS

MORE THAN 10,000 STUDENTS BENEFITTED FROM PRE-MATRIC COACHING

ANTENATAL CARE TOUCHED 14,000 WOMEN WHILE 15,000 INFANTS WERE IMMUNIZED

THE DRINKING WATER FACILITIES REACHED OVER 2,50,000 PEOPLE IN RURAL AREAS

~ 2300 SOLAR STREET LIGHTS WERE INSTALLED IN VILLAGES IN JHARKHAND AND ODISHA

~10,000 YOUTHS WERE ENROLLED AT 237 TRIBAL LANGUAGES CENTRES

The primary purpose of business at Tata Steel is to improve the "quality of life of people". This is stated in its Corporate Social Responsibility & Accountability Policy and is the essence of its Vision. The focus is therefore on addressing vulnerabilities and multiplying opportunities, which enhance the ability of its stakeholders to secure a better quality of life both today and in the future.

The Company's Guiding Principle for Corporate Social Responsibility (CSR) is an "improvement in the Human Development Index in Jharkhand, Odisha & Chhattisgarh" through focus on Education, Livelihood & Health. The Company also engages with the community through Sports, Disaster Relief, Ethnicity and Environment to multiply opportunities and mitigate the impacts of natural disasters or social marginalisation. These initiatives are supported via the development of physical and social infrastructure.

The Company measures the impact of its strategy through the ability of an individual, especially children and youth, to continue to thrive in the future. It evaluates impact based on both quality as well as scale using well-designed Key Performance Indicators (KPIs) to measure impacts on target groups. HDI was measured in 230 villages around Jamshedpur, Noamundi, Jharia and West Bokaro.

Projects are designed based on Tata group values, external inputs, policy/ statutory guidance and data based on the KPIs.

Wider impacts are achieved by enlarging the scope of the CSR projects beyond the operational villages to the block, district and state levels. The projects are medium to long term in nature to foster enduring impacts. Tata Steel's flagship projects are assessed via third party assessments. The feedback helps redesign and rollout further initiatives.

Tata Steel's initiatives are undertaken in the following thematic areas:

- Livelihood (Agriculture, Skill Development and Self-help Group)
- Education
- Health
- Drinking Water
- Renewable Energy (Solar Street Light)
- Ethnicity

Cognizant of the fact that diverse stakeholder groups require different interventions to improve their efficacy and impact, the department has multiple operating arms:

- Tata Steel Rural Development Society
- Tata Steel Family Initiatives Foundation
- Tata Steel Tribal Cultural Society
- Tata Steel Skill Development Society

In addition the Urban Services department caters to the community in Jamshedpur.

Operational heads of all units liaise directly with the stakeholders conducting workshops with village mukhiyas, tribal leaders and opinion makers to draw up annual local area development plans for each location.

Tata Steel also works with the Government and builds domain specific partnerships with non-governmental organisations, Tata group companies as well as seeks

technical expertise for exponential impact. Under its Affirmative Action programme focused attention is provided to the local scheduled tribe and schedule caste population. Tata Steel has operated in these communities for over a century. Its operational excellence efforts continuously focus on the extension of the life of the mines, hence closure plans are not reflected in the long-term plans of the Company.

Significant achievements in 2013–14

- A CSR Advisory Council was set up with eminent names from academia and the development sector to guide the Company's approach towards CSR.
- Project MANSI on maternal and newborn survival, which is underway in 167 villages of Seraikela district, has brought down the infant mortality rate by 26.5% and neonatal mortality rate by 32.7%.
- Project RISHTA on adolescent health was scaled up from Seraikela-Kharsawan to other operational areas of the Company and is now being implemented in 700+ villages across seven districts in Jharkhand and Odisha.
- To provide healthcare services to deprived communities, Tata Steel in partnership with Hewlett Packard set up an E-health centre at Bagbera in Jamshedpur. Doctors sitting at a distant location cater to patients using real time technology solutions.
- Jyoti Fellowship was given to nearly 3,000 meritorious students from the SC/ST communities across Jharkhand, Chhattisgarh and Odisha.
- The Company partnered with several organisations to set up skill development centres for IT, hospitality, textile, cosmetology etc.
- To empower farmers of Patamda, a Market Yard was set up in January 2014 to provide options to aggregate and market the agriculture produce at a fair price.
- Under the solar street light project, nearly 2,300 solar street lights were installed in villages of Jharkhand and Odisha.

Livelihoods

Tata Steel's livelihood initiatives focus on agriculture, skill development and enterprise development through self help groups for women.

Creation of irrigation facilities such as lift irrigation projects and ponds encourages farmers to opt for second and third cropping, positively impacting their income from agriculture. In 2013-14 nearly 2000 farmers adopted SRI method to improve paddy cultivation, more than 5000 acres of agriculture land was brought under second and third crop coverage, while irrigation resulted in the development of 1000 acres of wasteland. Farmers now develop cashew plantations in these areas. More than 150 irrigation structures, including lift irrigation points and ponds, were created in the Company's operational areas during the year.

The Company supported about 800 Self Help Groups (SHGs) with 9700-plus women, predominantly from economically challenged families in 2013-14. Assistance is provided to the women to set up small business units for handicrafts, vermicomposting, tamarind cake and pickle making, mushroom cultivation, etc.

More than 2000 youth were trained through various skill interventions in 2013-14.

Improving attendance in schools

The Central Kitchen instituted by Tata Steel at Jamshedpur continued to provide nutritive and hygienic mid-day meals to ~ 50,000 students of government schools in East Singhbhum and Seraikela-Kharsawan.

Education

More than 10,000 students of classes VIII, IX and X benefitted from pre-matric coaching. Of the Class X students who attended these classes at the Jamadoba Centre about 50 % got a first division.

The Company also linked 200 underprivileged dropout girls to formal schools after putting them through a nine-month bridge course at its camp schools in Noamundi and Pipla. More than 15,000 women were made functionally literate.

With the corpus of the Jyoti Fellowships further expanded in 2013-14, over 3000 meritorious SC/ST students from the states of Jharkhand, Odisha and Chhattisgarh were awarded scholarships to continue to pursue their education.

Employability

In 2013-14, nearly 2000 youth were trained in various vocational trades at Tata Steel's locations. Of those trained 27 % are from SC/ST communities. After attending these courses 600 youth were gainfully employed earning an average salary range of Rs 6,000 – 8,000 per month. In addition to the technical institutes established at Tamar in Jharkhand and Gopalpur in Odisha, Tata Steel established 'Samarth Skill Development Center' at Berhampur in Odisha in 2013-14 with the support of CMC Ltd.

Health

Primary health care services were provided to more than four lakh people in rural areas through health clinics, outreach camps and mobile health vans. The encouragement provided by Tata Steel Family Initiatives Foundation ensured that nearly 6000 couples opted for family planning services (LTT/NSV).

Infants and young children are particularly vulnerable to disease due to lack of primary health care in rural India. Infants and mothers are a focus group for Tata Steel's health initiatives. In 2013-14, antenatal care was provided to 14,000 women while 15,000 infants were immunised. The Company's flagship programme Maternal and Newborn Survival Initiative (MANSI) project aims at saving lives and treating illness in newborn through Home Based Newborn Care (HBNC) by the Sahiyaa (ASHA) under the National Rural Health Mission.

To restore the productive capabilities of those afflicted with Cataract, more than 5000 persons were operated upon as part of its eye care services. In addition, lives of nearly 40,000 adolescents were touched through the adolescent health programme.

Local infrastructure development

Rural infrastructure built by the Company across all locations include community centres, bus stands, market places, roads, bridges, culverts, check dams, school buildings and boundary walls, etc.

Tata Steel has initiated a drive to illuminate remote villages using solar energy, a renewable energy source under a public private partnership. It also created water harvesting and augmentation mechanisms. In 2013-14, ~ 2300 solar streetlights were installed in villages in its operational areas in Jharkhand and Odisha.

The Company also responded to the need for drinking water, installing 400 handpumps and 123 deep bore wells in Jamshedpur and mining locations in Jharkhand and Odisha. In addition, more than 500 defunct hand tube wells were repaired. The drinking water facilities have given more than 2,50,000 people in rural areas access to potable water.

To recharge the receding ground water table, 12 rooftop rainwater harvesting projects have been implemented at several locations in the operational areas, six of these are in Jamshedpur.

Ethnicity

Promotion and popularisation of various facets of tribal culture, including tribal music, dance and tribal scripts like Santhali and Ho integrate the tribal population with the mainstream population.

In 2013-14, ~10,000 youths were enrolled at 237 languages centres in and around Jamshedpur, more than 3500 tribal youth participated in the tribal sports tournaments organised at villages and schools to promote tribal sports like Kati and Sekkor and about 80 tribal students took to playing traditional musical instruments. Classes were conducted to teach them tribal music instruments like Banam while tribal music and dance forms were promoted at cultural events.

The Banam artists also performed with the Ocean band during Fusion Musical Performance at India Habitat Centre, New Delhi. The effort to popularise tribal sports was acknowledged by the Government of Jharkhand through films screened at the 'Yuva Mahotsav'.

Tagging CSR expenses

To capture its CSR spend more accurately the Company facilitated tagging of CSR expenses on its e-buy system. Workshops were also conducted during the year to allow officers to identify activities undertaken under CSR as well as to understand the Government's policy on CSR spend.

CSR Spend **Rs. Crores**

Particulars	2011-12	2012-13	2013-14
CSR Spend	146.64	170.62	212.72

Tata Steel was granted an additional Rs. 2.74 Crores from Government and donor agencies for CSR work in the area of health and education.

Breakup of CSR Spend

Infrastructure	Environment	Health	Livelihood	Disaster Relief	Education	Sports	Ethnicity
38.5%	21%	15%	9.5%	8.5%	4.5%	2%	1%

Employee Volunteerism

Tata Steel has initiated an IT-enabled platform for Employee Volunteerism in its CSR activities as well as encourages its employees to participate in the Tata Group level initiatives through the Tata Engage programme.

Livelihoods

Sub-strategies to share socio-economic benefits of growth

Agriculture interventions

- Building capacities of farmers on improved methods of agriculture and other allied sectors
- Developing water harvesting structures and irrigation facilities
- Supporting farmers with quality inputs, technical know-how and timely information
- Creating markets and marketing linkages for farm and forest based produce
- Undertaking and supporting research on agriculture and other allied sectors

Skill Development

- Setting up and running skill development centres, industrial training centres, diploma and polytechnic institutes, community colleges, etc
- Sponsoring candidates for skill development and vocational training programmes offered at identified institutions
- Coaching candidates to appear for entrance examinations of different institutions

Promoting Self Help Groups

- Creating, training and supporting entrepreneurs
- Creating, training and supporting self help groups, federations, co-operatives, societies and similar institutions

Winds of change sweep through villages of Odisha and Jharkhand

Given the importance of agriculture, the main source of rural livelihoods in Odisha and Jharkhand, Tata Steel sought to give a major fillip to promote and develop agricultural production in the states.

Besides revival of existing irrigation facilities, new irrigation networks, distribution of seeds and farm implements as well as training of farmers on the latest methods of cultivation were undertaken. In Odisha 34 Lift Irrigation (LI) points in Ganjam district, across the Hinjilicut, Seregada, Chhatrapur and Digapahandi blocks were revived. The project impacts more than 2,000 farmers and will irrigate more than 1,100 acres of land there.

Tata Steel Rural Development Society (TSRDS) provided paddy and vegetable seeds to more than 1,800 farmers of the state, besides training about 1,200 farmers in the System of Rice Intensification (SRI) method of cultivation. Various agricultural implements were gifted to more than 200 farmers in the Kalinganagar, Joda, Bamnipal, Gopalpur and Sukinda areas.

Paddy production has thus soared from about eight quintals per acre to about 25 quintals per acre.

Remote dusty villages such as Katikoda on the outskirts of Noamundi in Jharkhand are gradually but surely experiencing change. Tata Steel Rural Development Society (TSRDS) is helping villagers adopt extensive farming, increasing their farm productivity and, consequently, their family income.

Particulars	UoM	2011-12	2012-13	2013-14
Paddy Yield	Tonne/ acre	1.64	2.5	2.5
2nd & 3rd Crop	Areas in acres	2027	3177	5032

Products of Navjeevan Cooperative find markets

Products of Navjeevan Co-operative Ltd. (NCL), a co-operative comprising members of families relocated by Tata Steel's Kalinganagar Project has attracted attention in markets beyond the state of Odisha.

Fabindia, Tribes India - an organisation under the Union Ministry of Tribal Affairs - as well as Delhi Crafts Council are among the buyers that have shown interest in soursing products from NCL. It bagged a small order for the supply of hand painted stoles, dupattas and wall hangings from Delhi Crafts Council in 2013-14.

EDUCATION

Interventions

- Supporting development of infrastructure in schools/colleges
- Mid-day meals for students in Government schools in partnership with ISKCON / Govt. of Jharkhand
- Mainstreaming children from particularly vulnerable tribal groups to formal schools
- Coaching for classes 8, 9,10 for Maths, Science and English
- Offering scholarships and financial assistance to SC/ ST students from class 7 till post-graduation including professional courses
- Bridging drop-out children and mainstreaming them to formal schools
- Making adults functionally literate
- Developing educational material and methodologies
- Early Child Education / Bal Vikas

Development of infrastructure

The Company actively supports infrastructure development in schools because it believes that by enriching the quality of education available to school students, rural students will have a level playing field with students in urban areas.

The third and final installment of its total commitment of Rs 3.39 crores to Xavier Institute for Tribal Education (XITE), Gamharia, as approved by the Executive Committee of the Board of the Company, was gifted to the institute in 2013-14.

Financial assistance of Rs 1 crore was provided to DBMS English School, Jamshedpur. The money will be used to set up audio-visual e-learning infrastructure and a digital library for delivery of curriculum in all classes.

Access to quality education for children in the rural community of Chaibasa will also undergo an improvement with Tata Steel extending financial assistance of Rs 2.37 crores to St. Xavier's High School Lupungutu in Chaibasa to construct a new Inter College block.

The quality of education available to underprivileged tribal children, a significant part of the population in Tata Steel's operational area, is a cause of concern. Hence the Company is progressively improving the infrastructure in tribal schools. Classrooms were added to the Adivasi Vikas Samiti, Kainshi Vidyamandir, under its OMQ Division.

Residential school facilities for tribal children

In the past three years, Tata Steel has sponsored economically underprivileged tribal children, particularly orphans, to continue their education uninterrupted at schools run by the Adivasi Vikas Samiti. It therefore protects these children from being drawn into child labour or otherwise exploited due to the extreme poverty and deprivation endured by their families. In 2013-14, a total of 24 students from seven villages were enrolled in Siriakholi Ashram School and Government High School, Damsal. Residential coaching programmes are also hosted for tribal children to enable them to return to the academic mainstream.

Non formal schools

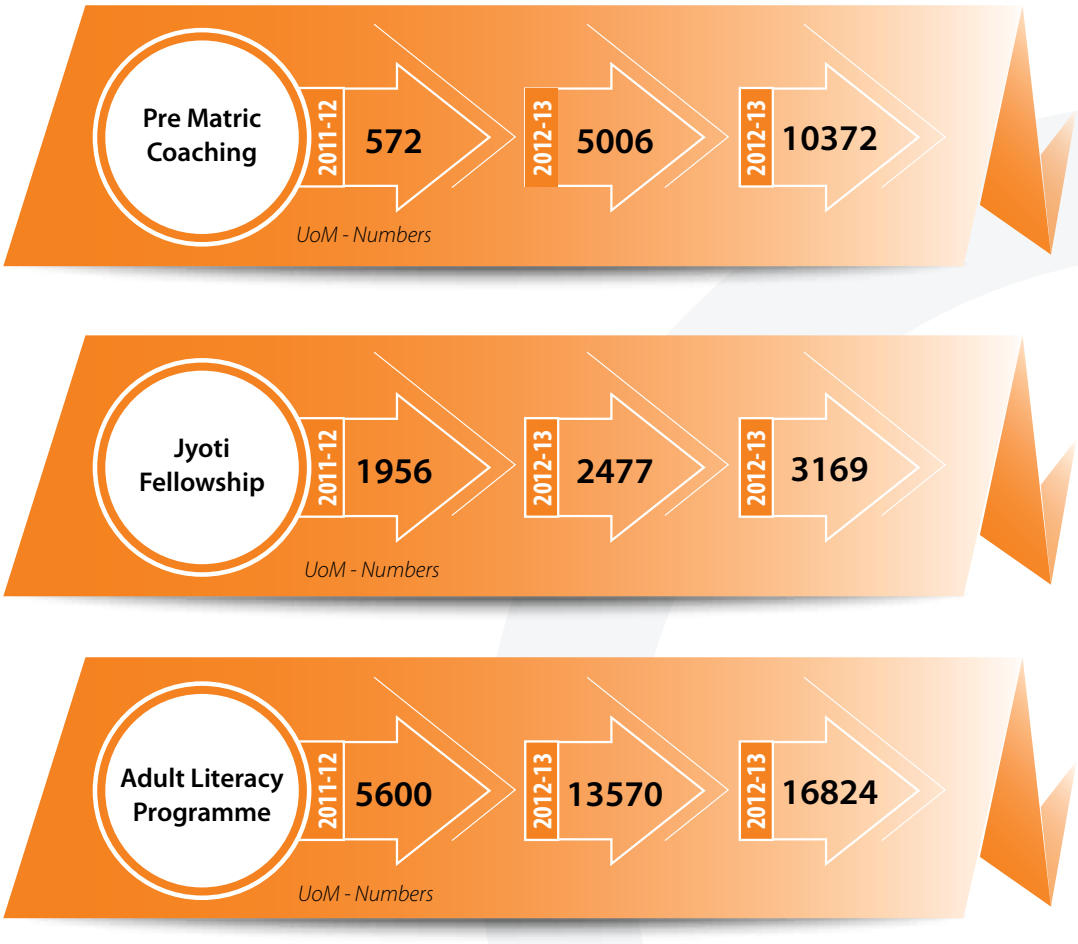
Tribal habitations, located deep within forests, are scattered, with basic amenities virtually absent. Access to these villages during or after monsoons is arduous therefore is next to impossible for the children in such villages to go to Anganwadis or a primary school. TSRDS facilitates the setting up of non formal school to link tribal children to formal school. In 2013-14, TSRDS Bamnipal enabled 21 tribal children to move from non-formal schools to Government schools.

Jyoti Fellowship benefits underprivileged students

Jyoti Fellowships, targeted at Scheduled Caste (SC) and Scheduled Tribe (ST) students in Odisha, Jharkhand and Chhattisgarh, provides financial assistance to meritorious students from these economically and socially-challenged communities. In 2013-14 a sum of Rs 1.93 crores was disbursed to about 3,000 SC and ST students in the three states of Jharkhand, Odisha and Chhattisgarh.

Tata Steel launches 'eDUCATION' programme at Kalinganagar

Computer literacy is critical to schoolchildren being able to pursue their aspirations. To make children on the periphery of Kalinganagar, Tata Steel's greenfield site, capable of competing with those more privileged Tata Steel launched a new project 'eDUCATION'. In the first phase, two computers each were installed at two schools. Over 600 students will benefit from this project.



EMPLOYABILITY

Interventions

- Technical Institutes
- Skill Development programmes

Technical Institutes in Odisha

Tata Steel has set up and supports technical institutes where it operates. Employability training at J N Tata Technical Institute at Gopalpur in collaboration with Nettur Technical Training Foundation (NTTF) has allowed more than 400 students to graduate since it started in 2005. The Industrial Training Centre - Prerna - set up in January 2013, in partnership with NTTF (Nettur Technical Training Foundation) caters to students from marginalized communities.

Technical Institutes in Jharkhand

Shavak Nanavati Technical Institute, R D Tata Technical Institute and ITI Tamar are among leading technical institutes in Jharkhand. During the year, ITI Tamar, run in partnership with NTTF, received the NCVT certification for electrician and fitter trades. Trainees at Tata Steel Technical Institute in Jamshedpur, most of who belong to a rural background, undergo a three-year diploma course in various industrial trades.

Skill Development programmes

Tata Steel offers a range of skill development programmes to youth to help them become gainfully employed. These include skills in trades like construction, automobiles, motor driving, welding, computer hardware and software, housekeeping, cosmetology, plastic technology, apparel design etc.

Tata Steel Rural Development Society (TSRDS) collaborated with CMC Ltd, a TCS subsidiary, to establish 'Samarth Skill Development Center' at Berhampur. The purpose is to improve the employability potential of the youth through technical job enabled training. The area is emerging as new hub for professional education in Odisha.

The following programmes benefitted youth in 2013-14:

- Hospitality training with Indian Hotels and Pratham, both at Jamshedpur and at Gopalpur
- Training on textile industry skills in collaboration with Apparel Training and Design Centre in Jamshedpur
- Six-month training programme in Advanced Plastics Processing Technology in partnership with the CIPET, Bhubaneshwar. 18 were gainfully employed
- Rural Gurukul set up in Jajpur in partnership with Pan IIT Alumni Reach For India (PARFI), to train local youth as forklift operators

As a special initiative, Tata Steel facilitated nursing training of 93 tribal girls from the naxalite affected Saranda region. These girls were admitted to various colleges in Ranchi and Lohardaga.

HEALTH

Interventions

- Setting up and running clinics and hospitals
- Running mobile medical vans and ambulances
- Organising health camps
- Providing financial assistance and waivers for needy patients, on a case-to-case basis
- Providing family planning services
- Reducing infant and maternal mortality
- Preventing and treating communicable diseases like malaria, tuberculosis and HIV / AIDS
- Treating and rehabilitating persons with disabilities
- Working on adolescent and reproductive sexual health issues
- Promoting awareness about various health issues and generating demand for health services
- Undertaking and supporting research on health-related issues
- Ensuring access to potable drinking water and hygienic sanitation

State-of-the-art hospital in Gopalpur

Tata Steel has hospitals and clinics at Jamshedpur as well as at all its outlocations. These include clinics at Gopalpur and Kalinganagar where the Company is setting up operations. In 2013-14, The Company set in motion the process for establishing two large hospitals - a 500-bedded hospital at Gopalpur, Ganjam, near its rehabilitation colony and 200-bedded at Kalinganagar. The Chief Minister of Odisha, Shri Naveen Pattnaik, laid the foundation stone for the hospitals to be set up in collaboration with Medica in the presence of Tata Group Chairman, Mr Cyrus Mistry.

Resuscitation Bay dedicated to the Steel City

To provide world-class emergency facilities, Tata Steel's Tata Main Hospital (TMH) in Jamshedpur added a five-bedded modern Resuscitation Bay. It will bolster the capabilities of the Emergency Department of the hospital.

Project MANSI

Project Maternal and Newborn Survival Initiative (MANSI) is aimed at reducing infant & maternal mortality rate in 167 villages of Seraikela block in Seraikela-Kharswan district of Jharkhand. Operational since 2009 Project MANSI aims at saving lives and treating illness in new-born children through Home Based New-born Care (HBNC) by the Sahiyaa (ASHA) under NRHM.

Implemented and funded by American India Foundation (AIF) and Tata Steel Rural Development Society (TSRDS) in collaboration with Dept. of Health & Family Welfare and with technical support from SEARCH, Gadchiroli, in the last couple of years the knowledge imparted to the Sahiyaas', their skill and timely intervention, has saved many neonates and mothers.

Between 2011 and 2013, the project has resulted in a reduction in the child (0-5 years) mortality rate by 26.5%, in infant (up to 1 year) mortality rate by 26.5% and in neonatal mortality rate by 32.7%.

Drinking water project

To provide potable water to communities living in rural and per-urban areas, Tata Steel has made provisions for water harvesting and augmentation mechanisms.

In FY 2013-14 the following results were achieved:-

A total of 400 hand tube wells and 123 deep bore wells were installed for drinking water in Jharkhand and Odisha

- To recharge the receding ground water table, 12 rooftop rainwater harvesting projects were implemented at various locations in the operational areas

Tata Steel joins hands with Operation Smile for a cleft-free Jharkhand

Operation Smile (OS), in a tie-up with Tata Steel, set up a cleft lip center at Tata Main Hospital (TMH), Jamshedpur, based on the care center model. The tie-up was for a three-month period beginning February 1, 2013 and lasting for ten weeks. A ten-week period of Operation Smile changed the lives of 46 less privileged persons including six-month old Samredi Kumari from Ramgarh in Jharkhand daughter of a farmer and seven year old Ganesh Gorai, son of a daily wage labourer from East Singhbhum district of the state.

Project RISHTA launched in Chaibasa

Project 'Rishta' is a Tata Steel led consortium project being implemented in 65 villages of Jajpur and Ganjam districts in Odisha and 671 villages of East Singhbhum, Seraikela-Kharsawan, West Singhbhum, Ramgarh and Dhanbad districts in Jharkhand. The project aims at enabling adolescents make informed decisions regarding their lives including sexual and reproductive health.

Lifeline Express touches over 5000 lives in Odisha

Lifeline Express, the 'Hospital on Wheels', hosted by Tata Steel at Chhatrapur Railway Station in Ganjam district Odisha, touched the lives of over 5,000. Tata Steel hosted the Lifeline Express for the second time in Ganjam district, the seventh time in Odisha and 17th time in the country. Lifeline Express provided treatment to patients with orthopaedic problems, epilepsy cases, dental cases and those requiring plastic surgery to correct congenital problems such as cleft lips and cleft palates.

Tata Steel shows the way for HIV awareness

To reduce the spread of HIV/AIDS the route chosen by Tata Steel is health awareness. Both Tata Steel's AIDS Core Group and Tata Steel Rural Development Society (TSRDS) collaborate with Jharkhand State AIDS Control Society (JSACS) and National AIDS Control Organisation (NACO) to conduct awareness for high-risk groups such as truckers.

The HIV / AIDS prevention programme covers long distance truck drivers and helpers under the 'Truckers Intervention Project'.

DISPLACEMENT AND POST DISPLACEMENT RESETTLEMENT ACTIVITIES UNDER TATA STEEL PARIVAR

The aim of Tata Steel's Resettlement & Rehabilitation programme, Tata Steel Parivar is to ensure that stakeholders enjoy a "better tomorrow" or a quality of life better than experienced by them before the Company became a part of their eco-system.

Its theme rests on four "R-s":

- Reassuring Communication – 'Vision for a better tomorrow'
- Resettling the displaced population with care
- Rehabilitation – ensuring a better quality of life, income and happiness
- Recheck implementation through self and independent social audits.

Tata Steel Parivar has been designed with utmost sensitivity. The stages involved in the Tata Steel Parivar R&R processes are:

- Free interim arrangements at transit camps and provision of Temporary Shed Allowance
- Logistics support to facilitate the shifting process.
- Familiarisation process at the transit camps.
- The relocated family is provided with the necessary items of household need and helped to open a bank account
- Women of Tata Steel Parivar are encouraged to participate in self-help activities.
- Technical skills training provided to a family member in recognised Government / Company managed institutes or a one-time compensation in lieu of the job
- Building allowance and allotment of a housing plot
- Grievance redressal mechanism involving two-way communication

Relocation of Displaced Families

The total number of families to be shifted is 1234, of which 1011 were shifted as on July 1, 2014. Temporary shed allowances were received by 956 families, plots in the R&R colonies by 880 families. With 56 families opting for

self-rehabilitation a total of 932 have accepted their house building allowance. The Tata Steel Parivar Identity Card has been given to 283 families.

Nomination and Employment of Members of Displaced Families

Under its R&R scheme Tata Steel offers employment to one member of a displaced family. In 2013-14, a total of 700 families had nominated one member for employment in the Company. Of these 402 were called for an interview and 269 issued letters to join in July 2014. A total of 170 families have opted to take cash in lieu of employment. Alternative livelihoods through Navjeevan Cooperative Self Help Groups and the Navjeevan Cooperative are a vibrant source of social revolution in the area. More than 60% of the women under the Tata Steel Parivar scheme have launched income generation enterprises. They are engaged in activities such as Stitching, Painting, Poultry, Food Processing and Stationary. The Navjeevan Cooperative has 157 members and generated a revenue of Rs 92,78,272 in 2013-14. Wages amounting to Rs 9,25,369 were paid to its members with a profit/ production bonus of Rs 2,37,400 being distributed to them. The poultry unit generated the highest revenue.

Financial Strength of Self Help Groups

The financial status of the 506 members of the 36 Self Help Groups under Tata Steel Parivar has also improved considerably. They have mobilized savings of Rs 21,73,026 earning a bank interest of Rs 86,752 and Total Inter Lending amounting to Rs 7,37,482. The SHGs have taken bank loans of Rs 4,90,000.

Education and Scholarship interventions

Tata Steel has established nine pre-primary centres in the resettlement & rehabilitation colonies, six centres that use a combination of activities to maximize learning for students of classes 1 to 7 and three centres offer tutorial classes to student from classes 7 to 10. These 18 centres benefitted 487 children in 2013-14. In addition admission to residential schools was facilitated for 148 children and scholarship granted to 15 children for higher education. They took the total number of scholarships granted by Tata Steel to displaced persons since 2007-08 to 103.

Education and Health status

Adult Literacy classes offered at two centres significantly raise literacy levels among members of the Tata Steel Parivar scheme with another 57 people becoming functionally literate in 2013-14. The maternal mortality rate has also dropped to zero with much better levels of antenatal care, zero adolescence pregnancy and better understanding of family planning needs.

Artisanal and Small-Scale Mining

While India has a long tradition of artisanal and small-scale "rat-hole" mining the socio-economic impacts have not been enumerated and its does not form part of Government policy making. Artisanal mines are largely illegal in the coal and iron ore segment.

The uncertain nature of operations and environmental impact has made Tata Steel discourage "illegal" mining. It offers to meet the 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.

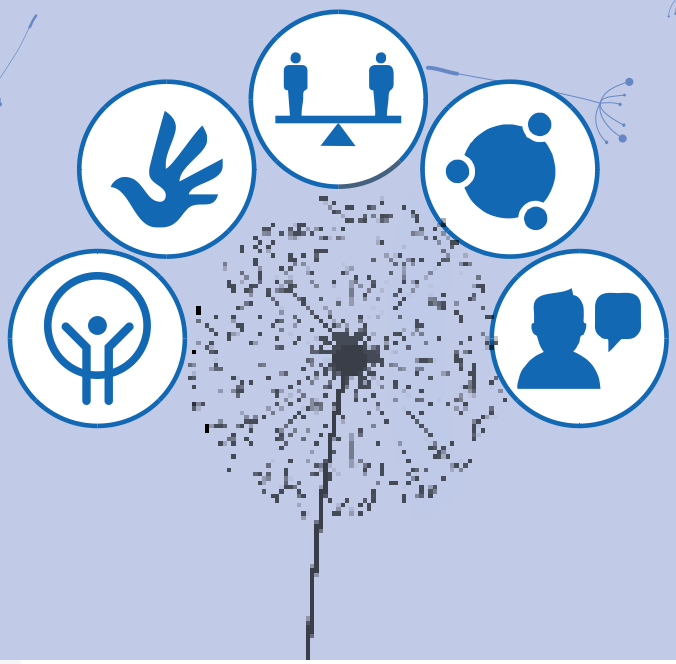
10 | PRODUCT RESPONSIBILITY

TATA STEEL'S SHORT AND LONG-TERM PLANS FOR DEVELOPMENT OF NEW PRODUCTS AND PROCESSES ARE LINKED TO ITS TECHNOLOGY STRATEGY.

A NEW LCA VERTICAL WAS CREATED UNDER THE R&D DEPARTMENT, WITH SPECIALISTS ASSIGNED TO THE TEAM.

IN 2013-14 AN ENVIRONMENT PRODUCT DECLARATION (EPD) STUDY WAS CARRIED OUT FOR TATA TISCON 500D.

Globalisation of business over the last decade has led to a transformation in Tata Steel's Research & Development environment. A Global R&D Board comprising the senior-most managers from across the world provide strategic direction, which is aligned to its overall corporate strategy. Technology is no longer a differentiator in the global marketplace. The key to success in the marketplace lies in two principal areas: (i) understanding and responding to customer requirements and (ii) meeting the needs of the ecosystem and the community so as to create a win-win-win solution for all stakeholders.



As the demand for steel progressively puts pressure on natural resources, the threats and opportunities that arise incentivise investments in product responsibility - the efficient use of mineral resources, the development of new technologies to enable the use of low grade raw materials, the improvement of energy efficiency and the use of alternative / renewable energy. In the area of product responsibility therefore the two key material sustainability issues for Tata Steel are (i) Resource Footprint and (ii) Development of new products and services to respond to the customer as well as be cost competitive through greater operational efficiency.

Tata Steel's Environment Policy provides direction on these material issues, asking for the "efficient use of natural resources & energy; reducing and preventing pollution; promoting waste avoidance and recycling measures; and product stewardship."

The Annual Business Plans, Short Term and Long-Term Technology Plans of Tata Steel emerge from an analysis of the Business Environment, identification and evaluation of strategic opportunities and risk assessment. The Business Environment analysis includes identification of new technologies, including ideas captured by the Marketing & Sales and Technology Groups on new product development from gaps identified or needs articulated by customers. Inputs are also garnered on emerging technologies, both domestically and internationally. Special task forces are constituted to study new developments in technology in relevant areas, as per need. All the New Projects are subjected to Environment Impact Assessment (EIA) to establish their impact on the ecosystem and the communities.

New operating regimes were adopted in 2013-14 to actualise Tata Steel's strategy for technological advancement. The year saw simultaneous developments on multiple fronts these include special grades for the automotive industry based on customer inputs on future requirements.

New Product Development (NPD) Process

Tata Steel's short and long-term plans for development of new products and processes are linked to its Technology Strategy, articulated in the Technology Road Map. Thrust areas are defined for bringing in breakthrough improvement in processes and products. A stage gate approach is followed to develop the breakthrough processes and products. These gates track the technology development progress. At the idea generation stage, benchmarking studies are carried out to identify the technology gaps and areas of research.

Tata Steel has distinct processes for (a) New Product Development, (b) Product and process improvements/ modifications.

In 2013-14 Tata Steel adopted an online Sustainability assessment of any New Product Development, which has four stages:

(i) Raw material supply & steel manufacturing, → (ii) Downstream processing → (iii) Usage of finished product → (iv) End of Life Recycling of the product,

Triple Bottomline Impact was introduced under 'Holding Gains' for improvement projects as well during the year.

Resource Footprint

Tata Steel pro-actively anticipates the future impacts of products and services through various measures, extending the scope of product responsibility beyond compliance to statutory standards and voluntary codes such as the Tata Code of Conduct and WorldSteel Association's sustainability charter.

Stakeholder	Proactive Measures
Environment	REIA, EIA for new projects, Carrying Capacity Study, LCA, EMS (ISO-14001)
Community & Society	Development and maintenance of infrastructure to take care of civic amenities, health care, education, family initiatives, livelihood creation, quality of life studies
Customer	Customer interactions, Customer satisfaction surveys, Focused Group discussions, CRM-IT system
Suppliers & Contractors	Strategic sourcing vendor evaluation, integration of EMS with Supply Chain, SA 8000 Implementation, eQ index vendor satisfaction surveys, Supplier Relationship Management (SRM)
Shareholders	Investment decision for higher ROI, diversification to improve EBITDA
Media & Global Community	Transparency through press conferences, performance reporting, GRI based Triple Bottom Line reporting, SA 8000 Implementation
Employees	Infrastructure for environment, health and safety, OHSAS-18001 implementation, SA 8000 Implementation, Du Pont Safety initiative, open communication channel with top management (e.g. MD Online QC, Suggestion Management, KM, JDCs etc.)

To respond to current, emerging and anticipated needs of customers, while providing product stewardship, Tata Steel has systematic processes that encourage and facilitate innovation. Broadly, the thrust of R&D at Tata Steel is on projects that meet its long term objectives and strategies of shaping the markets and industry, while immediate improvements and commercialisation of products are driven by Technology Groups responsible for Raw Materials, Iron Making, Long Products & Flat Products.

Technology and R&D improvements in 2013-14

High Impact Innovations
Bake-hardened, High-Strength, Low-Alloy steel (BHSLA) developed
Online sensing of alumina in iron ore
Superior quality of Coke
Technology to pre-empt shutdown in Blast Furnaces
High strength C-MN 440
Breakthrough in research for safer automobiles
Low Carbon Wire Rods (LCWR) suitable for high speed drawing

Long-term Strategic projects

Area	Project	Achievement
Resource Conservation		
Coke	Development of methodology to produce coke with CSR>70, CRI>28, AMS>52mm for stamp charging technology	Two pilot trials done
Iron making	Reduction in slag rate from 280 kg/t to 240 kg/t	Plant trial is on
Investments in New Products & Processes		
New product	Large area graphene coating for corrosion protection of steel	Pilot scale work is going on
	High Strength-bainitic Steel	Prototype trials

Implemented projects

Area	Initiative	Achievement in 2013-14
Resource Conservation	Iron Ore slime beneficiation	Process developed and proven in pilot scale
Product Development	SPFH 540 and SPFH 590	Started commercial production in TSCR

Other sustainability benefits and trials in 2013-14:

- Generation of first time ideas on "Solid Waste Utilization" led to six ideas being signed off, of which four were implemented
- Trials are underway for the use of LD slag to minimise lime consumption; use of slime briquettes in place of iron ore lump
- A LD slag granulation plant is being conceptualised
- ETP Sludge Co-Processing in Cement Industry (Tubes)
- A new model in road transportation- "Hire and Use" basis is being considered for reduction in dumper movement

LONG TERM SUSTAINABILITY THROUGH PRODUCT STEWARDSHIP

TQM based approach to innovation

Product and process improvements and an end-to-end focus on innovations is driven through a systematic TQM process. It has a two-pronged approach, both of which evaluate triple bottomline impacts across the lifecycle of the product.

a) *Inside the factory gate* - to take the company's product-based value propositions to the next level
Process: New Product Development process, Innovation Council and the I-Eureka process at Research & Development (R&D)

b) *Outside the factory gate* - to create differentiation based on solutions/services and business model innovation
Process: "Project Innovent" driven by Marketing & Sales

Innovation Council

The Research & Development department's Innovation Council drives the process inside the factory gate. Its most important task is idea generation, through an online portal - I-Eureka, to enable the researcher to engage in innovative research projects. The researcher is expected to defend the idea, including those raised on health & safety concerns.

Project Innovent

Outside the gate a structured approach to innovation in the market place is taken through the innovation platform Project Innovent, goverened by Marketing & Sales. Launched in 2013-14, it aims at institutionalising best-in-class innovation processes across industries, to constantly feed the innovation funnel.

The Innovent process has three well-defined stages, each having a distinct focus, the first being identifying the opportunity areas for the Company's businesses (frames). The Second Stage focuses on assessing preliminary sizing & feasibility, Concept prioritisation & Preparing Business plan, wherein risks related to health & safety issues are also addressed.

Work commenced on two frames in 2013 - i) Construction services for Industrialised Housing & Buildings, and ii) Increase Cold Rolled steel consumption in rural markets. While the first frame is being deliberated upon, the second frame has delivered two potential concepts: a) steel doors and b) steel furniture. The wood finish steel doors & furniture are green initiatives that will protect our green cover.

Life Cycle Analysis (LCA)

To provide customers with better understanding of the environmental footprint of its products based on a structured process, a new LCA vertical was created under the R&D department, with specialists assigned to the team. In 2013-14 an Environment Product Declaration (EPD) study was carried out for TATA TISCON 500D. Also accomplished was a detailed Cradle to Gate LCA study for TATA TISCON 500D - a special grade of high-strength rebar, along with a Cradle to Cradle study on alternate use of Iron Ore Slime in steel making.

The study identified opportunities for improving environmental performance in the steel production processes. Triple Bottomline benefits derived across the value chain as a result of the study include a 18% reduction in steel consumption per unit improving its CO_2 efficiency. The high-strength grade is both stronger and more ductile hence even as it makes construction safer, it is also safer when being bent at site by construction workers. The economic savings that accrue to the customer include a reduction in the amount of steel and cement used for unit construction.

Product Application Engineers

To ensure the best performance of products and informed choice by consumers, Tata Steel provides technical guidance on proper usage of it's products, use of the appropriate grades for diverse applications. It shares product and service information with customers and captures feedback on product quality. A service unique to Tata Steel is dedicated Product Application Engineers based in every region. They advise customers on appropriate applications for each product as well as generate insights on the development of New Product and Services.

Retail Communication

Communication to retail customers is through accredited agencies who adhere to the guidelines of the Advertising Standards Council of India, a self-regulatory voluntary organization of the advertising industry, for protection of the interests of consumers.

Other initiatives to promote innovation at Tata Steel:

Mind Over Matter

An open innovation platform launched in 2014, Mind Over Matter taps into the insights of students in select Indian Universities on innovation. Part of Tata Steel`s youth initiatives, it can be accessed through the Company's web service called valueabled.com. In 2013-14, nine themes were chosen for further work at the Steel Works along with the student team members from 140 proposed by R&D researchers.

Tata Innovista

Driven by the Tata Group Innovation Forum (a wing of Tata Quality Management Services of Tata Sons), Tata Innovista captures all innovations happening across the Tata companies. Tata Steel participates every year. Both dual flux pellets and the new bake-hardened, high-strength, low-alloy steel developed by Tata Steel were recognised in 2013-14.

Customer Satisfaction

Tata Steel has a network of 100 plus sales managers who directly interact with B2B customers and channel partners (for B2C customers) to manage their enquiry as a normal process.

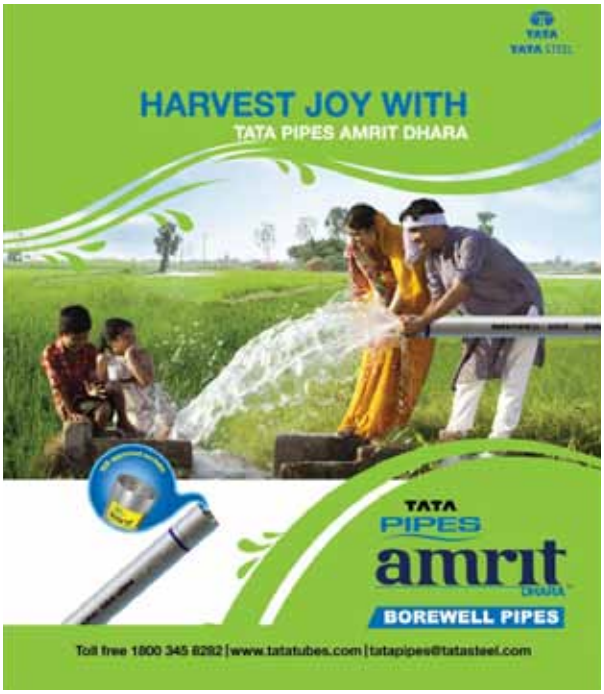
Platforms for sharing information on products and services

OEM customers	Retail Customers
Customer Value Management	Distributors/ Retailers Meets
Customer Page	Focus Group Discussion
Customer Visits by Sales Managers, Application Engineers, Plant Personnel and Senior Management	End users - Haat and Mela, Mason / Fabricators / Mistry meets
Driving Steel (Knowledge Sharing Session for Auto customers)	Influencer meets like Architect Meets / Fabricator Meets
Customer Meets / Customer Visits Feedbacks Customer Satisfaction Survey	Consumer Meets
Customer Service Team	Distributors
	Retailer Visits
	Customer Satisfaction Survey – Distributors, Retailers, SME Customers
	Call Centers (24 X 7)

Use of Technology to provide information to Customers

Tata Steel has leveraged technology to connect to, and build strong business relationships with the customer. The SAP CRM solution went live in 2012-13 for Customer Relationship Management for the steel, tubes and wires business. The Complaint module was launched in Q1 of 2013-14. Distributor and retail integration on a single IT platform integrates the channel partners in the extended supply chain.

Technologies	Application
SAP & TOC Dashboard	On-line order generation for TOC sales, Visibility of order progress, viz, in-transit stock and stock in ware-houses, TDCs, SDCs etc.
Corporate website www.tatasteel.com	Access to product, processes, customer wise needs and happenings in Tata Steel
Toll free number of 24 x 7 state of the art Call Centre with SLA and escalation structure	Customer queries, complaints, etc
Video Conference	Visual interaction through offices

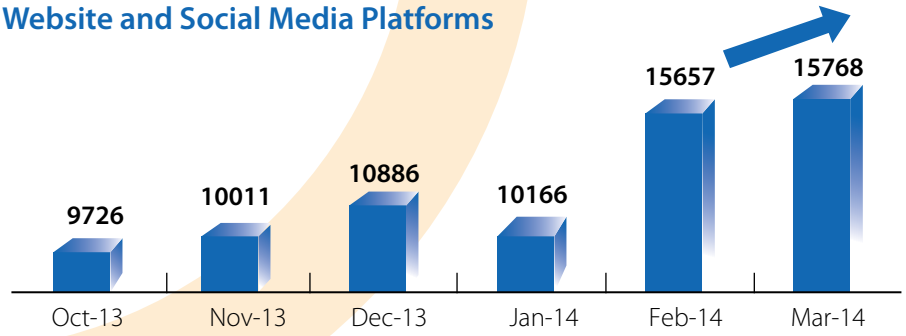


TATA TISCON goes digital to engage with consumers including tier II and smaller towns

To build awareness and brand affinity for Tata Tiscon among the individual house builders (IHBs) Tata Tiscon went digital in 2013-14 to allow access to information through the internet.

The Tiscon website was enhanced and mobile enabled with interactive features such as Ask Experts, Rebar Calculator, Mason Locator, etc. Social media (Facebook & Twitter) was leveraged to communicate, engage and create brand evangelists for Tata Tiscon.

No. of Consumers engaging with Tiscon through Website and Social Media Platforms



(Source: Website, Call Centre, Facebook & Tally)

Given the month on month growth in awareness, Tata Tiscon intends to integrate digital marketing endeavours with on ground activities to provide uniform brand experience to consumers as well as strengthen the engagement platforms for influencers – Architects & Engineers.

Mechanism for converting customer feedback into new products and services

Marketing & Sales and Technology Groups/ Product Application Groups capture requirements of the customers through various forums, identifying gaps between products offered and market needs. The methodologies to capture customer requirements, both stated and unstated, are distinct for Retail and the OE Business.

Monthly reviews facilitate product enhancements and New Product Development. Targets for new product development are set at an annual year workshop attended by the Technology Groups, Marketing & Sales, Planning and R&D. Each idea is evaluated not only for market attractiveness, technical and commercial feasibility but also resource management feasibility before the Voice of Customers flow into actions in the production & delivery system.

Tata Steel follows a 4-step process for value creation for customers:

1 Customer Need Identification	2 Analysis & Prioritization of needs	3 Selecting Ideas for Implementation	4 Piloting of Selected Ideas as Projects
Select and Deploy Listening & Learning Mechanisms	Completion of needs, analysis for customer insight and identification of prioritized needs	Evaluation of ideas to address the prioritized needs	Project execution through Cross Functional teams and stabilization & monitoring of ideas
TQM Tools - CST, QFD Observational techniques	TQM Tools - AHP, MVA, Cluster Analysis, Dr. Kano Model	TQM Tools - NPD process	TQM Tools - PS, TA, SIP, TOC

Addressing Four Customer Categories

Business to Business (B2B)
Large OEM using Steel as an input raw material and directly buying from Tata Steel

Business to Customer (B2C)
Small, indivicual consumers using steel as finished product and surved by the Retail network

Small & Medium Enterprises (B2SME)
Small and Fragmented customers, served through the distribution network

Channel Partners
Distributors and Retailers across India.

PROCESS AND PRODUCT IMPROVEMENTS

Process or product modification is initiated based on performance feedback from the customer, complaints, process change at the customer premises or benchmarking with a competitor's product. Customer Service Teams have introduced "Three Levels of Quality" to benchmark Tata Steel's product & service offerings w.r.t competition as well as to identify the latent needs of customers.

High Impact Innovations in 2013-14

Bake-hardened, High-Strength, Low-Alloy steel (BHSLA) developed

The new bake-hardened, high-strength, low-alloy steel (BHSLA) developed by Tata Steel has been the focus of steel research for quite some time because new BHSLA steel has the potential to replace the existing high-strength, low-alloy material used by automobile manufacturers across the world.

The new innovation holds tremendous business potential for Tata Steel. Use of these advanced steels with tensile strength beyond 500 MPa will radically change the auto sector allowing the industry to produce lighter, faster, safer and more fuel efficient vehicles. A reduction in the vehicle weight without compromising crash-safety will cut fuel consumption significantly, consequently reducing greenhouse gas emissions.

Online sensing of alumina in iron ore

A joint effort by Tata Steel R&D and CSIR-NML led to the development of a low cost, online system for detection of alumina, as the higher alumina in Indian ores affects blast furnace productivity. Now effective blend planning and reduction of impurities is possible.

Superior quality of Coke

To achieve a reduction in its carbon rate and reduce CO_2 emissions Tata Steel is pursuing a project to produce superior quality coke under stamp charge conditions without deterioration in the health of the oven. The superior quality coke has generated improvement in some operating methods with savings in energy and reduction in CO_2 emissions. On being proved on a laboratory scale in 2013-14, plant trials were initiated at the Coke Plant.

Technology to pre-empt shutdown in Blast Furnaces

Tata Steel R&D has developed a technology to measure the remnant thickness of copper staves in blast furnaces, which protecting the outer steel shell by cooling the bosh and stack area and preventing thermal overload. Frequently updated knowledge of their remnant thickness is of high importance to operate the blast furnace safely. The technology will increase the campaign life of the blast furnace by reducing unplanned outages. A patent has been filed for the technology developed.

High strength C-MN 440

A cold rolled high-tensile material for the passenger vehicle segment, it has helped localise this grade. Manufactured through the Batch Annealing Furnace as against Continuous Annealing Process deployed overseas, this product make cars lighter, allowing them to use less fuel and effect large energy savings throughout the life cycle of the vehicle. The sales of C-Mn 440 increased from 22,900 tons in 2012–13 to 23,800 tons in 2013-14.

Breakthrough in research for safer automobiles

Side Door-Impact Beams (SIB) in automobiles ensures better crash performance by absorbing shocks during impacts on the sides of a car. Till recently material imported by POSCO was used for this application. Tata Steel Tubes Division mooted the idea to the R&D team, which helped it developed a medium carbon boron-added hot rolled thin strip steel to meet this demand.

The first trial was encouraging, therefore fine-tuning of final heat treatment parameters are in progress to consistently achieve the required properties with the support of the end customer.

Low Carbon Wire Rods (LCWR) suitable for high-speed drawing

The ER70S6 grade of Wire Rods can be drawn at a speed of 15-20 m/s against the present WR3M grade that was drawn at a speed of 8-10 m/s for producing continuous welding electrode by our customers. It has increased the productivity of Continuous Welding Electrode producers saving power and water consumption at their premises.

COMMERCIALISATION DURING 2013–14

The development process is steered by Advanced Product Quality Planning (APQP). The process chart and process routes are designed and quality control measures to meet the Technical Delivery Conditions are established. Once the trial quantity is successfully manufactured, the product is offered to customer for trials as per customer's approval procedure, with the performance of the product monitored by the concerned Application Engineers.

Once the product performs successfully at all stages of customer's trial and approval process, the product is taken up for commercial production.

(i) **Fire resistance steel:** A micro-alloyed steel it has a fire resistance ratio/yield ratio greater than 0.5. The steel is specifically designed for high-rise buildings, airport structures, stadiums and auditoriums.

(ii) **ROHS compliant material for Galvano:** Additional lead is not added to the coating bath for Galvano, a Zero Spangled Galvanized Product making it eco-friendly. 'Galvano' (Branded Galvanised Plain sheets), is now also ROHS Complaint due to replacement hexa-chromate chemical making it a safe and environment friendly product.

(iii) **Skin Panel, High Tensile and GA:** Tata Steel improved its sales mix and sale of Skin Panel has gone up from 75,000 tons in FY-13 to 83,600 tons in FY-14, clocking an 11% growth. The skin panel helps customers in localization, preventing the need to import such materials. Out of total skin panel sales, the sales of high-tensile steel, C-Mn 440 grade, has gone up from 22,900 tons in FY-13 to 23,800 tons in FY-14. The high tensile skin panel helps in safer, light-weight, fuel efficient cars.

(iv) **Thinner and Wider Galvanised Corrugated sheet:** Production commenced at CGL#3 and was streamlined within three months ensuring availability of the product.

Consolidating new solutions Value Analysis Value Engineering (VAVE)

Tata Steel's Quality Vision is to be "the most trusted and preferred domestic supplier of value added steel." New steels are seamlessly integrated into the vehicle components and production processes of customers Tata Steel's VAVE (Value Analysis and Value Engineering) service. It is an engagement programme with its Automotive OEM customers, to enable them to reduce the carbon footprint in the life cycle of a vehicle by reducing steel consumption in the vehicle and conservation of natural resources. Tata Steel is the first steel company to start VAVE activities in India, requiring trust and confidence between both the Company as a supplier and the Auto customers. Two challenging projects supported by the cross-functional teams from Operations, Technology Group and R&D were completed leading to significant weight reduction in two models.

Base of the Pyramid Solutions

Nest-In is the steel housing solution aimed at providing comfortable living conditions for the relatively less affluent rural population. This light gauge steel frame construction solution made from cold rolled high strength galvanised steel, provides a simple and quick solution to building houses. It is eco-friendly as the construction process is almost dry and does not waste resources or pollute the environment by using cement & water. A typical house is finished in nine days. At the end of 2013-14 an area of more than 80,000 square feet across India was covered under Nest-In. 130 Nest-In houses were built in 2013-14. Of this 40,000 square feet were built for 88 class rooms in 24 Government Schools to restored normalcy in areas affected by Cyclone Phailin in the state of Odisha. Another 500 square feet comprising 10 units were built for victims of the Himalayan tsunami in Uttarakhand.

Nest-In Bio-toilet

The Nest-In Bio-toilet is an integrated solution, made up of a Bio-toilet system and Nest-In super structure. It consumes around 300 Kg of steel and can be installed in four days time. Commercialised in 2012-13, it can be installed at any location, as it does not require a sewage-line connection for disposal of waste from toilets, creating a much cleaner and hygienic environment especially in public places. The bio-toilet was developed using the bio digester solution of DRDO which disposes human waste in a 100% eco-friendly manner and generates colourless and odourless water. Around 50 such bio toilets were built in 2013-14.

Roof Junction

It is a one-stop roof installation service for retail and institutional consumers. This service encompasses one-stop buying of all roofing-related products, transparent pricing of product and service, installation of roof by trained fabricators within assured timelines as well as free maintenance service. Modern techniques by expert and trained fabricators ensure optimal usage of steel components at standardized costs resulting into savings for the consumer by avoiding wastage. In 2013-14, a total of 251 Roof Junction Projects were completed compared to 42 in 2012-13, taking the number of installations in the country to 1000 consumers.

TISCON ReadyBuild Brand

A customized cut and bend (CAB) rebar solution it is sold in the processed form to Construction Project customers across the country. The CAB (ready-to-use product) reduces rebar wastage at the customer premises and also reduces project time.

New Products

Wire Division launches `Farming Gold' at Nashik

Tata Steel's 'Farming Gold' offers a farmer the distinct advantage of an increase in the life of the wires on their farm through proper installation and application of wires, leading to a reduction in the life cycle cost to the farmers.

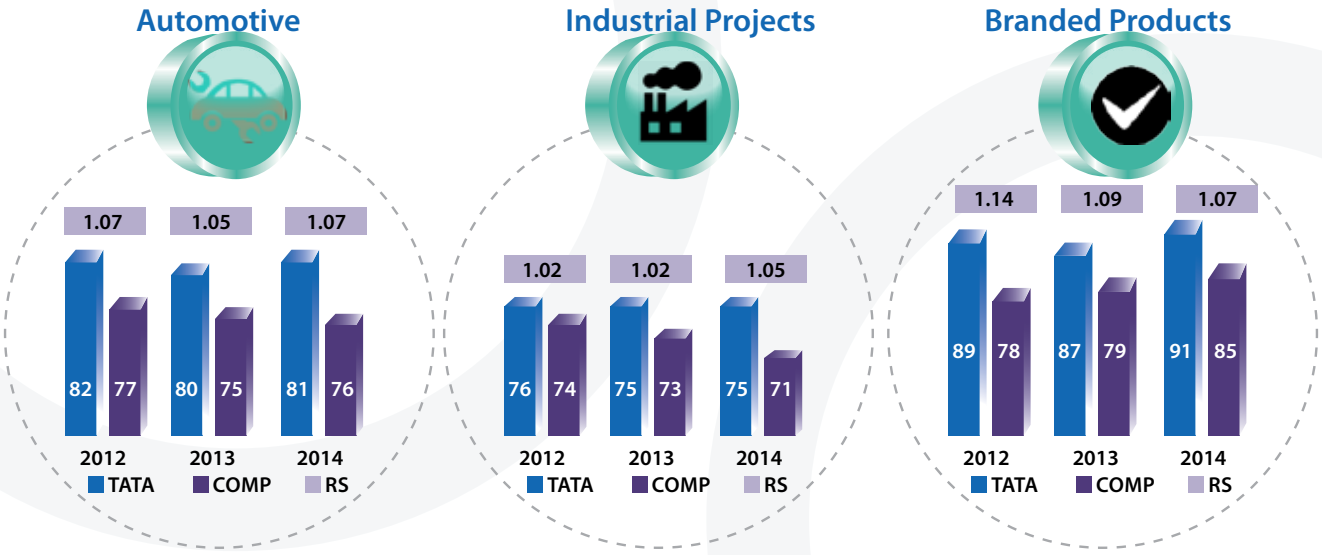
Ground Granulated BF Slag (GGBS)

Widely used in developed economies for years and, more recently in major construction projects in India, GGBS was introduced by Tata Steel in Indian markets. The new value added product for the construction industry promises to be a sustainable and cost-effective material that will not only increase the compressive strength and durability of concrete but also significantly reduce the carbon footprint of the downstream product.

Customer Satisfaction Studies

Customer Satisfaction is evaluated through regular Customer Satisfaction Studies done for each segment of the market through renowned third party agencies. In 2013-14 the survey was conducted by CSMM (A Specialist Unit of IMRB International). Among the process improvements introduced in the survey for 2013-14 the questionnaire included attributes to strengthen feedback on Business Ethics and Sustainability aspects in the 'Company Imagery' section. The volume coverage across segments was ~80%.

Tata Steel's CSI score is better than competition indicating it is a supplier of choice in chosen segments



RS: Relative Score; RS More than 1 means Tata Steel is better than competition

Note: *In 2013, the Survey Agency was changed as a standard process of changing the agency every three years and two new attributes viz. "Technical Support" and "Company Personnel" were added.*

The survey provided the opportunity to list feedback and taken action to improve Tata Steel's ability to meet and exceed customer expectations.

Customer Complaint Handling

Tata Steel has a closed loop CRM_IT system for handling complaints from customers. No complaint related to violations on the health & safety impacts of its products, non-compliance to regulations on product and service information, marketing communications or customer privacy was reported during the year.

ABBREVIATIONS & GLOSSARY OF TERMS

A		
AA	:	Affirmative Action
ABP	:	Annual Business Plan
AIDS		Acquired Immune Deficiency Syndrome
AHSS	:	Advanced High Strength Steel
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		
BO&S	:	Business Objectives & Strategies
Brown-field Expansion Capacity	:	expansion within existing manufacturing plant area.
BF	:	Blast Furnace
BF-BOF	:	Blast Furnace - Basic Oxygen Furnace (Steel Making)
BOT	:	Biological Oxidation Treatment
C		
CaO	:	Calcium Oxide
CAPL	:	Continuous Annealing and Processing Line
Captive reserves	:	Tata Steel's own raw materials mines (both Iron Ore and Coal)
CC	:	Clean Coal
CDQ	:	Coke Dry Quenching
CGL	:	Continuous Galvanizing Line
Chosen Segments	:	Intended Market Segment (Automotive, Re-bar etc.)
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
Coal Beneficiation	:	Process of cleaning the raw coal coming from mother earth and making ready for next process.
COGD	:	Coke Oven Gas Desulphurisation
CO_2	:	Carbon Dioxide
Coke	:	A hard lumpy form of coal after heating at very high temperature to release moisture and volatile matter
Coking Coal	:	Metallurgical grade coal used for making Coke
CRM	:	Cold Rolling Mill
CSD	:	Customer Service Department
CSI	:	Customer Satisfaction Index / Coke Sinter Iron
CSR	:	Corporate Social Responsibility
CSS	:	Corporate Sustainability Services
CST	:	Customer Service Team
CTO	:	Consent To Operate
CVM	:	Customer Value Management
CVR	:	Customer Visit Report
D		
DAP	:	Deming Application Prize
DM	:	Daily Management
DGP	:	Deming Grand Prize
E		
EBIDTA	:	Earnings Before Interest, Taxes, Depreciation and Amortization
EC	:	Environmental Clearance
EPA	:	External Processing Agent

E		
eQ Index Measurement index -	:	Trademark of AC Nielsen (independent survey agency)
EVA	:	Economic Value Addition
EHI	:	Employee Happiness Index
ESI	:	Employee Satisfaction Index
ESP	:	Electrostatic Precipitator
F		
FAP	:	Ferro Alloys Plant
FAMD	:	Ferro Alloys & Minerals Division
Fe	:	Iron
FP	:	Flat Products
FY or fy	:	Financial Year (Starts with 1st April of one year and ends with 31st March of next year)
G		
GCP	:	Gas Cleaning Plant
GHG	:	Green House Gas
GI	:	Galvanized (Zinc Coated Steel Sheets)
Green Field	:	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
IMR	:	Infant Mortality Rate: No. of infant deaths within 1 year of age for 1000 live births
ILO	:	International Labour Organization
IOM	:	Iron Ore Mines
IR	:	Industrial Relations
J		
Jharia	:	Coal Mine – under RM Division near Dhanbad
JWQC	:	Joint Works Quality Council
Jigging Process	:	Process of separating iron ore fines by density differentiation.
Jharia	:	Coal Mine – under RM Division near Dhanbad
JWQC	:	Joint Works Quality Council
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K		
KM	:	Knowledge Management
KPI	:	Key Performance Indicator. KPI and KPM are used synonymously
KPM	:	Key Performance Measure, KPM and KPI are used in the same context
KT	:	1000 Tonne
KVHS	:	"Kar Vijay Har Shikhar" a Hindi phrase and its meaning is Conquering All Peaks

K		
kg/tcs	:	kilogram/tonne crude steel
ktpa	:	1000 tonnes
L		
LD	:	Linz Donawitz
LD#1, LD#2, LD#3	:	Name of Steel Making Facility
LD3 & TSCR	:	LD#3 and Thin Slab Casting & Rolling
LP	:	Long Products
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.
LD	:	Linz Donawitz
LD#1, LD#2, LD#3	:	Name of Steel Making Facility
LD3 & TSCR	:	LD#3 and Thin Slab Casting & Rolling
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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^3	:	Cubic metre
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
MGD	:	Million Gallons per Day
MGM	:	Manganese Group of Mines
MOU	:	Memorandum of Understanding
MT, mt	:	Million Tons
mtpa or MTPA	:	Metric Ton Per Annum
MoEF	:	Ministry of Environment & Forest and Climate Change
MW	:	Mega Watt
N		
NPD	:	New Product development
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 in Noamundi, Jharkhand and Joda, Orissa
P		
PAG	:	Product Application Group
PCI	:	Pulverised Coal Injection
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
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		
ROIC	:	Return on Invested Capital
R&D	:	Research & Development
Ref.	:	Reference

R		
RM or RMD	:	Raw Materials, a division of Tata Steel which supplies coal and iron ore to Steel Business
RO	:	Reverse Osmosis
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
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
SOP	:	Standard Operating Procedure
SO_2	:	Sulphur Dioxide
SS	:	Shared Services
SVM	:	Supplier Value Management
T		
TCS, tcs	:	Tonne of Crude Steel
TG	:	Technology Group
TMDC	:	Tata Management Development Center
TOC	:	Theory of Constraints
TPM	:	Total Productive Maintenance
TQM	:	Total Quality Management
TRT	:	Top Gas Pressure Recovery Turbine
TS Alloys	:	TS Alloys Ltd, a subsidiary
TSCR	:	Thin Slab Casting and Rolling
TSL	:	Tata Steel Limited
Tss, tss	:	tonnes of saleable steel
U		
Ultimate tensile strength	:	The maximum load which a material can withstand before necking in while stretching
UOM or UoM	:	Unit of measurement
Upskilling	:	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
WSA	:	Worldsteel Association (worldsteel)
Y		
Yield	:	Output of process divided by Input to the process.
YS	:	Yield Strength (measure of mechanical properties)
OTHERS		
4Q	:	4 Quadrant

GRI G3.1 CONTENT INDEX - MINING & METALS SECTOR SUPPLEMENT (APPLICATION LEVEL A+)

STANDARD DISCLOSURES PART I

	Description	Reported	Page	Response / UNGC CoP
1. Strategy and Analysis				
1.1	Statement from the most senior decision-maker of the organization.	●	Page 1	DA / Statement of continuing support
1.2	Description of key impacts, risks, and opportunities.	●	Page 5	DA
2. Organizational Profile				
2.1	Name of the organization.	●	Page 16	DA
2.2	Primary brands, products, and/or services.	●	Page 16	DA
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	●	Page 16	Direct Answer / www.tatasteel.com/ www.tatasteelindia.com
2.4	Location of organization's headquarters.	●	Page 16	DA
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	●	Page 16/ 18	DA
2.6	Nature of ownership and legal form.	●	Page 16	DA
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	●	Page 16	DA
2.8	Scale of the reporting organization.	●	Page 19	DA
2.9	Significant changes during the reporting period regarding size, structure, or ownership.	●	Page 20	DA/ Annual Report
2.10	Awards received in the reporting period.	●	BIC	DA
3. Report Parameters				
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	●	Page 22	DA
3.2	Date of most recent previous report (if any).	●	Page 22	DA
3.3	Reporting cycle (annual, biennial, etc.)	●	Page 22	DA
3.4	Contact point for questions regarding the report or its contents.	●	Page 23	DA
3.5	Process for defining report content.	●	Page 22	DA
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.	●	Page 23	DA
3.7	State any specific limitations on the scope or boundary of the report (see completeness principle for explanation of scope).	●	Page 23	DA
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	●	Page 23	DA
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report. Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols.	●	Page 23	DA

3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g.,mergers/acquisitions, change of base years/periods, nature of business, measurement methods)	●	Page 23	DA
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	●	Page 23	DA
3.12	Table identifying the location of the Standard Disclosures in the report.	●	Pages 126 174	DA
3.13	Policy and current practice with regard to seeking external assurance for the report.	●	Page 30	DA
4. Governance, Commitments, and Engagement				**UNGC CoP 1-10**
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	●	Page 26	Annual Report Pages 99-128
4.2	Indicate whether the Chair of the highest governance body is also an executive officer.	●	Page 26	Annual Report Pages 99-128
4.3	For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members.	●	Page 26	Cross-reference/ Annual Report page 83
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	●	Page 32	DA / Annual Report Page 88
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	●	Cross reference	Annual Report Pages 99-128
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	●	Page 28	Annual Report Pages 99-128
4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.	●	Cross reference	Annual Report Pages 99-128
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	●	Page 26/27	DA
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	●	Page 26	DA
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	●	Cross reference	Annual Report Pages 99-128
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization.	●	Page 44/ 106	DA / Principle 7
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	●	Page 27/ 34	DA
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization: * Has positions in governance bodies; * Participates in projects or committees; * Provides substantive funding beyond routine membership dues; or * Views membership as strategic.	●	Page 27/34	DA
4.14	List of stakeholder groups engaged by the organization.	●	Page 31	DA
4.15	Basis for identification and selection of stakeholders with whom to engage.	●	Page 27	DA

4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	●	Page 30	DA
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	●	Page 30	DA

STANDARD DISCLOSURES PART II & PART III

ECONOMIC				UNGC CoP 1, 4, 6, 7
DMA	Economic performance	●	Page 38	DA
DMA	Market presence	●	Page 38	DA
DMA	Indirect economic impacts	●	Page 39	DA
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	●	Page 40	DA
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change.	●	Page 40	DA / Principle 7
EC3	Coverage of the organization's defined benefit plan obligations.	●	Page 40	DA
EC4	Significant financial assistance received from government.	●	Page 40	None
EC5	Range of ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation.	●		Cross referenced to LA 14
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	●	Page 41	Direct Answer
EC7	Procedures for local hiring and proportion of senior management and workforce hired from the local community at significant locations of operation.	●	Page 41-42	DA / Principle 6
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	●	Page 42	DA
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts.	●	Page 39/91	DA
ENVIRONMENTAL				**UNGC COP 7, 8, 9**
DMA	Materials	●	Page 47-48	DA
DMA	Energy	●	Page 45-50	
DMA	Water	●	Page 45-50	
DMA	Biodiversity	●	Page 45-50	
DMA	Emissions, effluents and wasteCOMM	●	Page 45-50	
DMA	Products and services	●	Page 45-50	
DMA	Compliance	●	Page 45-50	
DMA	Transport	●	Page 57	
DMA	Overall	●	Page 47	
EN1	Materials used by weight or volume.	●	Page 52	DA / Principle 8
EN2	Percentage of materials used that are recycled input materials.	●	Page 53	DA / Principle 8,9
EN3	Direct energy consumption by primary energy source.	●	Page 54	DA / Principle 8

EN4	Indirect energy consumption by primary source.	●	Page 54	DA / Principle 8
EN5	Energy saved due to conservation and efficiency improvements.	●	Page 56	DA / Principle 8,9
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	●	Page 57	DA / Principle 8,9
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	●	Page 57	DA / Principle 8,9
EN8	Total water withdrawal by source.	●	Page 61	DA / Principle 8
EN9	Water sources significantly affected by withdrawal of water.	●	Page 62	DA / Principle 8
EN10	Percentage and total volume of water recycled and reused.	●	Page 62	DA / Principle 8,9
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	●	Page 63-65	DA / Principle 8
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	●	Page 63	DA / Principle 8
MM1	Amount of land (owned or leased, and managed for production activities or extractive use) disturbed or rehabilitated.	●	Page 64	DA / Principle 8
EN13	Habitats protected or restored.	●	Page 63	DA / Principle 8
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.	●	Page 65	DA / Principle 8
MM2	The number and percentage of total sites identified as requiring biodiversity management plans according to stated criteria and the number (percentage) of those sites with plans in place.	●	Page 66	DA / Principle 8
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	●	Page 66	DA / Principle 8
EN16	Total direct and indirect greenhouse gas emissions by weight.	●	Page 49	DA / Principle 8
EN17	Other relevant indirect greenhouse gas emissions by weight.	●	Page 49	DA / Principle 8
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	●	Page 56	DA / Principle 7, 8, 9
EN19	Emissions of ozone-depleting substances by weight.	●	Page 58	DA / Principle 8
EN20	NOx, SOx, and other significant air emissions by type and weight.	●	Page 57	DA / Principle 8
EN21	Total water discharge by quality and destination.	●	Page 63	Only at Steel Works/ Zero Discharge at Mines and Collieries / 8
EN22	Total weight of waste by type and disposal method.	●	Page 58	DA / Principle 8
MM3	Total amounts of overburden, rock, tailings, and sludges and their associated risks.	●	Page 59	DA / Principle 8
EN23	Total number and volume of significant spills.	●	Page 59	None / Principle 8
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	●	Page 59	Not applicable / Principle 8
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	●	Page 61-62	DA / Principle 8
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	●	Page 59-60	DA / Principle 7, 8, 9
EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	●	Page 61	DA / Principle 8, 9
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	●	Page 29, 53	None / Principle 8

EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	●	Page 57	DA / Principle 8
EN30	Total environmental protection expenditures and investments by type.	●	Page 52	DA / Principle 7, 8, 9
SOCIAL: LABOUR PRACTICES AND DECENT WORK				**UNGC CoP 1, 3, 6**
DMA	Employment	●	Page 68	DA
DMA	Labor/management relations	●	Page 68	DA
DMA	Occupational health and safety	●	Page 69	DA
DMA	Training and education	●	Page 70-71	DA
DMA	Diversity and equal opportunity	●	Page 68	DA
DMA	Equal remuneration for women and men	●	Page 68	DA
LA1	Total workforce by employment type, employment contract, and region, broken down by gender.	●	Page 73	DA
LA2	Total number and rate of new employee hires and employee turnover by age group, gender, and region.	●	Page 72	DA / Principle 6
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	●	Page 76/77	DA
LA15	Return to work and retention rates after parental leave, by gender.	●	Page 73	
LA4	Percentage of employees covered by collective bargaining agreements.	●	Page 73	Principle 1, 3
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	●	Page 30	DA / Principle 3
MM4	Number of strikes and lock-outs exceeding one week's duration, by country.	●	Page 30	None / Principle 1
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	●	Page 75	DA / Principle 1
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and by gender.	●	Page 77	DA / Principle 1
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	●	Page 76	DA / Principle 1
LA9	Health and safety topics covered in formal agreements with trade unions.	●	Page 75	DA / Principle 1
LA10	Average hours of training per year per employee by gender, and by employee category.	●	Page 73	DA / Principle 1
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	●	Page	DA
LA12	Percentage of employees receiving regular performance and career development reviews, by gender.	●	Page 73	DA
LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	●	Page 76/73	DA / Principle 1, 6
LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.	●	Page 68	DA / Principles 1, 6
SOCIAL: HUMAN RIGHTS				**UNGC CoP 1 - 6**
DMA	Investment and procurement practices	●	Page 81	DA
DMA	Non-discrimination	●	Page 81	DA

DMA	Freedom of association and collective bargaining	●	Page 33	DA
DMA	Child labor	●	Page 80	DA
DMA	Prevention of forced and compulsory labor	●	Page 80	DA
DMA	Security practices	●	Page 81	DA
DMA	Indigenous rights	●	Page 81	DA
DMA	Assessment	●	Page 81	DA
DMA	Remediation	●	Page 81	DA
HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening.	●	Page 82-83	Significant Suppliers/ Principles 1 – 6
HR2	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken.	●	Page 84	Significant Suppliers / Principles 1 – 6
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	●	Page 84	All employees are covered through training on Tata Code of Conduct/ Principles 1 – 6
HR4	Total number of incidents of discrimination and corrective actions taken.	●	Page 29	Number of concerns raised have been reported with breakup of categories under Chapter 4/ Management of Business Ethics / Principles 1,2,6
HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.	●	Page 82-83	DA / Principles 1, 2, 3
HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor.	●	Page 84	DA / Principles 1, 2, 5
HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor.	●	Page 84	DA / Principles 1, 2, 4
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.	●	Page 80	DA / Principles 1, 2
MM5	Total number of operations taking place in or adjacent to Indigenous Peoples' territories, and number and percentage of operations or sites where there are formal agreements with Indigenous Peoples' communities.	●	Page 80	DA
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.	●	Page 81	Number of concerns raised have been reported with breakup of categories under Chapter 4/ Management of Business Ethics /
HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.	●	Principles 1, 2	DA / Principles 1 - 6
HR11	"Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms."	●	Page 29	Number of concerns raised have been reported with breakup of categories under Chapter 4/ Management of Business Ethics / 1 - 6
SOCIAL: SOCIETY				**UNGC CoP 10**
DMA	Local communities	●	Page 88	DA
DMA	Artisanal and small-scale mining	●	Page 100	DA

DMA	Resettlement	●	Page 99	DA
DMA	Closure planningCOMM	●	Page 89	DA
DMA	Grievance mechanisms and procedures	●	Page 30	DA
DMA	Emergency Preparedness	●	Page 77	DA
DMA	Corruption	●	Page 33	Cross referenced to Chapter
DMA	Public policy	●	4/ Management of Business	DA
DMA	Anti-competitive behavior	●	Ethics	DA
DMA	Compliance	●	Page 35	DA
SO1	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.	●	Page 88	DA
SO1 (G3.1)	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	●	Page 88-98	DA
MM6	Number and description of significant disputes relating to land use, customary rights of local communities and Indigenous Peoples.	●	Page 99	DA
MM7	The extent to which grievance mechanisms were used to resolve disputes relating to land use, customary rights of local communities and Indigenous Peoples, and the outcomes.	●	Page 30/99	DA
MM8	Number (and percentage) or company operating sites where artisanal and small-scale mining (ASM) takes place on, or adjacent to, the site; the associated risks and the actions taken to manage and mitigate these risks.	●	Page 99	DA
MM9	Sites where resettlements took place, the number of households resettled in each, and how their livelihoods were affected in the process.	●	Page 99-100	DA
MM10	Number and percentage of operations with closure plans.	●	Page 89	DA
SO9	Operations with significant potential or actual negative impacts on local communities.	●	Page 88-89	DA
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.	●	Page 99	DA
SO2	Percentage and total number of business units analyzed for risks related to corruption.	●	Page 28	Cross referenced to Chapter
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures.	●	4/ Management of Business	Cross referenced to Chapter 4/ Management of Business Ethics / 10
SO4	Actions taken in response to incidents of corruption.	●	Ethics / 10	Number of concerns raised have been reported with breakup of categories under Chapter 4/ Management of Business Ethics / 10
SO5	Public policy positions and participation in public policy development and lobbying.	●	Page 35	DA / Principle 1 - 10
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	●	Page 40	None / Principle 10
SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	●	Page 29	None
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	●	Page 29	No pending non-monetary actions
SOCIAL: PRODUCT RESPONSIBILITY				**UNGC CoP 1-8**
DMA	Materials stewardship	●	Page 102-103	DA
DMA	Customer health and safety	●	Page 104	DA

DMA	Product and service labelling	●	Page 105	DA
DMA	Marketing communications	●	Page 106	DA
DMA	Customer privacy	●	Page 112	DA
DMA	Compliance	●	Page 112	DA
MM11	Programs and progress relating to materials stewardship.	●	Page 105/ 109	DA
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	●	Page 105	DA / Principle 1
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	●	Page 105	DA / Principle 1
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	●	Page 106	DA / Principle 8
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	●	Page 114	DA / Principle 8
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	●	Page 106/112	DA
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	●	Page 112	DA
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.	●	Page 106	DA
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	●	Page 112	DA / Principle 1
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	●	Page 29/ 116	DA

KEY

● : Fully Reported

DA : Fully Reported/ Direct Answer

UNGCCoP: United Nations Global Compact Communication on Progress

INDEPENDENT ASSURANCE STATEMENT

Introduction

DNV GL represented by DNV GL Business Assurance India Private Limited ('DNV GL') has been commissioned by the management of Tata Steel Limited ('Tata Steel' or 'the Company') to carry out an independent assurance engagement on the Company's Corporate Sustainability Report 2013 -14 ('the Report') in its printed format. This assurance engagement has been conducted against the Global Reporting Initiative 2011 Sustainability Reporting Guidelines Version 3.1 (GRI G3.1) and AccountAbility's AA1000 Assurance Standard 2008 ((AA1000AS (2008)). The verification was conducted during November-December 2014, for the year of activities covered in the Report i.e. 1st April '2013 to 31st March' 2014.

The intended user of this Assurance Statement is the management of the Company. The management of the Company is responsible for all information provided in the Report as well as the processes for collecting, analysing and reporting the information presented in the printed Report. Our 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. We expressly disclaim any liability or co-responsibility for any decision a person or entity would make based on this Assurance Statement.

Scope, Boundary and Limitations of Assurance

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

- The content of the Report i.e. Review of the policies, initiatives, practices and performance described in the Report as well as references made in the Report to Tata Steel's Annual Report 2013-14;
- Review of Tata Steel's Corporate Sustainability Report 2013-14 so developed as per Application Level A of the GRI G3.1 Guidelines and GRI's Mining and Metals Sector Supplement (MMSS)
- Evaluation of the AccountAbility principles and specified performance information, described below, for a Type 2, moderate level of assurance, in accordance with the requirements of AA1000AS (2008) detailed below:
- Information relating to the Company's sustainability issues, responses, performance data, case studies and underlying systems for the management of such information and data;
- Information relating to the Company's materiality assessment and stakeholder engagement processes;
- Confirmation that the Report meets the requirements of GRI G3.1 for an Application Level A+, as declared by the Company.

The reporting boundary is as set out in the Report i.e. the reporting boundary covers the operations from Tata Steel's assets in India i.e. the Company's Steel Business Unit, Raw Materials operations, and three profit centres - Ferro Alloys & Minerals Division, Tubes Division and Wires Division. During the assurance process, we did not come across limitations to the scope of the agreed assurance. The reported data on economic performance is based on audited financial statements by the Company's statutory auditors. No external stakeholders were interviewed as part of this assurance engagement.

Verification Methodology

This assurance engagement was planned and carried out in accordance with AA1000AS (2008) and the DNV GL Protocol for Verification of Sustainability Reporting ('VeriSustain' - www.dnv.com/moreondnv/cr/; available on request). The Report has been evaluated against the following criteria:

- Adherence to the principles of ***Inclusivity, Materiality*** and ***Responsiveness*** as set out in AA1000AS (2008) and the ***Reliability*** of specified sustainability performance information, as required for a Type 2, moderate level assurance engagement,
- Adherence to the additional principles of Completeness and Neutrality as set out in VeriSustain, and
- The principles and requirements of GRI G3.1 and the Mining and Metals Sector Supplement (MMSS) for an Application Level A+.

As part of the engagement, we have verified the statements and claims made in the Report. In doing so, we have:

- Reviewed the Company's approach to stakeholder engagement and its materiality determination process;
- Verified the sustainability-related statements and claims made in the Report and assessed the robustness of the data management system, data accuracy, information flow and controls;
- Examined and reviewed documents, data and other information made available by the Company;
- Visited the Marketing & Sales Office at Kolkata, Steel Works and Tata Tubes Division in Jamshedpur, Noamundi Mines in Jharkhand, and Wires Division in Mumbai.
- Conducted interviews with key representatives including data owners and decision-makers from different divisions and functions of the Company;
- 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 information included in the Report.

Conclusions

Tata Steel's Corporate Sustainability Report, 2013-14, provides a fair representation of the Company's sustainability policies, objectives, management approach and performance during the reporting period. The Company has implemented management systems with sustainability as the focus, to manage its key sustainability parameters. We confirm that the Report, along with the referenced information

to Annual Report and in the Company's website, meets the general content and quality requirements of GRI G3.1 and the MMSS. We confirm that the Report meets the requirements for GRI Application Level A+ as declared by the Company. We have evaluated the Report's adherence to the following principles on a scale of **'Good', 'Acceptable' and 'Needs Improvement'**

AA1000AS (2008) Principles

Inclusivity: As a part of its stakeholder engagement process, the Company has conducted an independent stakeholder engagement to identify the material issues scientifically and ensuring neutrality based on the documented stakeholder engagement process. The engagement outcomes are validated by the Top Management team and realigned with organizational priorities and the results are fairly reflected in the Report. In our opinion, the level at which the Report adheres to this principle is **'Good'.**

Materiality: The materiality determination process is based on inputs from key stakeholders including employees, customers, suppliers, trade union workers, NGOs, and the Leadership team of Tata Steel, and the Report focusses its disclosures on twelve (12) key material aspects at macro level for the mining and metals sector. The management of the Company is committed to effectively identify, manage and report the material aspects based on a continual evaluation for long term sustainability. In our opinion, the level at which the Report adheres to this principle is **'Good'.**

Responsiveness: We consider that the Company has adequately responded to identified key sustainability aspects and challenges in the local sustainability context, including aspects related to the mining and metal sector, within the reporting boundary. Tata Steel has implemented management systems with sustainability as focus, related to social, environment and health and safety to manage its key risks and opportunities. In our view, the level at which the Report adheres to this principle is **'Good'.**

Reliability: The majority of data and information verified at the Steel Works, Noamundi Mines, Tubes and Wires Divisions were found to be accurate. Some of the data inaccuracies identified during the verification process were found to be attributable to transcription, interpretation and aggregation errors and the errors have been communicated for correction. Hence in accordance with AA1000AS (2008) requirements for a Type 2, moderate level assurance engagement, we conclude that the specified sustainability data and information presented in the Report is generally reliable. In our view, the level at which the Report adheres to this principle is **'Good'.**

Specific evaluation of the information on sustainability performances

We consider the methodology and process for gathering information developed by the Company for its sustainability performance reporting to be appropriate and the qualitative and quantitative data included in the Report was found to be identifiable and traceable; the personnel responsible were able to demonstrate the origin and interpretation of the data and its reliability. We observed that the Report presents a faithful description of the Company's sustainability activities.

Additional Parameters as per DNV GL's Protocol

Completeness: The Report fairly responds to the disclosure requirements and the scope of the Report covers key economic, environment and social aspects and performance disclosures related to GRI G3.1 and the MMSS for Application Level A+. In our opinion, the level at which the Report adheres to this principle is **'Good'.**

Neutrality: This Report presents a balanced account of the Company's sustainability performance, related issues and key performance indicators, in terms of content and tone. In our opinion, the level at which the Report adheres to this principle is **'Good'.**

Opportunities for Improvement

The following is an excerpt from the observations and opportunities for improvement reported to the management of the Company and are not considered for drawing our conclusions on the Report; however they are generally consistent with the management's objectives:

- The Company may expand the scope and boundary of reporting to include material aspects from related activities within its sphere of control and influence i.e. Joint Ventures and Subsidiaries.
- Sustainability performance may be disclosed at regular intervals for stakeholders to make informed decisions and benchmarked with peers with emphasis on Occupational Health and Safety.

DNV GL's Competence and Independence

DNV GL is a global provider of sustainability services, with qualified environmental and social assurance specialists working in over 100 countries. DNV GL states its independence and impartiality with regard to this assurance engagement. While we did conduct other third party audits work with Tata Steel in 2013-14, in our judgement this does not compromise the independence or impartiality of our assurance engagement or associated findings, conclusions and recommendations. We were not involved in the preparation of any statements or data included in the Report, with the exception of this Assurance Statement. We maintain complete impartiality toward any people interviewed.

For DNV GL,

Prasun Kundu
Project Manager,
DNV GL Business Assurance India Private Limited, India.

07th January' 2015, Kolkata, India

AA1000 Licensed Assurance Provider 000-10

Vadakepatth Nandkumar
Assurance Reviewer, Regional Sustainability Manager,
DNV GL Business Assurance India Private Limited, India.

Awards

Name of Award / Rating / Certification	Name of Awarding / Rating / Certifying Organisation	Year	Theme of the Award*
CII-ITC Sustainability Prize	CII-ITC CESD	2013	Sustainability
NDTV Profit Business Leadership Award	Business Today and People Strong	2013	Leadership Excellence
11 Prime Minister's Shram Awards	Government of India	2013	Productivity
National Safety Awards	Directorate General of Mines Safety, Govt. of India	(different categories - 2012	Mines Safety
Tata Steel among World's Most Ethical Companies	Ethisphere Institute	2013	Ethics
Tata Shaktee awarded the SUPERBRAND status	Superbrands India Pvt. Limited	FY'12 & FY'13	Brands that have transcend beyond the market place to consumers' lives
INSSAN Awards	Indian National Suggestion Schemes' Association	2013	TQM
1st Prize at FICCI Water Awards-Noamundi	FICCI	2013	Water Conservation


TATA STEEL
TATA


VECTUS
TATA STEEL
TATA
TATA RELIEF COMMITTEE


ଟାଟା ରିଲିଫ୍ କମିଟି


CIVIL COURTS CHATRAPUR


JAI MAA TARINI
TATA RELIEF COMMITTEE
GOOD SPEED
OR05
N0790
40KM LUCK