

GRI Sustainability Reporting Standards 2016
in accordance Core option



PROMISE + PROGRESS

Corporate Sustainability Report 2019





Sustainable Development Policy

SAIL recognizes that its business activities have direct and indirect impact on the environment and society. SAIL is committed to continuously promote Sustainable Development encompassing environmental, societal and economic aspects related to its business activities.

Guiding Principles

- Affirm its commitment to contributing towards a clean and sustainable environment and continually enhancing its environment related performance as an integral part of its business philosophy and values.
- Strive to integrate its business values in an ethical and transparent manner to demonstrate its commitment to sustainable development and to meet the interests of its stakeholders.
- Create a positive footprint within the society to make a meaningful difference in the lives of people by continually aligning its initiatives to the goals for sustainable development.
- Regularly interact with stakeholders to assess and achieve sustainability goals associated with its business activities, through constructive dialogue.
- Maintain commitment to business and people for quality, health and safety in every aspect.

July 2019

Anil Kumar Chaudhary
Chairman



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CHAIRMAN'S MESSAGE

Steel Authority of India Limited (SAIL) has staged a remarkable turnaround by bouncing back to see the profitability after three years and at this juncture, it is my privilege to present our 9th Sustainability Report of this esteemed Organization for the FY 2018-19.

SAIL is committed for Sustainable Development encompassing environmental, societal and economic impacts related to its business activities and this Report is the testimony of our relentless efforts towards Sustainable Development, which integrates business and inclusive development in harmony with nature. The Report has been prepared in accordance with the GRI Sustainability Reporting Standards 2016.

During 2018, Global Crude Steel production has increased by 4.6% to reach 1808.6 Million Tonnes (MT) compared to 2017 and India became the second largest steel producer in the World with a record production of 106.5 MT, up by 4.9% compared to 2017. In consonance with this, I am delighted to share that SAIL has also achieved its highest ever annual production of Hot Metal of **17.5 MT**, Crude Steel of **16.3 MT** and Saleable Steel at **15.1 MT**, with a growth of 10%, 8 % and 7%, respectively with respect to 2017-18. With the turnover of ₹66,267 Cr., the Company earned a net profit (PAT) of ₹2,179 Cr. during the year.

During the year, SAIL contributed a remarkable sum of ₹13,520 Cr. to the national exchequer in payment of taxes and duties to various government agencies. Though the market conditions continue to remain volatile, we could achieve success due to the hard work and synergy of our dedicated work force. A capital expenditure of ₹4,303 Cr. was incurred during FY 2018-19 and capex planned for the Year 2019-20 is ₹4,000 Cr.

Partnering with Country's infrastructure development, SAIL continues to be the Nation's trustworthy steel supplier in past 60 years and consistently supplying its quality steel for various prestigious infrastructure projects including road, rail and highways, bridges, hydropower projects, rail & road tunnels, metro lines, etc. SAIL is proud to be associated with numerous projects of national importance which have been inaugurated in the recent times like Eastern Peripheral Highway Project, Kishanganga and Tuirial Hydropower projects, 111-km long Jiribam-Tupul-Imphal new broad gauge railway project, Bogibeel Road-cum-Rail Bridge on the river Brahmaputra in Assam, etc. by way of supplying the major steel requirement with stringent quality control.

SAIL is ramping up the production of all the newly installed production facilities and you will be happy to note that the 'state of the art' Blast Furnace-8, Mahamaya at Bhilai Steel Plant achieved a landmark of 1 MT Hot Metal production in record 8 months and 17 days after blowing in on 2nd February 2018, fastest in SAIL.

During the year, with continued innovation, several new products, particularly special steels, with superior product quality attributes were developed and commercialized therein addressing stringent application requirement of diverse markets.

The Company has become the first domestic steel maker to successfully roll NPB-750 (Narrow Parallel Flange Beams) with more depth. It has higher load bearing capacity, easier for fabrication which makes the construction more cost effective. We feel privileged to supply our special grade of steel for India's first indigenous and biggest artillery gun Dhanush, which was inducted into Indian Army. With this, SAIL has once again established its commitment to fulfilling the Country's requirement and strengthening India's defence systems. Another important milestone was achieved when the production of UTS-90 Rails by SAIL reached highest ever production of 9.85 Lakh Tonne during the FY 2018-19. The Company has also supplied first consignment of Linke Hofmann Busch (LHB) wheels to Indian Railways under the 'Make in India' Initiative and also a step towards import substitution by SAIL for Indian Railways.

During 2018-19, the Company achieved its outstanding sales volume of over 14.1 MT, registering a growth of approximately 0.4% over CPLY. Advancing its presence in international markets, SAIL has exported 0.76 MT of steel, a growth of approximately 9% over the previous financial year. To realize the vast potential of rural India, the Company organized 152 'Gaon Ki Ore' workshops in 29 States/Union territories for increasing awareness on usage of steel. Small consumers continued to be a focus area and 0.7 MT of steel were sold through the retail marketing channels.

In line with the multi-pronged approach comprising of development of new mines for ensuring raw material security, diversifying strategic alliances aiming for leadership in technology, the Company has formed various JV Companies in diverse areas. Raw Material security is a major thrust area for SAIL. The ability to source the entire requirement of iron ore from the captive mines is SAIL's major strength. In order to further expand the production capacity of the mines, a number of statutory clearances have been obtained during the FY 2018-19. In case of coking coal, however, the major requirement is being met through imports due to limitation in availability of coal of good quality and required specification within the Country.

Ensuring a safe and healthy work place for the people working at our various site locations is our topmost priority and we are committed to build a safer and healthier workplace. Safety and health issues are monitored and guided from apex level of management i.e. SAIL Board as well as Board Sub-committee on Health, Safety and Environment.

The Company acknowledges the valuable contribution of its Human Resources in imparting the competitive advantage. The Company has achieved its present level of excellence through investment in its human resource, where skill and knowledge constitute multitude of initiatives in technology and innovation. Developing skills and capabilities of employees to enhance manpower utilization, labour productivity and safety is the key thrust area of Human Resource Management (HRM) in the Company. Several Large Group Interactions were held encompassing each Unit of the Company. Extensively utilizing the tools of

internal communications, employees were contacted for important occasion through numerous channels, comprising of videos on safety, targets, achievements, priorities, focus areas, corporate in-house journal SAIL-News, posters and messages. The Company realizes the importance of social media in present socio economic context and strengthened its presence in social media like Facebook and Twitter.

Environment Protection including water conservation, self-regulation and self- monitoring through real time online monitoring of stacks and effluent quality and quantity, sustainable waste management practices, Water Conservation including treatment and recycling, maintaining good work zone and ambient air quality have been our thrust areas during this year. In consonance with the Paris Agreement, the Company is geared up to address the Climate Change issues. SAIL is Climate Action Member at World Steel Association and has been participating in the Climate Action recognition programme of World Steel Association.

Concerted efforts across the Organization have resulted in achieving significant improvement in the environmental parameters. In last five years, there has been 16% reduction in Particulate Matter (PM) Emission Load, 6% reduction in Specific Water Consumption, 17% reduction in Specific Effluent Discharge and 3% reduction in Specific CO₂ Emission. To create CO₂ Sink, since inception, over 20 million trees have been planted in SAIL Plants & Mines. The Company is implementing a Sustainable Development (SD) Project for Long Term Maintenance of Ecologically Restored Limestone Mined out area and Water body of Mine void at Purnapani Mine, which is in the last lap of implementation.

SAIL, Durgapur Steel Plant has undertaken the mission project for development of the 409 acres Bio-Diversity Park with seven water-bodies aesthetically designed for rain water harvesting, soil conservation and watering the plants, plantation of 60,000 saplings of 400 different species to attract migratory birds facilitating avian diversity, propagation of rare and medicinal plants/orchards for maintaining ecological balance, environmental sustainability and benefitting/ educating 75,000 natives.

Our other initiatives for greening of warehouses, promotion of renewable energy, switching over to LED lights and other environmental and pollution control projects have been carried forward during the year too.

Most of the SAIL Units are operating in allegiance with distinct international standards like ISO 14001 for EMS, ISO 9000 for Quality Management Systems, SA 8000 for Social Accountability and OHSAS 18001 for Occupational Health and Safety.

SAIL's Social Objective is synonymous with Corporate Social Responsibility. Over and above its core business of manufacturing steel, the objective of the Company is to take care of the social environment too aiming towards social, environmental and economic benefits to the communities and have a transforming and durable impact. The Company has been providing specialized and basic healthcare to people living in the vicinity of its Plants/Units through extensive & specialized Healthcare Infrastructure. Nearly 172 Lakh people living in the vicinity of its Plants and Units were benefitted during the period 2011-18.

Education forms the foundation of any society and contributes to the overall growth and development of society. SAIL is supporting about 77 schools and providing modern education to more than 40,000 children in the steel townships and assisting over 600 Govt. Schools. Our relentless efforts are there for the women empowerment and specialized skill development training are also being imparted for sustainable income generation for more than 1000 women. During the year, the Company has signed a Memorandum of Association (MOA) with District Administration, Nuh, Haryana to provide support and promote awareness for maintaining health and hygiene of the school girls.

Ekalavya Archery Academy at Kiriburu is now an established name among the aspiring archers in the Country. The Academy provides international standard archery training to the young boys and girls and chiseling out the best talents from the obscured potentials of Saranda Forest. Established in 2008, the Academy is unique by its own merits in remote tribal region of Saranda Forest near Jharkhand and Odisha Border. So far 146 medals including 45 Gold, 58 Silver and 43 Bronze have been won by the cadets at National and International meets.

SAIL has been a front runner in SWACHH BHARAT MISSION. Various Awareness campaign being organized to promote Swachhata in work place. Every year, in consonance with Govt. of India's **Swachh Bharat Mission** initiative, Swachhata Pakhawada is being celebrated all across SAIL during 16th to 31st March.

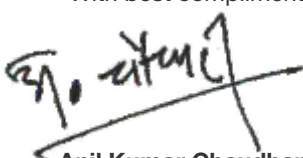
Sustainability is a journey and this Report is an attempt to yardstick our persistent efforts towards Sustainable Development through transparent and impartial reporting of Company's economic, environmental and social performance.

To conclude, let us preserve and protect our mother Earth which is a beautiful living planet of the Universe and the common habitat of more than seven billion human & millions of other varied species making it the excellent blend of biodiversity and ecological balance. As a steel maker, it is our responsibility to make steel in a more sustainable manner, to ensure the life of our future generation more secured and safe, as **Lord Gautam Buddha** said...

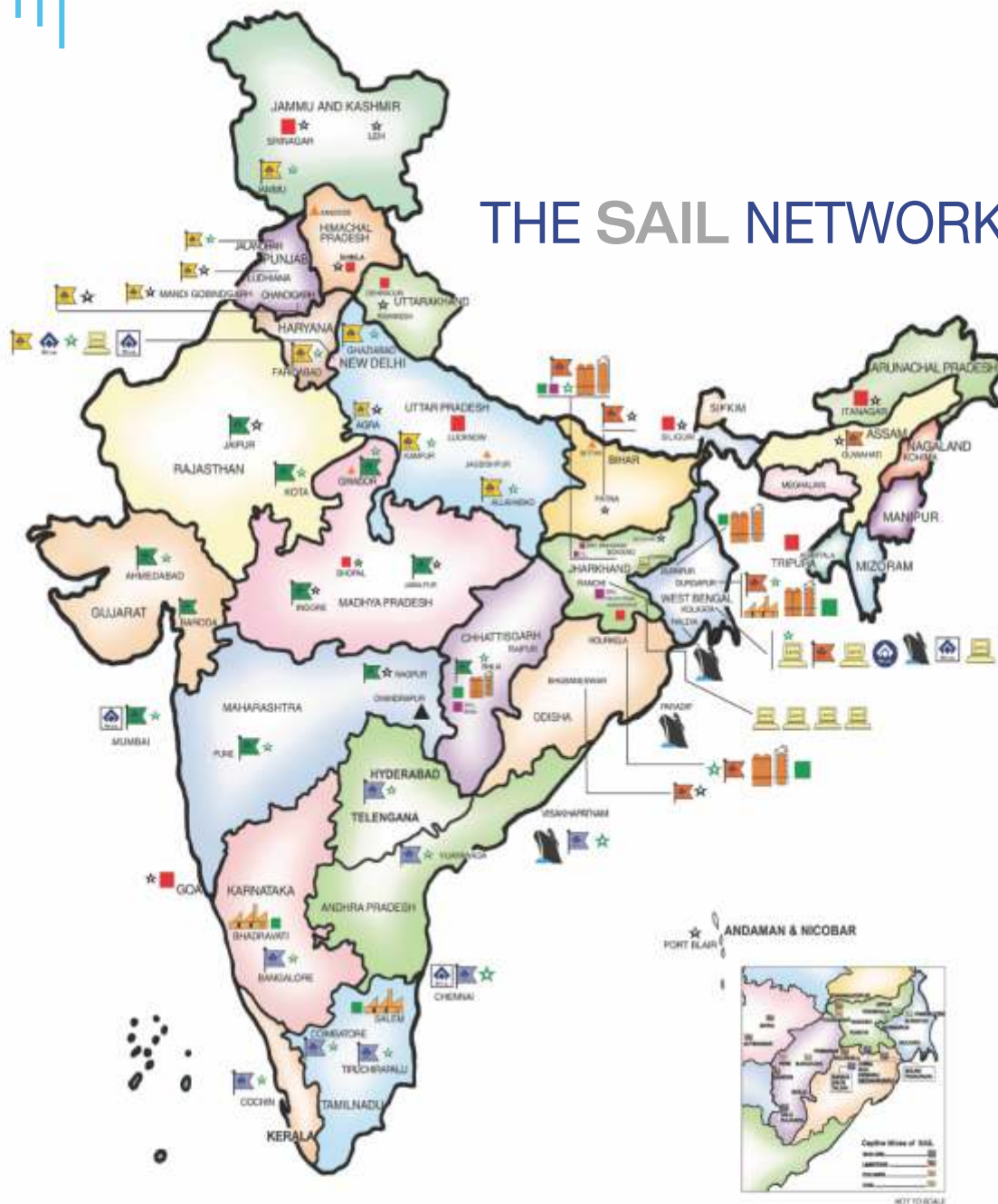
"No One saves us but Ourselves, No One can and no one may. We Ourselves must walk the Path"

.....Let us reassure our commitment to contribute towards clean and sustainable environment and continue paving the path towards Sustainability.

With best compliments


Anil Kumar Chaudhary
(Chairman)

THE SAIL NETWORK

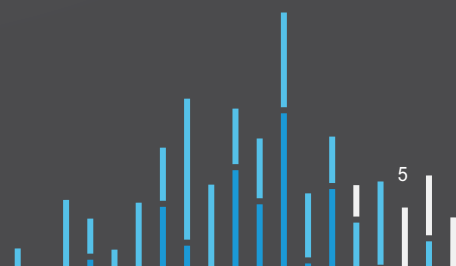


SAIL organisational network in India



9TH ANNUAL

Corporate Sustainability Report



Period

We are pleased to present our ninth corporate level Annual Sustainability Report, which we have been publishing since the Financial Year 2010-11. All our reports have integrated business operations in an ethical and transparent manner while demonstrating commitment towards sustainable development, keeping interests of our Stakeholders. The current report covers sustainability performance of the Company during the period from April 1, 2018 to March 31, 2019. This ninth report is in continuation to our earlier report published for the Financial Year 2017-18.

Framework

All Corporate Sustainability Reports of SAIL have followed the framework set out by the Global Reporting Initiative (GRI). The top management has once again decided to use the GRI Standards for 2018-19 report. This report has been prepared in accordance with the GRI Standards: Core Option. Keeping the focus on materiality and stakeholder inclusiveness, the report displays our conscious decision to disclose performance on Economic, Environmental and Social aspects to our stakeholders.

Scope

We have used information from the Annual Report of the Company for the Financial Year 2018-19, ending March 31, 2019 for presenting financial details in the economic performance section of the Report and social and environmental performances of Plants, Units and Mines in the respective sections. Page 10 of the report gives information on the boundary of the report covering details on products and services of Plants, Units and Mining operations. No Unit has been shifted, divested or closed during the Financial Year. We are transparent in sharing all significant events of the past, and the projections of their impacts to occur in future. We have maintained the data quality of the report while ensuring accuracy, reliability, timeliness, clarity and comparability of figures and periods that form the base of reporting.

Standards


We have used International Standards such as ISO 9000, ISO 14001, OSHAS 18001 and SA 8000 for reporting on Quality, Environment, Health and Safety management. For reporting financial performance of the Company, we have referred the Company Law guidelines. We ensure commitment to Economic and Financial systems by regularly getting the statutory audits as well as internal audits done. Our systems are open to verification and review by the government authorities. For reporting on Carbon Dioxide (CO₂) emissions from our Integrated Steel Plants (ISPs), we follow the World Steel Association (WSA) guidelines and calculation methodologies. For maintaining the Company's work environment and safety regulations, we diligently follow requisite regulations, issued from time to time by the Ministry of Environment, Forest and Climate Change (MOEFCC) and the Factories Act 1948. Materiality Assessment has definitely helped us in prioritizing issues pertaining to economic, environment and social aspects of Sustainability and stakeholder engagement process. The material topics, explained in the respective chapter, are established through this materiality assessment process.

Distribution and Feedback

We have used English Language for writing the full report. The report can be downloaded from SAIL website (www.sail.co.in) and can be requested via email too. Stakeholder feedback on the report shall be reported to the relevant department upon its receipt via email. Any other additional information about SAIL's efforts on sustainable development can be sought at sailsustainability@gmail.com

Assurance

No External Assurance was carried out for this report.



'Dhanush', the biggest artillery gun of Indian Army

SAIL'S ACHIEVEMENTS

Financial Year 2018-19 was another remarkable year in the performance of the Company even with, greater challenges like firm competition from domestic market and certain operational setbacks. However, SAIL Plants, continued with their journey of relentless improvement in production, product-mix and efficiency parameters.

During the sixtieth year of production, SAIL recorded its highest ever annual production of Hot Metal, Crude Steel and Saleable Steel. In its endeavour to become energy and cost efficient, SAIL increased the production of Crude Steel through Continuous Casting route and achieved highest ever Crude Steel production. SAIL Plants are carrying out a large number of innovations for process improvement and cost competitiveness.

Financial

All values are in ₹ Crore

Key Performance Indicators	2016-2017	2017-18	2018-19
Turnover	49,180	58,297	66,267
Net Sales	43,866	56,893	66,267
Profit Before Tax	-4,851	-759	3,338
EBITDA	672	5,184	10,283
Capital Expenditure	49,39	5,130	4,303
Total Assets	1,06,539	1,14,190	1,16,438
Export Sales	1,738	2,244	2,873
Profit After Tax	-2,833	-482	2,179
CSR Budget	29.34	26	31

Production

All values are in MT

Key Performance Indicators	2016-17	2017-18	2018-19
Plants			
Hot Metal	15.73	15.94	17.51
Crude Steel	14.5	15.02	16.26
Pig Iron	0.5	0.27	0.48
Total Saleable Steel	13.87	14.07	15.07
Semi-Finished Steel	3.17	2.6	3.16
Finished Steel	10.7	11.47	11.90
Mines			
Iron Ore Production	26.44	26.83	28.35
Flux Production	2.08	2.05	1.84

Determined efforts are being put towards reduction of energy consumption and greenhouse gas emissions, increase in water reuse and recycling and management of wastes etc. Social impact indicators such as labour productivity, employee training, and spending on CSR etc. are also captured to track the performance on social aspect.

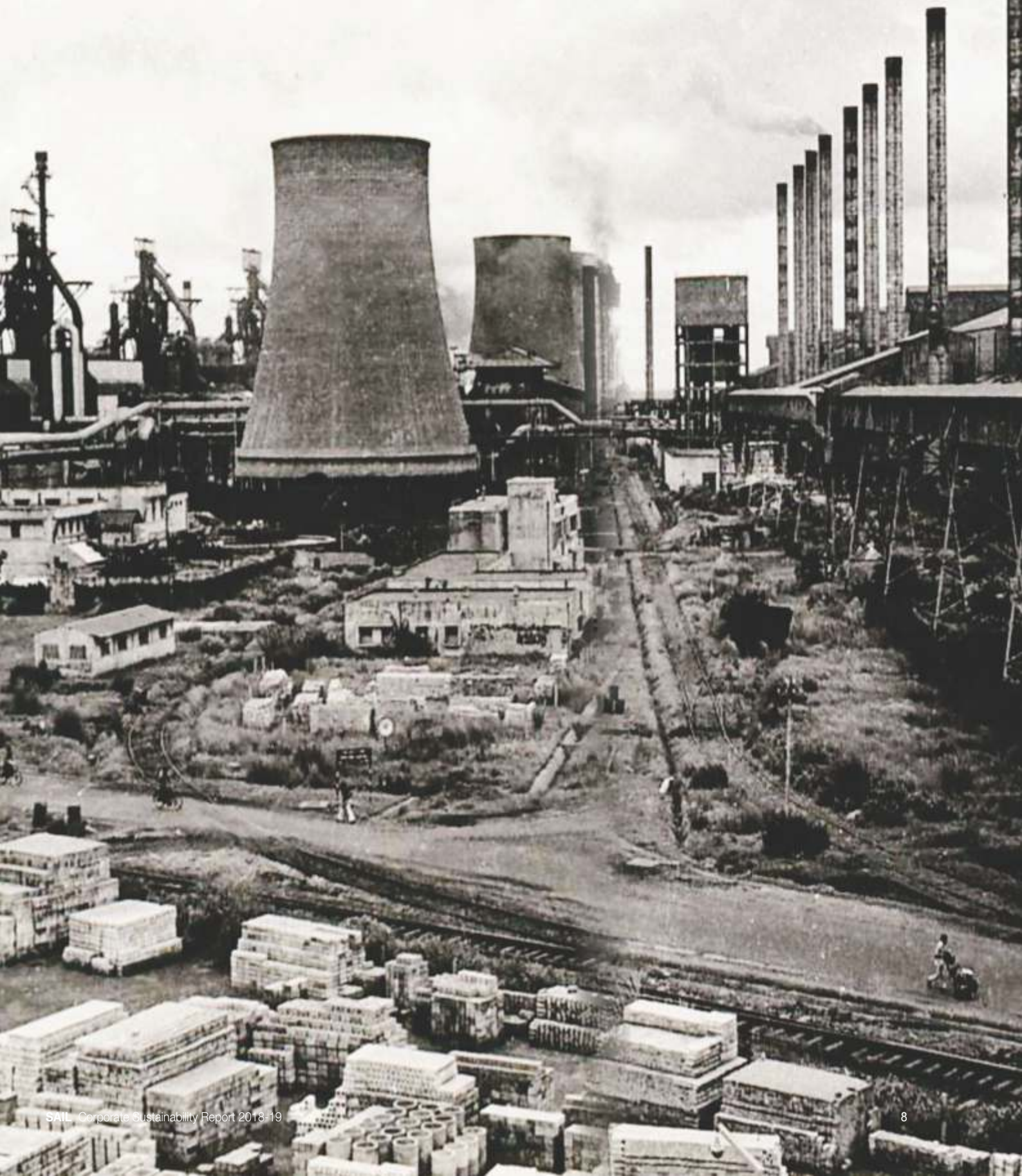
Environmental

Key Performance Indicators	Unit	2016-2017	2017-18	2018-19
Specific CO ₂ Emission	t/tcs	2.61	2.56	2.57
Particulate Matter Emission Load	kg/tcs	0.77	0.74	0.70
Specific Effluent Load	kg/tcs	0.086	0.081	0.085
Specific Effluent Discharge	m ³ /tss	1.91	1.78	1.80
Specific Water Consumption	m ³ /tcs	3.75	3.62	3.44

Social

Key Performance Indicators	Unit	2016-2017	2017-18	2018-19
Labour Productivity	tcs/man/year	320	344	389
Training	Man-hours/employee/year	104.80	84.80	72.0
Spending on CSR	₹ Crore	29.05	25.70	31.18
Female Employees	% of total employees	6.0	6.0	6.0

Panoramic view of
Durgapur Steel Plant
during its inception phase





SAIL

THE MAHARATNA

Business Profile

Steel Authority of India Limited (SAIL), a Government of India Undertaking and a Maharatna Central Public Sector Enterprise, is the premier steel-making organization headquartered at New Delhi, India. SAIL is a fully integrated iron and steel maker, producing both basic and special steels for domestic construction, engineering, power, railway, automotive and defence industries and for sale in export markets thereby responsible for driving the industrial revolution of modern India for more than six decades. The Company is among the seven Maharatnas of the Country's Central Public Sector Enterprises. SAIL produces iron and steel at five Integrated Plants and three Special Plants, located principally in the eastern and central regions of India and situated close to its captive iron ore, limestone and dolomite mines which are domestic sources of raw materials.

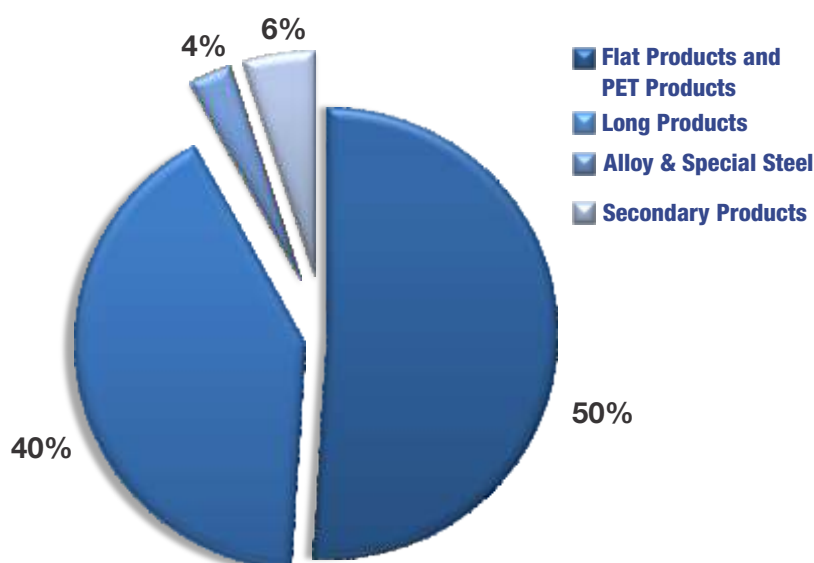
Scope of the Report

SAIL Plants, Units & Mines, as mentioned in the panel beside, are covered in the scope.

SAIL has the largest marketing network among all steel producers in the Country. The vital responsibility of carrying out the marketing activity is carried out by SAIL's own Central Marketing Organization (CMO) that transacts business through its 37 Branch Sales Offices (BSOs), 10 Customer Contact Offices (CCOs), 25 Departmental Warehouses and 20 Functional Consignment Agency Yards.

SAIL had been meeting retail demands of TMT bars and Galvanised products through Dealer channel. In order to deepen the reach to the end customer in the Retail Segment through an efficient distribution channel and provide value addition in product, delivery and services to customers, 2-tier Dealer-Distributorship channel was introduced. As on 1st April 2019, dealer network consisted of 1,789 dealers, out of which 858 dealers have been added by the 14 Distributors, appointed under 2-tier distributorship. This huge network spreading across the Country helps in meeting the requirements of a wide range of customers throughout India.

Sales Value of Products



Plants

Bhilai Steel Plant
Durgapur Steel Plant
Rourkela Steel Plant
Bokaro Steel Plant
IISCO Steel Plant
Alloy Steels Plant
Salem Steel Plant
Visvesvaraya Iron and Steel Plant
Chandrapur Ferro Alloy Plant

Units

Central Marketing Organisation
Research and Development Centre for Iron & Steel
Centre for Engineering and Technology
SAIL Safety Organisation
SAIL Growth Works, Kulti
Environment Management Division
SAIL Refractory Unit

RMD Mines

Iron Ore Mines

Kiriburu
Meghahatuburu
Gua
Manoharpur
Bolani
Barsua
Kalta

Flux Mines

Kuteshwar Limestone Mines
Bhawanathpur Limestone Mines
Tulsidamar Dolomite Mine

BSP Mines

Iron Ore Mines

Rajhara
Dalli
Jharandalli
Dalli Manual
Mahamaya

Flux Mines

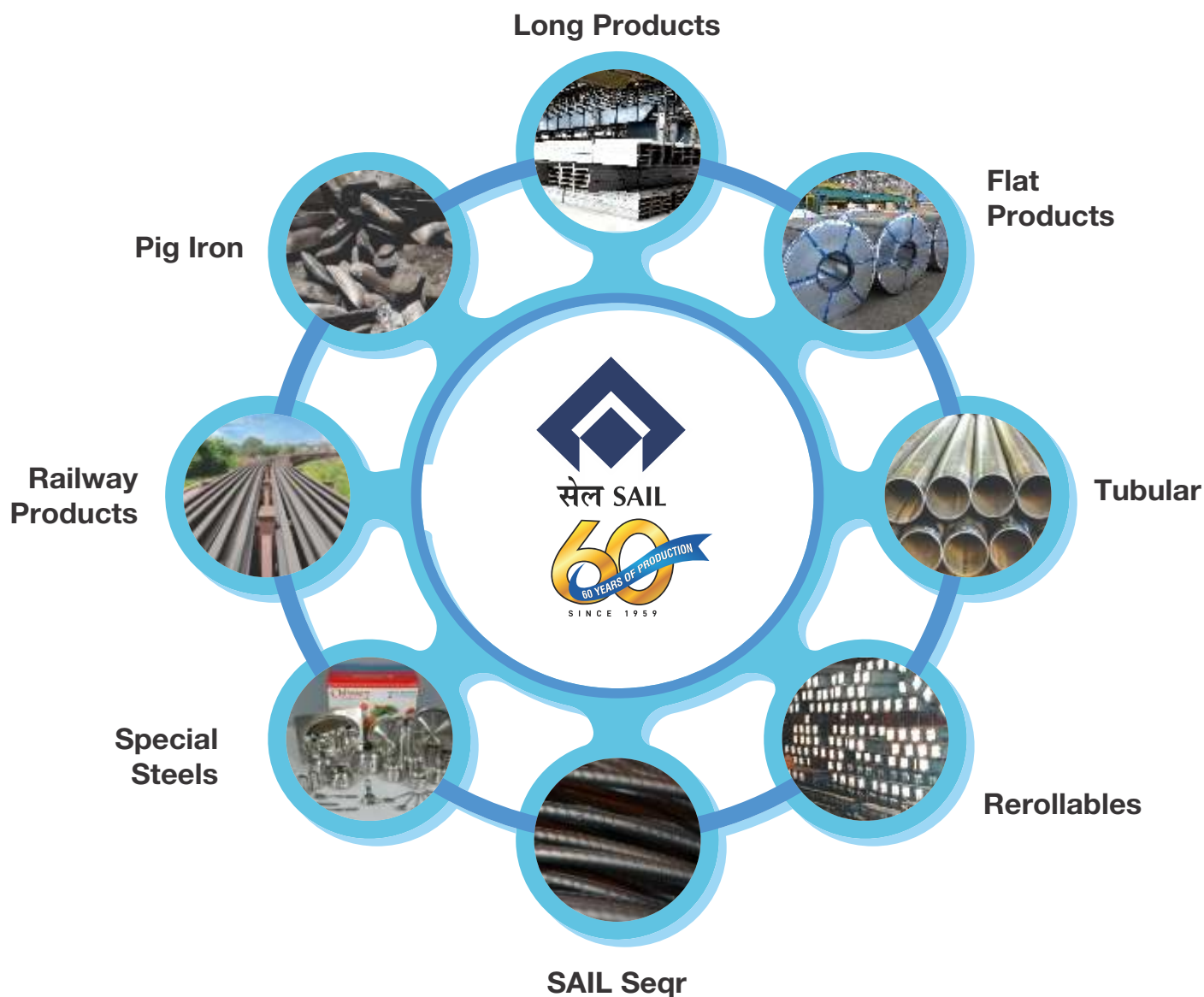
Nandini Limestone Mines
Hirri Dolomite Mines

VISL Flux Mines

Bhadigund Limestone Mines
Kenchapura Dunite Mines

PRODUCTS PORTFOLIO

The Company caters to almost the entire gamut of the mild steel business namely, Flat products in the form of Plates, HR coils/sheet, CR coils/sheets, Galvanised Plain/Corrugated Sheets and Long products comprising Rails, Structural, Wire-rods and Merchant Products. In addition, Electric Resistance Welded Pipes, Spiral Welded Pipes and Silicon Steel Sheets form part of Company's rich product-mix.



First Steel Ingot cast at DSP
on **April 24, 1960**





SUSTAINABILITY

APPROACH

SAIL has adopted a holistic approach for its sustainability framework; addressing the Business, Health & Safety, Environment and Community management across all the operations. The company has in place the Sustainable Development Policy, supported by our Operating Model which in turns helps in implementation of this framework and promotes enhanced accountability within the system.

The sustainability priorities at SAIL are manoeuvred based on the feedback of relevant stakeholders of the company. The achievements in the field of sustainability are on account of innate dedication and commitment of our corporate family. The business roles and responsibilities of the employees are designed in such a way that they are aligned with mission and values of the Company. This sense of social responsibility has not only helped the company in engaging with stakeholders in a constructive way, but also placed it in a leading role in the global commitment towards Sustainability.

The Company work in tandem with its supply chain, striving towards improvement of product portfolio & quality to improve the giving of its products to society and to limit the impacts of production. The Company is committed to giving back to the society through various well designed community initiatives.

Sustainability Strategic Priorities of SAIL

- To pilot the business of Steel
- To conduct business with high ethical standards
- To develop growth strategies for achieving continuous expansion in the market
- To benchmark operations with the global best practices and achieve excellence across the value chain
- To excel in the area of environmental management by adopting 'state-of-the-art' technologies
- To monitor and incorporate functional improvements in the all-inclusive business-model of our Company viz-a-viz mining, steel making, marketing, human resource management and peripheral services including community development
- To remain socially responsible Company by fulfilling social commitments towards society
- To device participative mechanisms for all our stakeholders such as employees, customers, suppliers and community so that "development with sustainability" remains our focus area
- To keep the business sustainable by adopting multi-dimensional approaches in the areas of cost and financial management, technology upgradation, value addition on products along with addition of new products that align with the future demands
- To meet the future global and domestic demands through accelerated investment in new products and processes

Strengths

- Among the leading steel producers of the Nation.
- Most diversified product range offered by any domestic steel company.
- Modernized units with newer technology for more efficient and environment friendly operations.
- Nationwide well established marketing and distribution network enabling reach of SAIL products across the Country.
- Renowned in-house research establishment in form of RDCIS
- Availability of Land bank for future expansions
- Captive iron ore resources
- Highly qualified professionals with experience in steel making and well-established systems and procedures
- Multi-location production units

Opportunities

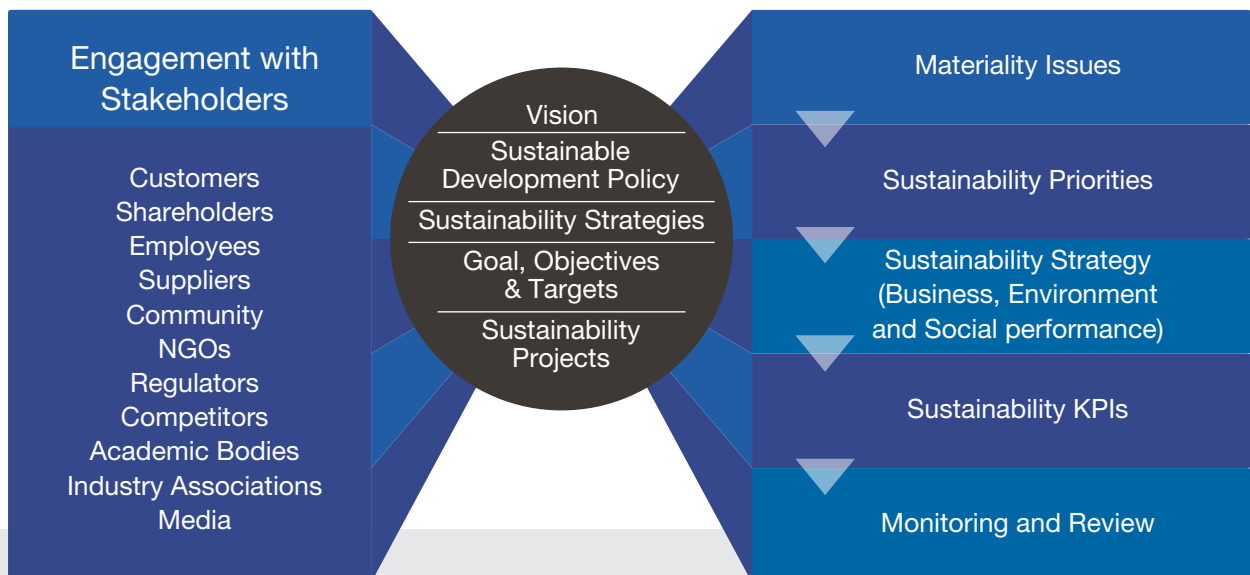
- Government policies for growth of steel intensive sectors such as infrastructure, capital goods, construction, etc. to position India as the 2nd largest steel consumer in the world in the coming years.
- The newly commissioned mills are oriented towards products required to cater to the infrastructure development.
- High export potential for markets of Middle East and South East Asia.
- Potential for improving product quality and reducing cost through operational efficiency and utilization of the new and modernized units.

Growth Strategies

- Consolidation of leadership position through capacity enhancement
- Strategic alliances for further supporting the growth initiatives
- Developing new mines for ensuring raw material security
- Improving quality of input material
- Increased focus on value added steel
- Continual enhancement in operational efficiencies
- Cost optimization

SUSTAINABILITY FRAMEWORK

At SAIL sustainability priorities by and large are result of the inputs/feedbacks of the stakeholders of the Company. The engagement feedbacks from our important stakeholders are used to identify the material topics based on which we classify sustainability priorities, impacting our triple bottom line of growth and also assists us in formulation of Strategies in line with Company's Vision, Goals and Policies.

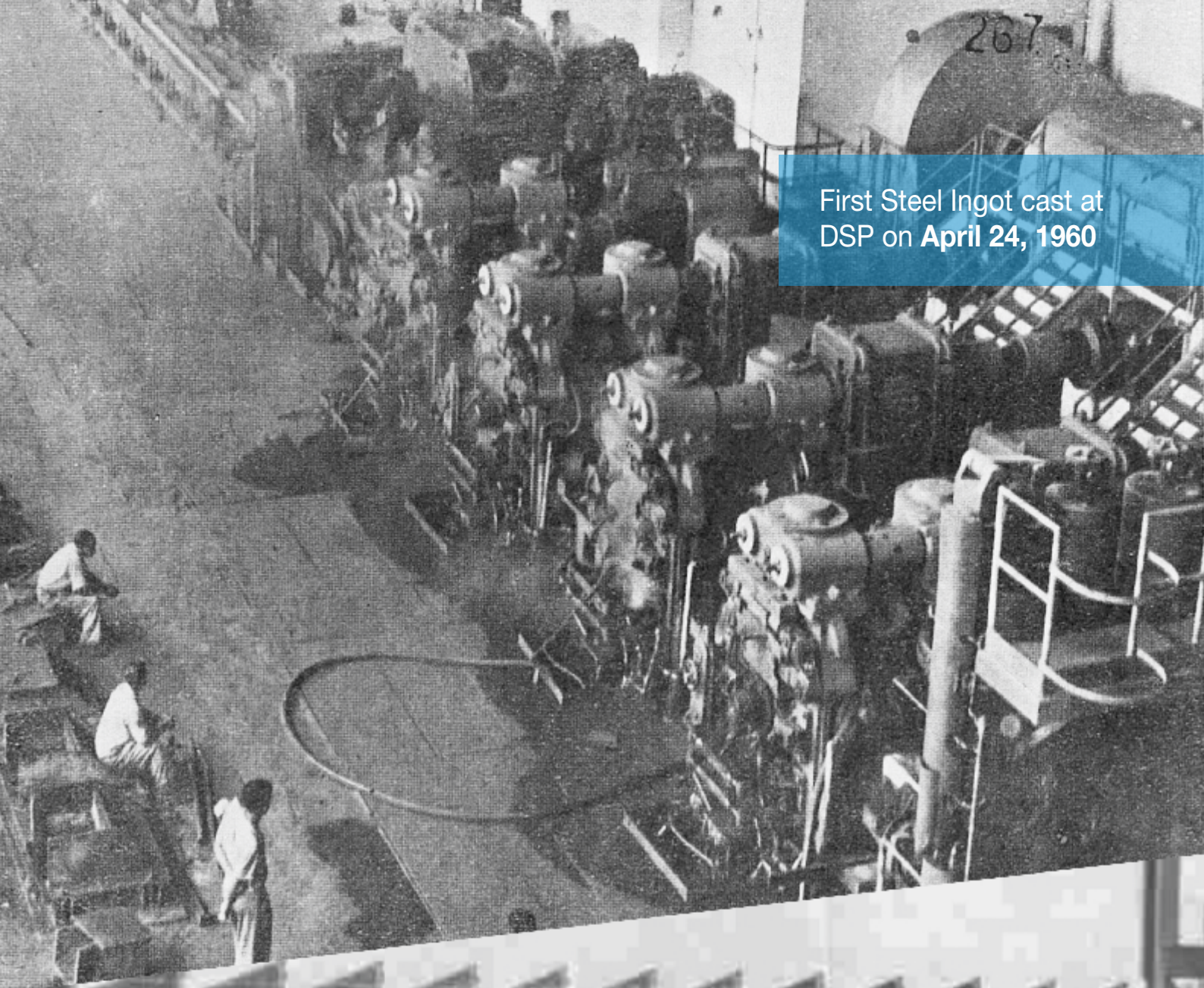


Core and Support Functions (Corporate, Plants & Mines)

Operations (Steelmaking and Mining), Marketing, Finance & Accounts Human Resource Management, Infrastructure and Utilities, Maintenance, IT, Projects, Resource Management, Supply Chain, R&D, Risk Management, Knowledge Management, Automation, Environment, Health and Safety Management, Community Development.

Implementation, monitoring and review of various sustainability initiatives results in enhancement of sustainability performance are taken care by core and support function.





First Steel Ingot cast at
DSP on **April 24, 1960**



Construction site of
of **Bloom Cast Mill (1965)**
at Alloy Steels Plant

PARTNERSHIPS, ASSOCIATIONS AND MEMBERSHIPS

World Steel Association (WSA)

SAIL is a member of WSA, the association with WSA has paved way and helped the company to a great extent in achieving the excellence in steel business over the period of time through knowledge sharing on sustainable steel production and best practices. The company has also subscribed to WSA principles and is committed to use co-products to reduce CO₂ emissions, adopt better operational practices and new technology for enhancing energy efficiency along with focused research for exploring innovative technologies. SAIL participate in measuring and reporting of GHG emissions as per WSA methodology.

Montreal Protocol

SAIL has demonstrated its commitment to Montreal Protocol by successfully phasing out Ozone Depleting Substances (ODS), viz. Carbon Tetrachloride (CTC). Trichloroethylene (TCE) is used as cleaning solvent in our operations.

UN Global Compact

The UN Global Compact is a strategic policy initiative for businesses that are committed to aligning their operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption. SAIL business policies and actions are in line with the Principles of UN Global Compact in letter and spirit.

Stockholm Convention On Persistent Organic Pollutants (POPs)

The Stockholm Convention (SC) on Persistent Organic Pollutants (POPs) recognizes that POPs including polychlorinated biphenyls (PCBs) as a major public health concern and their production is banned and use is restricted, further the waste also needs to be disposed off in an environmentally sound manner. Ministry of Environment, Forest and Climate Change (MoEFCC) and United Nations Industrial Development Organization (UNIDO) have come together to setup a state-of-the-art PCB management facility at Bhilai Steel Plant (BSP) of SAIL. The facility will have provision for destruction of pure PCB and PCB containing wastes along with facility for decontamination/treatment of PCB contaminated equipment, transformer oil and wastes arising from SAIL plants as well as other industries in-line with Stockholm Convention.

Charter on Corporate Responsibility for Environment Protection (CREP)

The charter on Corporate Responsibility for Environmental Protection (CREP) was launched by the MOEF&CC with the purpose to infuse the spirit of environmental excellence in industries. The charter also enlists industry specific action points so as to help them to go beyond the compliance of regulatory norms for prevention & control of pollution through various measures including waste minimization, in-plant process control & adoption of clean technologies. SAIL agreed to comply with the action points suggested under the charter and developed strategies in-line to improve upon the environmental performance further and beyond statutory compliance.

Standing Conference of Public Enterprises (SCOPE)

SAIL has been actively involved in the proceedings of SCOPE, a prominent body of the Central Government of India.

OTHER ASSOCIATIONS & MEMBERSHIPS

- All India Management Association (AIMA)
- Centre for Organization Development (COD)
- Confederation of Indian Industry (CII)
- Consultancy Development Centre (CDC)
- Federation of Indian Chambers for Commerce and Industry (FICCI)
- Forum of Women in Public Sector (WIPS)
- Indian Institute of Metals, Kolkata (IIM)
- Indian Institute of Plant Engineers (IIPE)
- Indian Steel Association (ISA)
- Indian Society for Training and Development (ISTD)
- Indo USSR Chamber of Commerce and Industries (IUCCI)
- Institute of Public Enterprises (IPE)
- Institute of Rail Transport (IRT)
- Project Management Associate (PMA)
- The Energy and Resources Institute (TERI)
- The Indian Iran Chamber of Commerce and Industry (IICCI)
- World Confederation of Productivity Science (WCPS)

Key Joint Venture Collaborations

- NTPC-SAIL Power Company Limited
- Bokaro Power Supply Company Limited
- mjunction services limited
- International Coal Ventures Private Limited
- SAIL-RITES Bengal Wagon Industry Pvt. Ltd.
- SAIL Bansal Service Centre Limited
- Bhilai Jaypee Cement Limited
- S&T Mining Company Private Limited
- SAIL & MOIL Ferro Alloys Private Limited
- SAIL-SCI Shipping Private Limited
- SAIL SCL Kerala Limited
- SAIL Kobe Iron India Private Limited
- TMTSAL SAIL JV Limited
- SAL SAIL JVC Limited
- SAIL-Bengal Alloy Castings Pvt. Ltd.
- PrimeGold-SAIL JVC Limited
- VSL SAIL JVC Limited
- Abhinav-SAIL JVC Limited
- North Bengal Dolomite Limited
- Romelt-SAIL (India) Limited
- NMDC SAIL Limited
- Bastar Railway Private Limited
- GEDCOL SAIL Power Corporation Limited

Strategic Initiatives of the Company

Pellet Plant of Suitable Capacity under a Joint Venture with KIOCL: A Memorandum of Understanding with KIOCL Limited (KIOCL) was signed on January 30, 2019 to undertake a Joint Techno-Economic Feasibility Study (Joint Feasibility Study) for setting up of a Pellet plant of suitable capacity at any suitable location across SAIL's Integrated Steel Plants. A Joint Working Group has been constituted to take the project forward.

GEDCOL SAIL Power Corporation Limited, a new Joint Venture Company between SAIL and Green Energy Corporation of Odisha Limited (a wholly owned subsidiary of Odisha Hydro Power Corporation) formed on September 6, 2018 for setting up of 10 MW small hydro-electric power plant at Mandira dam, Rourkela, Odisha.



AWARDS AND ACCOLADES

SAIL

- Prime Minister's Shram Awards including 6 employees for the Year 2017.
- 9 Vishwakarma Rashtriya Puraskar for 48 SAIL employees for the Year 2016.
- Governance Now PSU Award for 'Resilient Growth' in the "Maharatna" category.
- Winner of 'Golden Peacock Environment Management Award-2019'.
- Top Rankers Excellence Award for 'Outstanding Leadership' to Chairman, SAIL.
- Recognition for "Strong Commitment to HR Excellence" under CII HR Excellence Award.
- India's Top Challengers Award at the 16th Construction World Global Awards 2018.
- National Award for Excellence in Cost Management for first place in the category 'Public – Manufacturing – Mega'.
- 'Runners up' Trophy (in Category-A) under "NIPM National Award for HR Best Practices 2018".
- Second prize for In-house journal "Ispat Bhasha Bharti" amongst 61 PSUs of Town Official Language Implementation Committee (TOLIC).

Plant and Units

Bhilai Steel Plant

- Nari Shakti Samman to Smt. Rajani Rajak, Development Assistant in CSR Deptt. of BSP for outstanding contribution to women's empowerment for the year 2018

Durgapur Steel Plant

- ENCON Awards 2018 for Excellence in Energy Conservation by CII, Eastern Region.
- 10 nos. of Par – Excellence awards at National Convention on Quality Concepts (NCQC) organized by Quality Circle Forum of India (QCFI).

Rourkela Steel Plant

- Certificate of Appreciation - theme based award in Prime Minister's Trophy Awards 2016-17 for "Initiative to reduce turnaround time of BOBS wagons leading to substantial reduction in Demurrage and Optimum Utilization of National resources".
- Golden Peacock Award for Corporate Social Responsibility for the year 2018.
- Srishti G-Cube Good Green Governance Award for excellence in environment management for the year 2018.
- Par Excellence Award to the Quality Circle Team by QCFI of India.

Bokaro Steel Plant

- 18th Annual Greentech Environment Excellence Award – Platinum category in Metal & Mining in recognition of excellent environmental performance Sector for the year 2018.
- National Water Award in recognition of Best large scale industry for industrial water conservation category in eastern zone of India by Ministry of Water Resources, River Development and Ganga Rejuvenation for the year 2018.



Chairman SAIL receiving National Award for Excellence in Cost Management

IISCO Steel Plant

- West Bengal Best Employer Brand Award in recognition of HR initiatives by World HRD Congress for the year 2018.
- Golden Peacock National Training Award for the year 2017-18.

Alloy Steels Plant

- Ispat Suraksha Puraskar for 'No fatal accident' during the Calendar Year 2016 & 2017 under Scheme-II.
- Ispat Suraksha Puraskar 2018 for 'No fatal accident' involving Contract Labour during the Calendar Year 2016 & 2017 under Scheme-IV
- Excellence Award to the 2 Quality Circle Team by QCFI of India.

Salem Steel Plant

- Innovation and Sustainability Award to encourage and recognize the Excellent Performance in various fields by the Institution of Engineers.

Chandrapur Ferro Alloy Plant

- Ispat Suraksha Puraskar 2018 for 'No fatal accident' involving Employees under Scheme-IV Group 'B'.
- Ispat Suraksha Puraskar 2018 for 'No fatal accident' involving contract labour under Scheme-IV Group 'B'.

Research & Development Centre for Iron & Steel (RDCIS)

- RDCIS bagged several prestigious award during 2018-19 like Metallurgist of the year, O.P. Jinal Gold Medal, Indranil Award, M. Vishvesvaraya Award etc.

**SAIL won more than 30% of the
VISHWAKARMA RASHTRIYA PURASKAR
for the performance year 2016**





GOVERNANCE

STRUCTURE

At SAIL, we are proud to create transparent Corporate Governance Framework, where disclosures and reporting duly conforms to the laws, regulations and guidelines, including Department of Public Enterprises (DPE) guidelines. The incisive Corporate Governance framework at SAIL includes promoting ethical conduct and professional accountability, with the primary objective of enhancing stakeholder value with corporate risk management and corporate social responsibility. It recognizes that the Board is accountable to all shareholders and their first duty is towards protecting and promoting the interests of the Company. The Company is committed to delivering the highest standards of Corporate Governance in the country.

The Corporate Governance is accomplished in accordance with the Company's Act, 2013, SEBI (LODR) Regulations, 2015 and DPE Guidelines. Some of the dynamic protocols that we have adopted for governance include well-crafted guidelines, policies and procedures. Conducting independent internal audit, regular reviews by Audit Committee/ Board, CAG Audit of Corporate Governance, Independent Audit by Auditors of Corporate Governance in the Company also enables effectiveness of governance.

The Company's Vision and Credo plays a decisive role in guiding the Board of Directors to supervise and conduct business in an economically, socially and environmentally sustainable manner. The SAIL Board comprises of full time Executive Directors, Non-Executive Directors and Independent Directors, confirming to the provisions the Company's ACT, SEBI (LODR) and DPE Guidelines.

During the Annual General Meeting (AGM), the annual report of the Company together with Audited Accounts for Financial Year is presented by the Directors. The proceedings of the AGM including the suggestions, comments and feedback from the shareholders are duly recorded. The concerns of the shareholders are deliberated at the Board Meeting and after evaluation, these concerns are integrated into the management's business decision.

For adherence to Corporate Governance Agenda, the Company has specialized committees. Some of the key committees are Audit Committee, Nomination & Remuneration Committee, Stakeholders' Relationship Committee, Corporate Social Responsibility Committee and SAIL Risk Management Committee. These committees are led and supervised by Independent Directors. This robust structure, having valuable and varied experience of Independent Directors, enable the Company to have an independent perception on various governance issues before the same are considered by the Board of Directors.

During the year, besides, these mandatory Committees, various other Board Sub-Committees (BSC) such as BSC on Strategic Issues & Joint Ventures; Projects; Health, Safety and Environment have also been constituted by the Company. SAIL Risk Management Committee operates to oversee the risk management function of the Company.

The Board has laid down a Code of Conduct encapsulating the specifications to be complied with by all the Board Members and Senior Management Personnel of the Company. The Company has been compliant with this Code of Conduct and therefore, no penalties, strictures have been imposed on the Company by any statutory authority (e.g. Stock Exchange(s), SEBI) during the year in the matter related to capital markets or compliances during the year.



Chairman SAIL addressing employees

SAIL being a Government Company, the nomination, appointment and fixation of terms and conditions of Independent Directors is made by Government of India. No other pecuniary benefit is granted to the Non-Executive Directors (other than the Government Nominee Directors). Independent Directors are paid only sitting fee for each Board/ Board Sub-Committee Meeting attended by them. The salary and pay scales of the Whole Time Directors is fixed in accordance with the prevailing rules of the Government.

Various Corporate Office Divisions/ Departments regularly assimilate, compile and monitor diverse issues appropriating to the management of economic, environmental and social areas. The status reports in conjunction with the agenda papers, prepared with the valuable inputs provided by the respective Plants/Units, on the economic, environment and social performances including legal compliance are regularly and methodically put up to the Board for examination, comments and recommendations. The inputs and observation of the Board are examined and analyzed by the top management and subsequently envisioned for business decision-making.

There were no transactions by the Company of material nature with Promoters, Directors or the Management, Subsidiaries, relatives during the year, thereby eliminating any potential conflict of interests between the Company and its stakeholders.

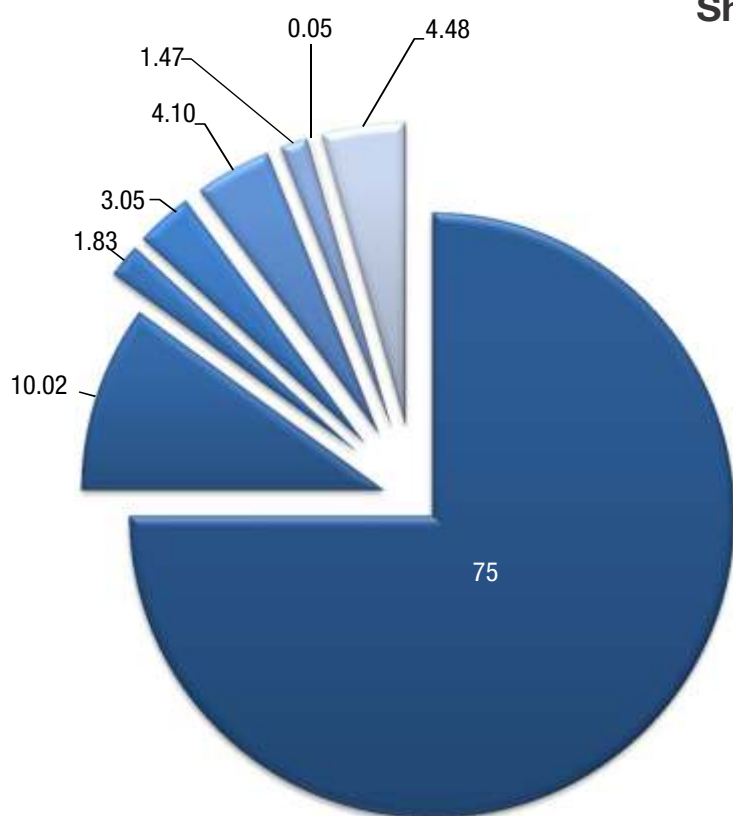
The Company has always been awarded the highest Grade i.e. 'Outstanding' in compliance of the provisions of Corporate Governance as per the DPE Guidelines on Corporate Governance 2010.

SAIL, by virtue of its 'Maharatna' status enjoys significant operational and financial autonomy. The Government of India owns 75% of the equity and retains voting control in the Company

Board of Directors

As on 9th July 2019, the Board of Directors comprised of one Full Time Chairman, five Whole Time Executive Directors and ten Non-Executive Directors, comprising of 2 Government Nominee Directors and eight Independent Directors. Eight Board meetings were held during the course of the year.

There were no complaints pending redressal as on 31st March 2019. All nine shareholders complaints received during the year were amicably addressed and resolved.



**Shareholders breakup for SAIL
as on 31st March 2019
(% of Equity)**

- Government of India
- Financial Institutions
- Banks
- Mutual Funds
- Foreign Portfolio Investors
- Companies
- Individuals
- IEPF Authority

CORPORATE LEADERSHIP

BOARD OF DIRECTORS as on 9th July 2019



Shri Anil Kumar Chaudhary
Chairman



Shri Saraswati Prasad
Special Secretary & Financial Adviser,
Government of India, Ministry of Steel



Shri Puneet Kansal
Joint Secretary,
Government of India, Ministry of Steel



Dr. G. Vishwakarma
Director (Projects & Business Planning)
with Additional Charge of Director (Finance)



Ms. Soma Mondal
Director (Commercial)



Shri Atul Srivastava
Director (Personnel)



Shri Harinand Rai
Director (Technical)



Shri Vivek Gupta
Director (Raw Materials & Logistics)



Prof. Ashok Gupta
Independent Director



CA Parmod Bindal
Independent Director



Ms. Anshu Vaish
Independent Director



Dr. Samar Singh
Independent Director



Shri Nilanjan Sanyal
Independent Director



CA Kartar Singh Chauhan
Independent Director



Prof. N.K. Taneja
Independent Director



Shri Krishan Kumar Gupta
Independent Director

Chief Executive Officers (Permanent invitees)



Shri P. K. Singh
CEO, BSL



Shri Anirban Dasgupta
CEO, BSP



Shri Dipak Chattaraj
CEO, RSP



Shri A. V. Kamlakar
CEO ISP, DSP & ASP

CORPORATE INTEGRITY

At SAIL, the core value that underpins all its business activities is Integrity. SAIL has earned its status of dependability through several decades of steadfast value-driven business operations across the country. As a responsible corporate citizen, SAIL not only seeks to conduct its business in the most ethical manner, it also motivates and encourages its employees to maintain the same ethical standards and carry forward the influence among the surrounding communities.

To enable its employees to work with integrity and impartiality while upholding the highest ethical and moral standards, the Company has in place dedicated vigilance departments at all its Plants/Units along with Quality Management System (QMS). In order to prevent corruption, all operations of SAIL are subject to scrutiny by Vigilance team. A full-fledged Vigilance team of around 140 employees is headed by a Chief Vigilance Officer; who is appointed by the Central Government on tenure basis. The Vigilance Wing carries out its work independently and the Chief Vigilance Officer reports to the Central Vigilance Commission directly on all aspects of corruption.

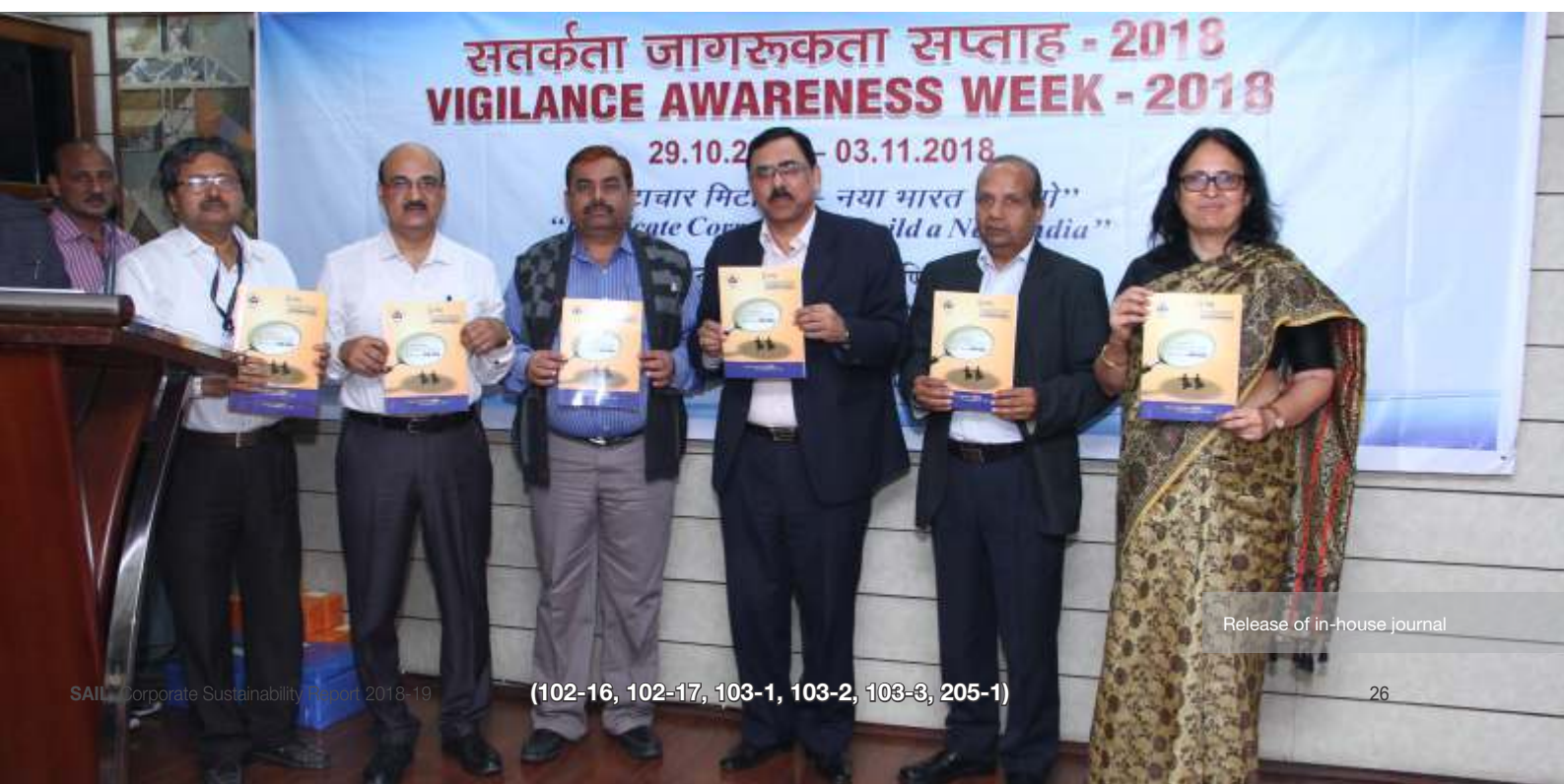
The Company has also put in place Conduct, Discipline and Appeal (CDA) Rules which prescribe the code of conduct as applicable mostly to the executives of the Company; whereas the non-executive workmen are covered under the code of conduct / misconduct as mentioned in the Standing Orders for respective Plants / Units of SAIL.

In July 2007, the Company implemented Integrity Pact for all contracts / procurements valuing Rs. 100 crores and above. Subsequently, to cover more contracts / procurements, threshold value has been reduced to Rs. 20 crores; and all tenders related to handling contracts in CMO departmental warehouses, irrespective of threshold value, are also covered under Integrity Pact. Guidelines on banning of business dealings with bidders / contractors / agencies dealing with SAIL have been implemented in the Company and made part of the Integrity Pact wherein it has been envisaged that appropriate action shall be taken against the signatories of Integrity Pact, if they are found involved in unethical practices including corruption and bribery.

SAIL Vigilance has been undertaking numerous Preventive/Participative Vigilance activities to prevent corruption in all the operations of SAIL; inter-alia including:

- Conducting Surprise Checks/File Scrutiny/Joint Surprise Checks in various areas
- Identification of Thrust areas and focussing Vigilance activities towards these areas
- Undertaking Intensive Examinations and System Improvement Projects
- Conducting training and awareness programmes to sensitize officials
- Periodically publishing SAIL Vigilance journal
- Laying emphasis on updation of existing systems & procedures
- Ensuring Job rotation in Sensitive areas
- Giving Preventive & Administrative recommendations on case to case basis as per requirement
- Monitoring the implementation of Integrity Pact
- Maintaining List of Officers of Doubtful Integrity and an Agreed List
- Laying emphasis on technology leverage for increasing e-tendering and e-payment etc.

The vigilance departments receive and investigate complaints as per the Central Vigilance Commission guidelines including those relating to corruption. During the year 2018-19, 842 complaints were received in SAIL Vigilance and 846 complaints were disposed off; out of which 307 complaints were found anonymous / pseudonymous, 145 complaints were forwarded to other departments, 272 complaints were closed as the allegations had no vigilance angle / were not substantiated, 98 were closed with



Release of in-house journal



Integrity Pledge being administered by Chairman SAIL

preventive / administrative recommendations whereas regular departmental actions were initiated in 24 complaints. A total of 2,444 surprise checks/file scrutiny were conducted by Vigilance Department in the vulnerable areas/departments of different Plants/Units.

Vigilance Department also provides inputs on existing system to operating authorities for ensuring greater transparency for continual improvement on regular basis. During the year, 13 cases of high value procurement/ contracts were scrutinized comprehensively and necessary recommendations were forwarded to respective departments.

To propagate ethical behaviour in the society at large, Ethics Clubs were formed in the schools of SAIL's Bhilai Steel Plant in 2011. Encompassing the core values of Honesty, Integrity, Responsibility, Compassion, Unity and Patriotism etc.; value education through Ethics Clubs is as an extra-curricular activity. Membership to the club is voluntary for students in the age group of 11 to 16 years. Members of the club are designated as Young Champions of Ethics. Schools of other SAIL townships at Rourkela, Bokaro, Burnpur, Durgapur, Salem and Bhadravati joined the movement and today, Ethics Clubs members in SAIL run into many thousands. SAIL believes that ethical values imbibed in the Young Champions of Ethics at an early age will lead to ethically sustainable growth in the years to come.

The following three (3) thrust areas were identified by SAIL Vigilance for the year 2018:

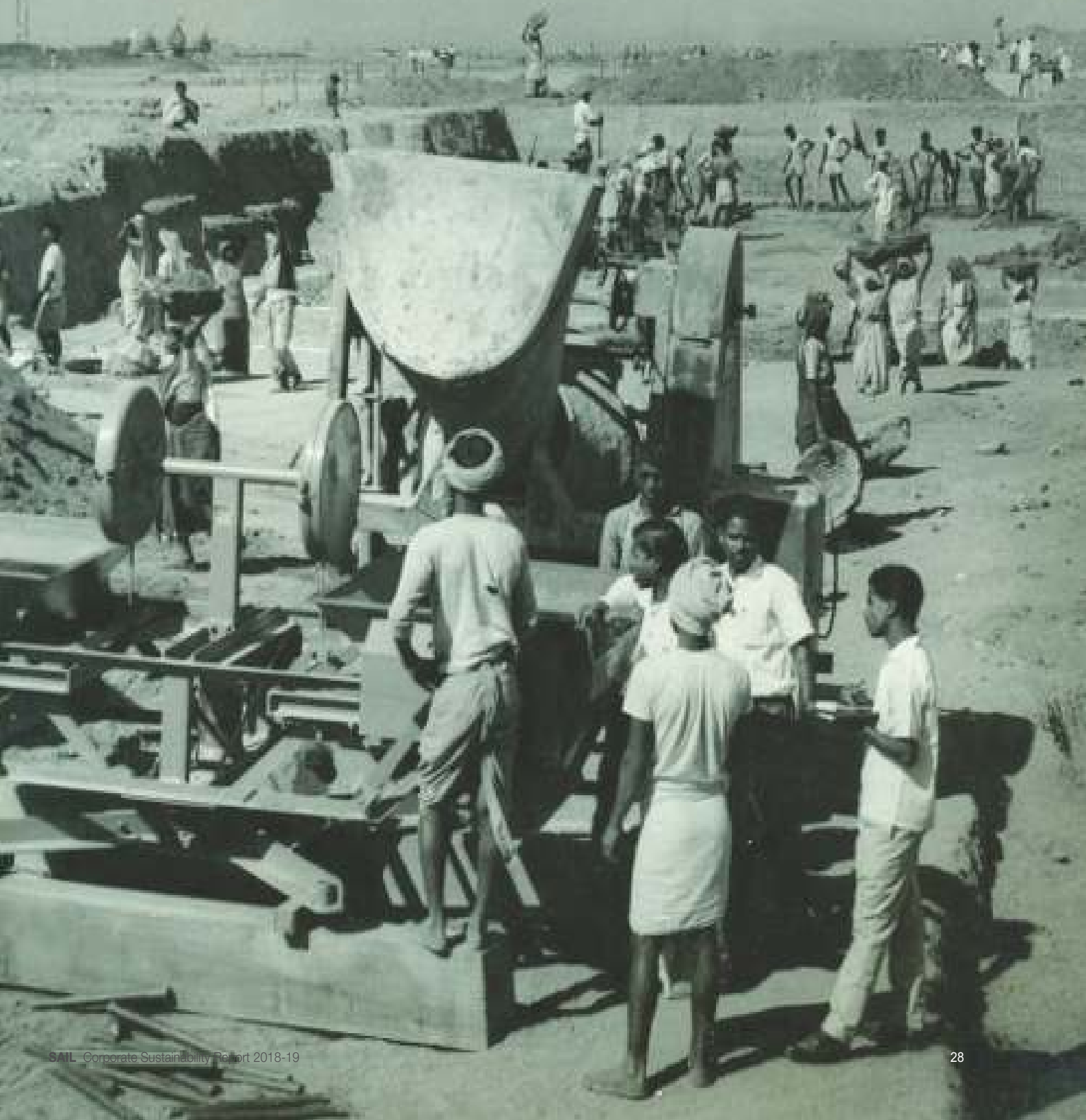
- Surveillance in the areas of receipt, sampling & testing of high value raw materials.
- Audit of SIPs implemented in 2015 & 2016.
- Scrutiny of emergency procurement and contract cases.

In order to create vigilance awareness among the employees on aspects such as Whistle Blower Policy, Purchase/Contract Procedures, Conduct and Discipline Rules, Common Irregularities, System and Procedures followed in SAIL etc., workshops and interaction-cum-awareness sessions are organised regularly by Vigilance Department. In the year 2018-19, 178 such vigilance awareness workshops/trainings were organized at different Plants/Units, covering 2,994 participants.

Vigilance Awareness Week is observed in SAIL for a period of one week during October -November. During 2018-19, the weeklong activities included workshops/ sensitization programmes, anti-corruption march / walkathon, customers meet, events like quiz, essay, slogan & drawing/poster, debate competition were organized for SAIL employees and their families. As outreach measures, various events like Speech/Oratory competition, Poster/Drawing competition, Essay/Slogan competition, Inter school debate competition, Quiz competition etc. were organized across various townships of SAIL and metro cities of Delhi & Kolkata, in which around 900 students from 27 Colleges / universities and more than 4000 students from various schools participated.

To enhance Vigilance awareness, an in-house journal 'Inspiration- Prerna' having case studies, informative articles, quiz on policy matters etc. is also published by SAIL Vigilance Department.

Levelling work in progress at the site of
Bokaro Steel Plant in the Year 1967





BONDING

WITH STAKEHOLDERS

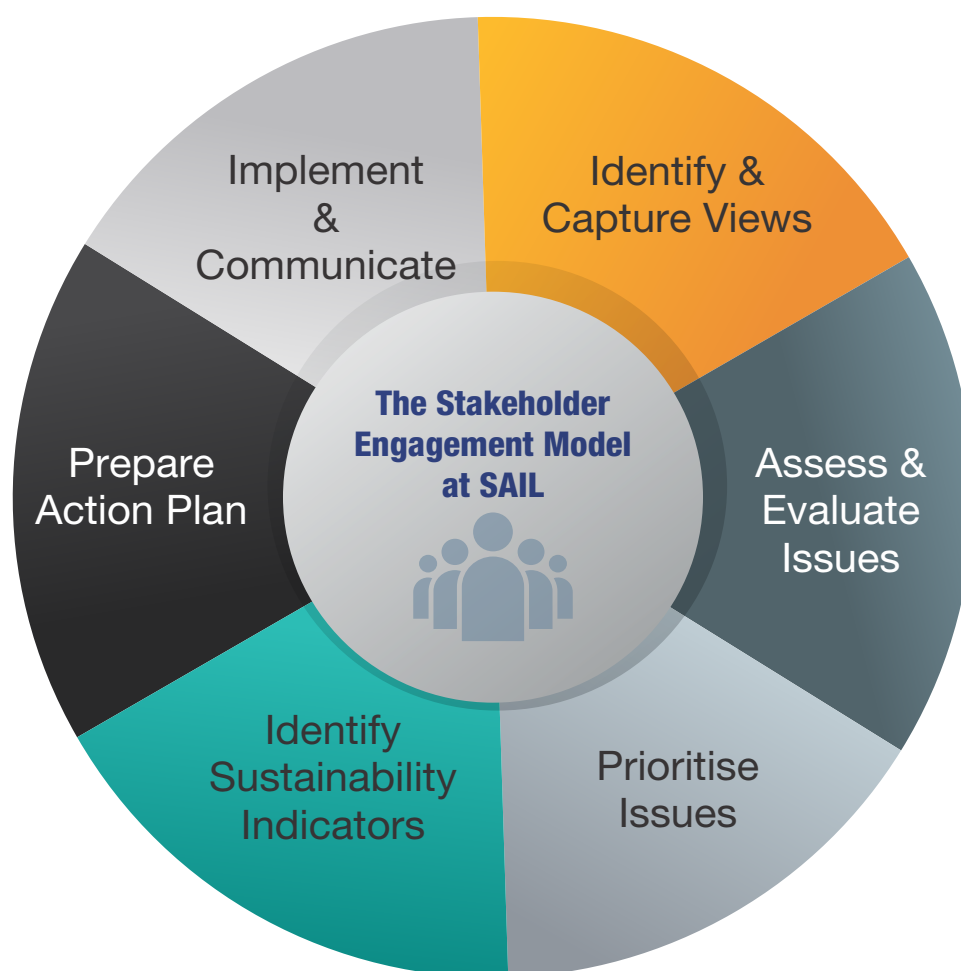


Stakeholders are broadly defined as those groups or individuals who can be reasonably expected to be significantly affected by the organisation's activities, products and/or services and whose actions can reasonably be expected to affect the ability of the organisation to successfully implement its strategies and achieve its goals. At SAIL, the identification of stakeholders originates from the vision of the Company. The vision indicates that all efforts shall be directed towards quality, productivity, profitability and customer satisfaction, whilst establishing value partnership with suppliers and contributing towards social progress of the nation.

The internal and external stakeholder base of SAIL encompasses the government, shareholders, employees, customers, suppliers, community, NGOs, academics, consultants, competitors, financial institutions etc.

SAIL's Citizen Charter has outlined commitment of SAIL towards its stakeholders, thereby empowering them to demand better products and services. Moreover, the Company is committed to excel in communal service delivery through good governance, in order to make the service delivery process more effective the Company has laid down process of identifying citizens, assessing their expectations and also for communication of Company's key policies to them.

The feedback mechanisms at SAIL have evolved and matured over several decades. The mechanism one of its own kind, helps the Company in collating & addressing the concerns & issues and also identifies risks arising out of the stakeholder concerns whilst paving ways to develop strategies for managing them. The frequency of engagement varies with the stakeholder groups ranging from regular everyday interaction with employees to Annual General Meetings (AGM) for shareholders.



Engagement with Stakeholders

Completeness

- Knowing & Understanding Stakeholders
- Transparent & Balanced Reporting

Materiality

- Assessing Significance to Stakeholders & Management
- Deciding what to report

Responsiveness

- Connecting & responding
- Providing Access to Information

STAKEHOLDER ENGAGEMENT MATRIX

Stakeholder Group	Sub Groups	Engagement Mechanism	Concerns / Perceptions	Accrued Benefits
Shareholders	<ul style="list-style-type: none"> Government Institutions Insurance Companies Individuals 	Annual General Meetings, Quarterly and half- yearly reports to shareholders, Shareholder relation meets, Investor surveys	Profitability of the Company, Creation of wealth, Stock price, Grievances and Complaints	Creation of wealth for Shareholders
Employees	<ul style="list-style-type: none"> Regular Contractual 	Labour Unions, Bipartite & Tripartite Meetings, Departmental & Zonal Committee Meetings, Various Platforms for Dialogues & Communication, CEO Interactions, Employee Satisfaction Surveys, Annual Appraisals, Internal newsletters, etc.	Safe and healthy working conditions, Good remuneration package, Professional growth, Quality of life, Welfare measures, Training and Career Development	Inspired, encouraged, satisfied and enthused workforce
Suppliers	<ul style="list-style-type: none"> Ancillaries Bulk Suppliers Vendors 	Vendor meetings, Meetings with Suppliers, Ancillary Association Meetings, Supplier Relationship Management	Partnership with value creation, Timely payment, Engaging more local suppliers, Supplier satisfaction, etc.	Contented suppliers
Customers	<ul style="list-style-type: none"> Institutional Retail 	Customer meets, Plant visits, Director's conference with customer groups, Visits to customers and customer satisfaction surveys	Partnership with value creation, Product quality, Delivery compliance, Customer satisfaction, Resolution of complaints, etc's	Long-lasting association, contented customer
Community	<ul style="list-style-type: none"> Urban Rural Indigenous Communities 	Community meetings, Interaction with municipalities, Town administrative committee, Involvement in local society Functions	Quality of life, Job opportunities, Education, Welfare measures, Medical facilities, Sustainable livelihood	Socio-economic development of the area, Partnership in development
NGO's	<ul style="list-style-type: none"> Local National 	Visits to Plants, Seminars, Conferences, Interactions, etc.	Environment quality, Human rights, Freedom of association, Compliance to regulations	Safe and healthy labour force, Environment friendly operations, Ethical operations, Compliance to Standards
Regulators	<ul style="list-style-type: none"> Central Government State Government Local Bodies 	Meetings with Central & State Government/ Steel Ministry / Trade Bodies, Industry Associations, Ministry of Environment, Forests & Climate Change, Other statutory bodies, etc.	Economic, Environmental and Social Compliance, Human Rights, Safety, Compliance to ILO Conventions	Legal Compliance, Beyond Compliance
Competitors	<ul style="list-style-type: none"> Local International 	Knowledge sharing, Partnership with value creation, Anticompetitive behaviour, Consumer privacy	Fair business, Partnership, Public policy advocacy	Knowledge sharing, Best practices, Ethical Business
Industry Associations	<ul style="list-style-type: none"> WSA CII FICCI IIM, etc. 	Conferences, Workshops, Seminars	Industry Policy, Regulations, Technology, Environment, CSR, Business Excellence	Knowledge sharing, Public policy advocacy, Best practices
Academic Bodies	<ul style="list-style-type: none"> Institution Research Labs 	Conferences, Workshops, Seminars	Knowledge management, R&D activities, Partnership for value creation	Knowledge sharing, New Technology
Professionals/ Consultants	<ul style="list-style-type: none"> Local International 	Visits to Plants, Seminars, Conferences, interactions	Partnership with value creation, Training and development	Knowledge building, Value creation, Collaboration
Media	<ul style="list-style-type: none"> Local National 	Press Meets, Interactions with Plant & Corporate Communications, etc.	Economic, Environmental and Social performance Achievements	Transparency and communication

Feedback from Stakeholders

The feedback received from shareholders at the SAIL level is often manifested in the market capitalization and share price performance of the Company. Inputs from shareholders help into the strategic plan development and the consequent strategic objective setting.

SAIL engages with its valued stakeholders through diversified modes of engagement and then incorporates their feedback in its strategy and initiatives. Customer feedback goes into forming basis for product improvement, products and services development necessary for customer retention, market penetration and growth. Interaction with suppliers allows the Company to recognize focus areas and strengthen relationship with them.

Materiality Assessment Process

Materiality Assessment helps in prioritization of issues pertaining to economic, environment and social topics of Sustainability. Questionnaires on sustainability issues were prepared by experts and circulated amongst various stakeholders for identifying the issues and gauging their perceptions. While developing materiality mapping, it was ensured that there was inclusivity in the approach and due importance was paid to the views of the stakeholders with regard to sustainability challenges faced by SAIL.

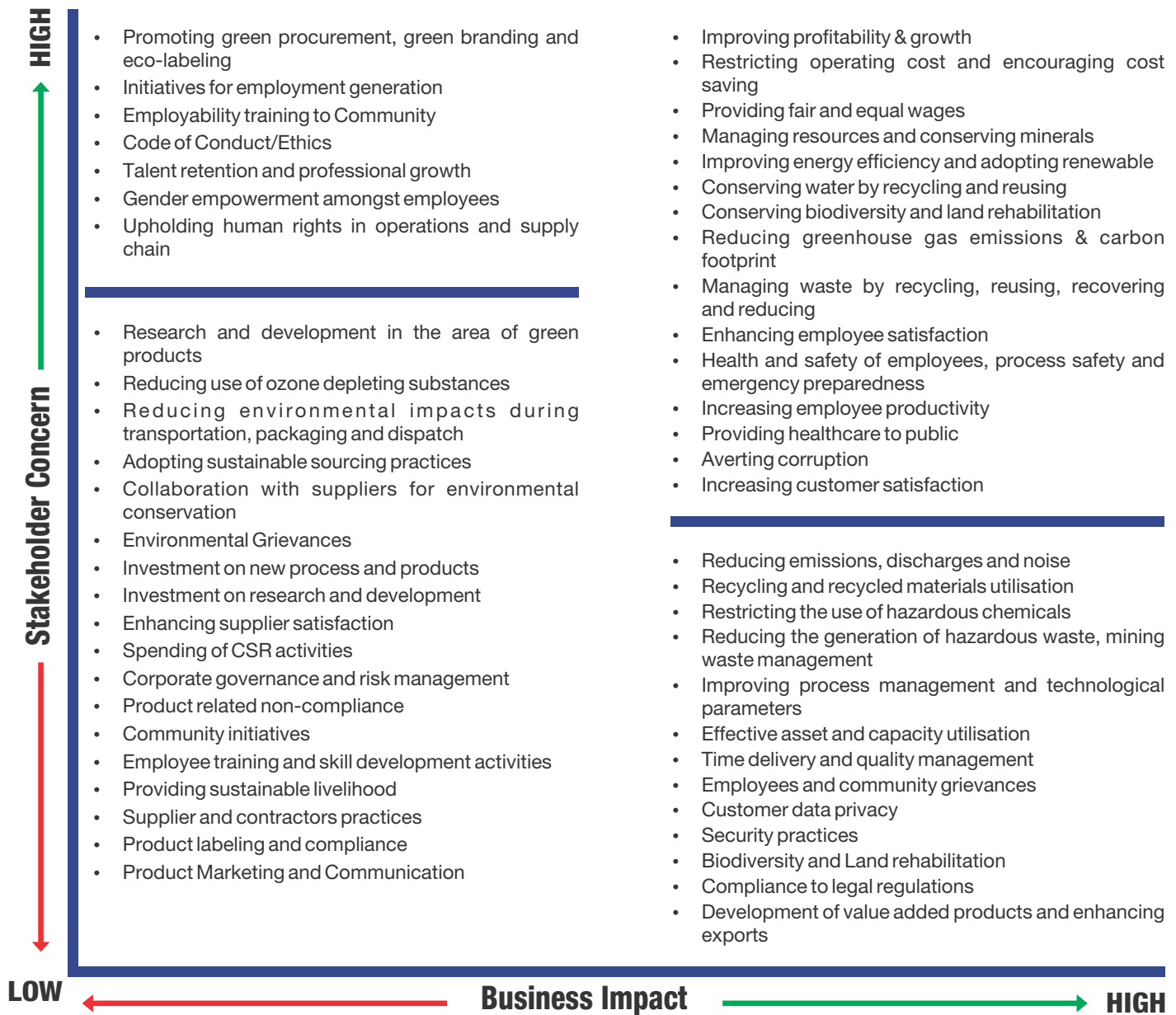
SAIL has adopted a structured approach for understanding stakeholder expectations and has done analysis of relevant issues for their professed importance as well as impact on business. The materiality mapping activity incorporates internal & external stakeholders across all operations ensuring a comprehensive approach.

The Stakeholder Consultation involving various internal and external stakeholder from Plants, Mines and Unit was done in 2017. For the present report also, similar stakeholder concerns have been taken into consideration for identifying the material issues. While developing materiality mapping, it was ensured to adopt inclusivity in the approach and due importance was paid to the views of the stakeholders with regard to sustainability challenges faced by SAIL. For the present report also, the reporting boundary for all topics has been restricted to the operations of SAIL.

Issues identified during Stakeholder Engagement	Linkage with GRI Material Topics	Page in Report
Enhancing profitability & growth	Economic Performance	36
Curtailing operating cost and encouraging cost saving	Economic Performance	36
Providing fair and equal wages	Market Presence	69
Managing resources and conserving minerals	Materials	51
Enhancing energy efficiency and adopting renewables	Energy	43
Conserving water by recycling and reusing	Water	48
Conserving biodiversity and land rehabilitation	Biodiversity	51
Reducing greenhouse gas emissions & carbon footprint	Emissions	47
Managing waste by recycling, reusing, recovering and reducing	Effluents & Waste	49-50
Enhancing employee satisfaction	Labour/ Management Relations	69
Health and safety of employees, process safety and emergency preparedness	Occupational Health & Safety	60
Enhancing employee productivity	Training & Education	75-76
Providing healthcare to community	Local Communities	79
Preventing corruption	Anti-Corruption	26
Increasing customer satisfaction	Marketing and Labeling	54



MATERIALITY MATRIX





FINANCIAL

SUSTAINABILITY

As per WSA, the global steel demand is expected to reach 1,735 MT in 2019, an increase of 1.3% over 2018. Although In 2018, global steel demand increased by 2.1%, growing slightly slower than in 2017. Uncertainty over the trade environment and volatility in the financial markets has not yet subsided and could pose downside risks to this forecast.

Across the globe, the growth rates are expected to be restrained owing to China's deceleration, a slowing global economy, uncertainty surrounding trade policies and the political situation in many regions. In 2017-18, steel demand in the US benefitted from the strong growth of the economy driven by government-led fiscal stimulus, leading to high confidence and a robust job market. In 2019, the US growth pattern is expected to slow with the waning effect of fiscal stimulus and a monetary policy normalisation. The EU economies also face the deteriorating trade environment and uncertainty over Brexit. Steel demand in the emerging economies excluding China is expected to grow by 2.9% and 4.6% in 2019 and 2020 respectively. Having overcome the shocks of demonetisation and the Goods & Services Tax (GST) implementation, the Indian economy is expected to achieve faster growth starting in the second half of 2019. The wide range of continuing infrastructure projects is likely to support growth in steel demand above 7% in both 2019 and 2020.

In 2018, India emerged as the world's second-largest steel producer with production standing at 106.5 MT. The growth in the Indian steel sector was driven by domestic availability of raw materials such as iron ore and cost-effective labour. Consequently, the steel sector was a major contributor to India's manufacturing output.

The National Steel Policy, 2017, envisages 300 million tonnes of production capacity by 2030-31. India's comparatively low per capita steel consumption and the expected rise in consumption due to increased infrastructure construction and the thriving automobile and railways sectors offer huge scope for growth.

SAIL products are appreciated by its customers across the world. The Company took various initiatives during the reporting period for sustaining and consolidating its position as the leading steel producer of the country by delivering world class products. Strategic actions such as optimizing coal blend, improvement in yields, reduction in coke rate, enhanced concast production, maximizing use of in-house engineering shops resulted in improvement economic indicators during the year. The comparative performance of major financial parameters of last three during the financial years is given below:

All values are in ₹ Crore			
Particulars	2016-2017	2017-18	2018-19
Gross Turnover (Direct Economic Value Generated)	49,180	58,296	66,267
Net Turnover	43,866	56,893	66,267
Cost of Material consumed including bought out goods	21,126	26,679	32,291
Employee Wages & Salaries	8,948	8,850	8,830
Payments to Providers of Capital			
Interest (Finance Cost)	2,528	2,823	3,155
Interest (Capital-Expenditure During construction)	582	669	704
Dividends	0	0	0
Community Investments (CSR Expenditure)	29	26	31
Contribution to Government / Exchequer	10,244	9,295	13,520
Operating Profit	2,106	2,037	6,882
Profit After Tax	-2,833	-482	2,179
Income Retained in Business	-2,833	-482	2,179

During the year 2018-19, SAIL achieved its best ever sales volume of over 14.1 million tons (MT), registering a growth of about 0.4% over corresponding period of last year. Continuing to maintain its presence in international markets, SAIL exported 0.76 MT of steel, a growth of about 9% over the previous financial year. Small consumers continued to be the focus area and 0.7 MT of steel was sold through the retail marketing channels.

SAIL also enhanced its efforts towards selling of value added steel to various segments. Supplies from the Cold Rolling Mill #3 at Bokaro have been steadily increasing to consumers in the highly demanding, high value auto segment, besides new customers in Power sector. Supplies of special grades Wire Rod Coil also commenced from the new mill at IISCO Steel Plant. With the ramping up of production at the Universal Rail Mill at Bhilai, record 4.42 lakh tonnes of long rail panels (260 meters) were supplied to Indian Railways, registering a growth of around 40% in the 2018-19. This Mill produces the longest single rail in the World (130 meters). During 2018-19, record 9.85 lakh tonnes of Rails in prime quality were produced at Bhilai Steel Plant, a growth of around 9% over 2017-18. A record 9.44 lakh tons were supplied to Railways (including supply to RVNL and IRCON).



Some of the key economic risks and barriers faced by SAIL along with their mitigation strategies are briefly described below:-

Economic Risks

- Increased competition from domestic and international steel companies located in India.
- Volatile coal prices and international currency.
- Low domestic demand and poorer sales realization of products
- Diminishing ore and coal reserves in India leading to dependence on external sources for key input - coking coal and Higher Royalty rate on Iron Ore
- Higher capital related charges on account of incremental Depreciation and Interest on new facilities leading to increased expenses.
- Elevated manpower cost and poor employee age-mix

Mitigation Strategies

- Emphasis on cost reduction with improvement in productivity through process improvement and efforts by R&D. Awareness created at all levels to control cost in all areas of operation.
- Taking strategic actions such as optimizing coal blend, improvement in yields, reduction in coke rate, enhanced concast production, sale of idle assets and maximizing use of in-house engineering.
- Product innovation to provide cutting-edge solution and retain customers and securing long-term contracts with suppliers and establishing relationship with customers
- Newly commissioned mills oriented towards products required to cater to the infrastructure development.
- High export potential for markets of Middle East and South East Asia.
- Rationalization of workforce- during FY 2018-19, a total of 448 employees separated from the services of the Company through the Voluntary Retirement Scheme (VRS), 2018.

In order to meet the challenges of adverse business environment, a Company-wide turnaround exercise named 'SAIL Uday' was initiated during 2016-17. As a part of the 'SAIL Uday' exercise, SAIL engaged M/s. Boston Consulting Group, a leading global Management Consultant, to study the health of the Company, suggest suitable measures for its turnaround and provide hand holding support and assistance to SAIL for implementation of approved road map for turn around. The study phase of 'SAIL Uday' culminated in October, 2017 with the submission of the 'Comprehensive Turnaround Roadmap' Report by M/s. Boston Consulting Group. The Roadmap contains recommendations encompassing various functional areas of the Company including Raw Materials, Production, Sales & Marketing, Supply Chain & Logistics, Manpower & Productivity, etc. SAIL is presently in the process of implementation of the recommendations which are expected to contribute towards improvement in the Company's performance.

Research and Development Activities at SAIL

Research and Development Centre for Iron & Steel (RDCIS) of the Company is India's premier research organization in the field of ferrous metallurgy and undertakes research projects encompassing the entire spectrum of iron & steel starting from raw materials to finished products. It has more than three hundred diagnostic equipment and adequate pilot facilities under fifteen major laboratories. In the year 2018-19, 90 projects were pursued and 44 projects completed with substantial benefits to the organization.

Indigenous development of model based breakout prediction system for Continuous Casters and development of automation system for optimum coal blending at coal handling plant of coke oven batteries are two important projects which are being pursued with assistance from the Ministry of Steel.

RDCIS also pursues pioneering work in the area of development of niche products as per market requirements aiming at superior performance based on application. During the year 2018-19, 20 products have been developed and some of the noteworthy products include resistant steels for Indian construction segment, Boilers and Pressure Vessels, Spring steel for auto segments, Crane, Defence sector, etc.

In its pursuit for excellence in various research fields, RDCIS enters into collaboration mode of research in specific areas with renowned research institutions and academia. During the year 2018-19, MOU/ Collaboration agreements have been entered into with institutions and PSUs such as Indian Oil R&D; R&D Centre at Rashtriya Ispat Nigam Ltd. and NMDC Ltd.; C-DAC, Thiruvananthapuram; Central Building Research Institute, Roorkee.

The efforts of RDCIS engineers and scientists have culminated in filing of 20 patents and 18 copyrights (in association with SAIL Plants) during 2018-19. As many as 95 technical papers (45 international) were presented in seminars/ symposia/ conferences and 79 papers (24 international) were published in prestigious journals. In addition, RDCIS undertook contract research work and provided consultancy services and know-how to organisations outside SAIL.

Modernisation & Expansion

The Modernisation and Expansion Plan at Rourkela, Burnpur, Durgapur, Bokaro and Salem Steel Plants has been completed and various facilities are under operation, stabilization & ramp up.

During the year 2018-19, Bhilai Steel Plant achieved many milestones including hot trial of Steel Melting Shop-III (SMS-III) facilities viz. Converter-2, Billet Casters 1 & 2, Billet cum Bloom Caster and RH Degasser, processing of Rail Heat at SMS-III through RH Degasser and Billet-cum-Bloom Caster route. Hon'ble Prime Minister of India dedicated the Modernized and Expanded Bhilai Steel Plant to the Nation on 14th June, 2018.

Once again SAIL made significant presence in the Infrastructure sector. Certain prestigious projects like Statue of Unity, Bogibeel Bridge, etc., where SAIL was one of the largest suppliers of steel, were dedicated to the Nation in the Financial Year 2018-19. In addition to this, large quantities of Plates and Structural steel were supplied to prestigious power and irrigation projects as well as Rail and Road infrastructure projects in FY 2018-19.



Hon'ble Prime Minister of India dedicating Modernized and Expanded BSP to Nation





ENERGY

EFFICIENCY



The Iron and Steel industry is vital to the nation's development efforts, as it manufactures products for equitable growth that provides the requisite support for rapid economic growth. Reduction of hematite and magnetite ores to iron and thereafter to steel involves highly energy intensive processes. Coal, electricity and natural gas are most widely used energy sources for carrying out the same.

SAIL Steel finds its application in wide range of infrastructural development projects viz. transport (roads, railways, metro, ports and civil aviation), power, irrigation, watersheds, hydroelectric works, scientific research and training, markets and warehousing, communications and informatics, education, health and family welfare and thus plays an important role in the development of Indian economy.

Energy efficiency and low carbon growth have emerged as key pathways to reduce the nation's energy intensity and emissions intensity. Initiatives to conserve energy at each sub process by adopting best technologies and innovative process operations or the usage of alternate materials have become the need of the hour. SAIL has successfully deployed energy efficient technologies such as Walking Beam Reheating Furnace (RHF), Pulverised Coal Injection, Top Recovery Turbine, Waste Heat Recovery, Coke Dry Quenching, Continuous Casting, Tall Coke Oven Batteries (green-field) and innovative process like Computerised Combustion Control System etc at its Plants during Modernization cum Expansion (MODEX) Programme.

SAIL's Research & Development Centre for Iron & Steel (RDCIS) supports Integrated Steel Plants and Special Steel Plants in enhancing energy efficiency through rigorous research, development studies focusing on technology, economics and policy aspects. Since the efficiency of steelmaking varies with the kind of production route, type of iron ore and coal used, the steel product mix, operation control technology, and material efficiency, every Plant of SAIL has dedicated "Energy Management Department" to minutely monitor, analyze the energy consumption of sub-process/operations and to envisage plant specific energy conservation measures for implementation. The efforts have resulted not only in significant savings in terms of cost as well as energy, but also in conservation of natural resources and lowering of GHG emissions intensity, thereby mitigating environmental pollution, global warming and climate change.

SAIL's specific energy consumption for the period 2018-19 was 6.50 Gcal/TCS and the energy consumption pattern is given below:

Power & Fuel Consumption	Quantity	(TJ)
Purchased Electricity (M kWh)	8,308.65	1,06,766
Generated Electricity (M kWh)	1,103.76	14,183
Coking Coal (MT) including CDI	17.071	4,81,402
Non Coking Coal (MT)	0.368	6,991
Furnace Oil ('000KL)	28.673	1,194
Total		6,10,537

As a responsible corporate house, SAIL has laid adequate emphasis on development and usage of renewable power sources. While Rooftop Solar Power Plant of 2 MWp capacity was commissioned during the Financial Year 2018-19 at various buildings of Bokaro Steel Plant, tenders have also been invited for installation of another 6.2 MWp capacity of Roof Top Solar Plants at different SAIL Plants/ Units. In addition to this, a new Joint Venture Company GEDCOL SAIL Power Corporation Limited (GSPCL) was incorporated during the Financial Year 2018-19 to develop a small Hydro Electric Plant of 10 MW capacity at Mandira Dam, Rourkela.

SAIL has set a target of installation of 242 MW (Solar Power Plants) in its Steel Plants (120 MW at Bokaro, 50 MW at Salem, 40MW at Rourkela, 25 MW at Kulti and 7 MW at Bhilai) by 2019.



श्री नरेन्द्र मोदी, प्रधानमन्त्री द्वारा

"विकास यात्रा- 2018"

भिलाई इस्पात संयंत्र के विस्तारीकरण का लोकार्पण

भारत-नेट परियोजना का भूमिपूजन

आई.आई.टी. भिलाई का शिलान्यास

छत्तीसगढ़ में 'उड़ान' का शुभारंभ (जगदलपुर)

श्री नरेन्द्र मोदी
प्रधानमंत्री



Schemes For Energy Conservation and Technology Absorption

Technology development, absorption, adaption and further improvement are part and parcel of our operation and take place continuously in the Company in different areas of Steel Plant operation through a definitive technology strategy. Unit wise brief of actions taken to improve energy efficiency by optimization of operational parameters, adoption of new technologies is presented below:

Bhilai Steel Plant (BSP)

- a) Best ever CDI and Coke Rate at BF #7
- b) Replacement of old BF gas burners by new in-house efficient burners in boiler #5
- c) Replacement of all worn out air preheater blocks in boiler #5
- d) Commissioning of VVVF drive for relay mechanism at cooling bed of Merchant Mill
- e) Power generation from Back Pressure Turbine Generator (BPTG) of CDCP of Coke Oven Battery #11
- f) Installation of 7455 nos. of LED bulbs/lamps at various locations

Durgapur Steel Plant (DSP)

- a) Lowest ever Blast Furnace Coke Rate and highest ever CDI rate
- b) Lowest ever specific boiler coal consumption n bay of SMS-2

Raurkela Steel Plant (RSP)

- a) Increased power generation from Back Pressure Turbine Generator (BPTG)
- b) Average solar power generation of 0.06 MW resulting in reduced import power from grid

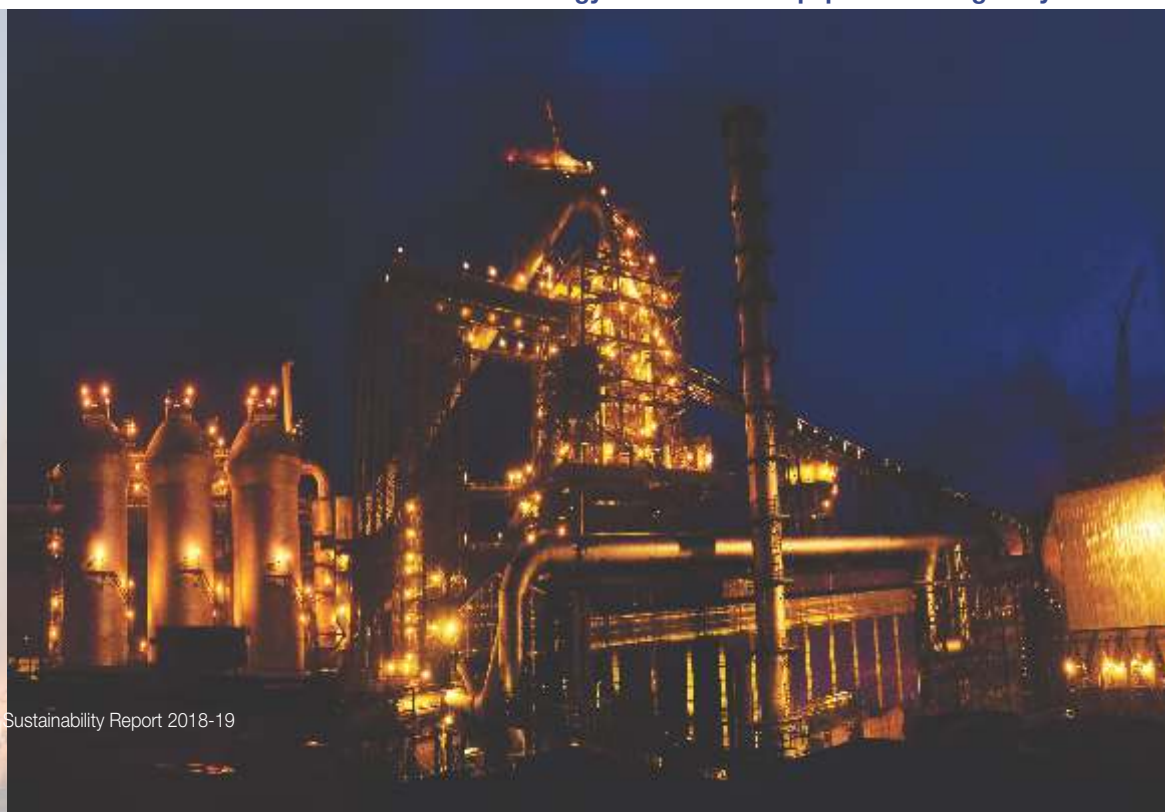
Bokaro Steel Plant (BSL)

- a) Improved Coke Oven gas availability for mills by partial commissioning of new alternate coke oven gas main header
- b) Commissioning of 2 MW roof top solar lighting system
- c) Changing of recuperator of RHF # 2 & 3
- d) Full skid insulation of RHF# 2, 3 & 4
- e) Liquidation of 90 nos. of steam leakages, insulation of 800 meter steam line & replacement of 24 nos. of steam traps

IISCO Steel Plant (ISP)

- a) Reduced Coke rate
- b) Improved Power generation in TRTG
- c) Modification of BF gas & CO gas mixing facility CBM gas mixing facility introduced in LDCP for proper intermixing of different fuel gases to obtain desired and consistent calorific value

Capital Investment of Rs. 29.83 Crore incurred on energy conservation equipment during the year.





ENVIRONMENT

MANAGEMENT



Plantation of saplings at BSP Group of Mines

SAIL, as a leading steel maker and a responsible corporate entity, has reaffirmed its commitment towards mitigation of climate change in its well laid down Corporate Environment Policy which includes the commitment that SAIL would “Contribute towards mitigation of climate change through the adoption of cleaner and energy efficient technologies.”

At SAIL, Environment management has always been a key priority area. The Company has continually strived to improve the environment in and around Plants and Units. A number of new clean technologies (like coke-dry quenching, waste-heat recovery from blast furnace stoves and sinter machines) along with state-of-the-art pollution control devices (secondary emission control from BOF, cast house de-dusting system at blast furnaces etc.) were installed during the modernization cum expansion phases. The company has also progressively introduced various management practices like ISO 9001, ISO 14001, OHSAS 18001 and SA 8000, at most of its Plants, Mines and Units.

Furthering its commitment to rules, regulations & laws of the land and to ensure that regulatory requirements are duly identified and adhered to, SAIL has adopted various steps that go beyond the statutory compliances. Close surveillance of key environmental parameters as per statutes is also being carried out to be environmentally compliant. SAIL ensures compliance to the conditions stipulated by the statutory authorities in the Environmental Clearances/Consents and the compliance reports are submitted to the respective statutory authorities on regular basis. Moreover, deviation pertaining to the environmental policy, violation of environmental clearance conditions, if any is duly reported to the SAIL Board, on quarterly basis.

Some of the key environmental risks foreseen by us and their mitigation strategies are briefly listed below:

Environmental Risks

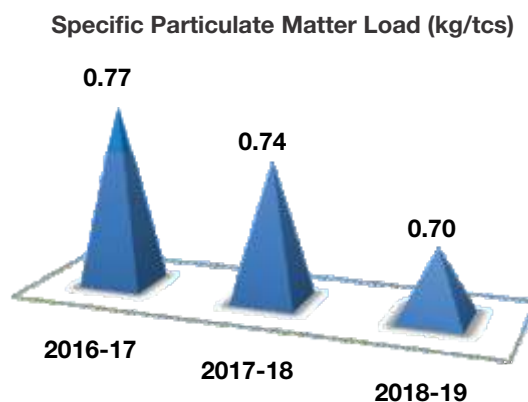
- Global concern for reducing greenhouse gas emissions & carbon footprint
- Concern for conservation of water and availability of good quality of water
- Proper management and disposal of waste
- Environmental governance thrusting industries to face stricter pollution norms

Mitigation Strategies

- Adoption of green & clean technologies to reduce greenhouse gas emissions & carbon footprint
- Formulation of water conservation schemes including increased recycling and reuse
- Proper handling, recycling, recovery and reuse of waste
- Compliance with the norms as well as preparing for beyond compliance scenario

Each Plant and Mine of the Company has its own Environmental Control Department, manned with qualified officers, for implementation of environmental protection measures and management. Besides this, Environment Management Division (EMD) unit of the Company act as a nodal agency and plays a pivotal role in consolidation of the efforts of the Plants and Mines towards environment protection, resource optimization through its multifarious activities involving proactive interface between the SAIL units & the regulatory agencies, monitoring & assessment, technology dissemination, awareness campaigns and skill up-gradation. Issues pertaining to Climate Change and matters related to Intended Nationally Determined Contribution (INDC) are also being dealt by the EMD.

SAIL has put in consistent efforts such as regular maintenance of air pollution control equipment, effluent treatment plants, recycling of solid wastes, adoption of cleaner and environment friendly technologies to enhance the environmental performance. Emissions of SO₂ are reduced by the use of low sulphur coal and desulphurization of coke oven gas. For controlling NO_x emissions, special burners have been installed.



Carbon Foot Print

Climate change due to global warming is one of the most pressing issues the world faces today. The largest contributor for global warming is atmospheric CO₂ and to address the climate change issues, a new pathway has been agreed upon during the Conference of Parties (COP)-21 Summit in 2015 called the Paris Agreement. India committed to reduce the emission intensity of its GDP by 33 to 35 percent from 2005 level by 2030. In line with India's commitment, the Company have set a target for CO₂ emission of 2.30 T/ton of crude steel production by 2030, which is equal to 23% reduction in emissions level from that of 2007-08. The company could achieve reduction of 11.7 % in CO₂ emission over the last ten years through installation of clean technologies in MODEX phase. The specific CO₂ emission during 2018-19 was 2.57 T/tcs.

Conserving Water

Nature has gifted us some precious and valuable resources and water is one of them. Fresh water availability is a major concern in large parts of the world. The steel industry requires large quantity of water for the purpose of cooling, gas cleaning, de-scaling, dust scrubbing and for other process operations, however very little water is actually consumed as most of it recycled back to system.

The company has taken various initiatives like setting up of waste water treatment plants, identifying source of leakage and arresting them, assessment & analysis of the discharged water from various units to identify areas that need improvement to reduce fresh make-up water. These endeavour of conserving water is being continued on sustained basis and regular water audits are also carried at different plants. Moreover, adequate steps for implementation of treatment and recycling facilities to achieve Zero Liquid Discharge (ZLD) have already been taken up at different plants. Out of three outfalls at BSP and BSL, facility for treatment and recycling of effluent from one outfall at each plant has already been developed and is under operation. Job for the remaining outfalls is under progress.

The other notable initiatives that bears the testimony of the Company's efforts towards conservation of this precious environmental resources include awareness campaigning, observations of water conservation months, revamping of localized recirculation systems, water auditing by third party, online monitoring of quality and quantity of effluent discharged from shops as well as outfalls, rainwater harvesting, installation of improved effluent treatment system in upcoming units under MODEX. Through consistent efforts, reduction of sp. Water consumption reduced by more 6 % in last five years.

Specific Water Consumption (m³/tcs)



Water Sources for various SAIL Plants & Units

Plants/units	Water Source	Plants/units	Water Source
BSP	River Mahanadi	ASP	River Damodar
DSP	River Damodar	SSP	River Kaveri
RSP	River Brahmani	VISL	River Bhadra
BSL	River Damodar	CFP	Groundwater (borewells)
ISP	River Damodar	SGW	River Barakar

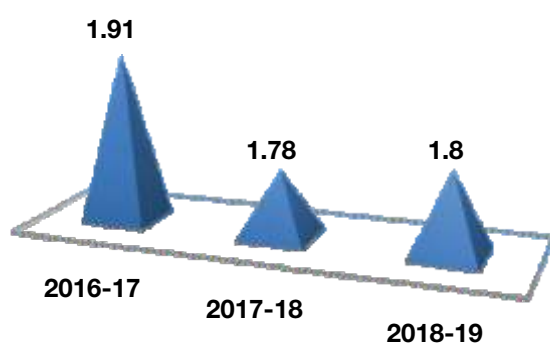
The Company draws water required for industrial use from surface water sources, primarily perennial rivers & streams and internal reservoirs. It does not encourage use of ground water. With this structured management approach, awareness and technological intervention, SAIL has been able to provide better water resources for industrial as well as human use within its operations. No negative impacts were observed on the water sources or the nearby water bodies because of our operations.

Effluent Treatment

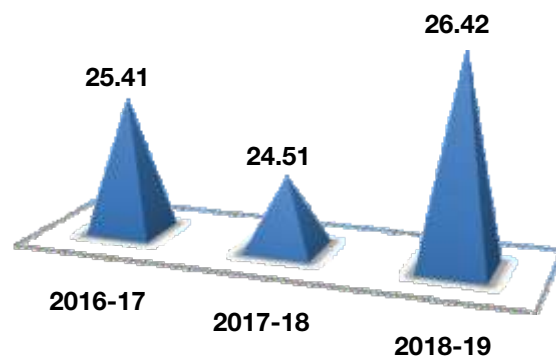
In an effort to preserve the water quality of natural water bodies and to avoid detrimental effect on the ecology of the local biosphere as well as on the natural resources, the quality of effluent discharged by SAIL plants and mines are being maintained through effective utilisation of the Effluent Treatment Plants (ETPs) installed at the various shops, rejuvenation of the existing local water re-circulation systems and recycling of treated waste water as much as possible. The waste water arising out from different operations at plants and mines is treated in ETPs and is discharged through the outfalls at the boundary, which conforms to the stipulated norms for respective parameters. The specific effluent load in the discharged effluent has reduced appreciably.

The Company has always shown its commitment to strictly monitor the water discharged from its operations and treat the water adequately so that the quality of water conforms to the stipulated statutory standards. In view of the above, online effluent quality monitoring systems are being installed at our plants.

Sp. Effluent Discharged (m³/tss)



Quantity of Effluent Discharged (Mm³)



During the year, all the parameters pertaining to standards of effluent discharged from all the Plants were well within the norms.

Effluent Quality of five ISPs during the year

unit: (mg/l except pH)

Parameters	pH	SS	BOD	COD	Phenol	Cyanide	Oil & Grease	NH3-N
Norm	6.0-8.5	100	30	250	1.0	0.2	10	50
BSP	7.3 -8.0	39-79	12-26	47-65	BDL-0.26	BDL-0.12	1.8-3.8	6-39
DSP	7.0-8.11	15-39	9-23	127-168	0.16-0.65	0.01-0.17	1.2-5.5	5-41
RSP	7.3-8.0	17-40	10-17	29-53	0.01-0.16	<0.002-0.10	2.4-4.3	<0.1-16
BSL	7.0-8.0	23-57	4-12	24-104	0.015-0.12	0.01-0.07	0.3-1.3	1-8
ISP	6.3-7.9	14-25	7-17	11-115	BDL-0.17	BDL-0.11	<1.0-1.3	0.2-28

Effluent Quality of Special Steel Plants and Ferroalloy Plant during the year

unit: (mg/l except pH)

Parameters	Norm	ASP	SSP	VISL	CFP
pH	5.5-9.0	7.3-8.6	5.5-8.6	7.4-7.5	7.7-8.9
Suspended solids	100	8-61	4-12	49-56	74-98
BOD	30	6-8	2-5	3.0-3.45	21-37
COD	250	7-53	16-24	4.0-24	158-250
Fluoride	2	<0.2	0.3-1.3	<0.02	NA
Iron	3	<0.3	0.1-0.6	0.4-0.5	0.1-0.4
Oil & Grease	10	1-8	<4	BDL	4-6

*Norm of BOD at CFP is 100 mg/l

NA : Not applicable



Waste Management

Solid waste management in steel industry is aimed to extract the maximum practical benefits from waste products and to generate the minimum amount of waste to comply with Environmental legislation & Regulations and the economics of disposal in the present scenario. To achieve this goal and for a sustainable growth “4Rs” i.e. reduces, reuse, recycle and restoring the materials are being considered as strategies of solid waste management in our Company.

In the Company, the solid wastes like mill scale, BF flue dust, BF slag and waste refractory bricks are utilised fully. The BF slag gets granulated through cast house slag granulation plants for further use in cement industries as a substitute of clinker. The company achieved 96% utilization of BF slag during 2018-19 and has taken following steps to reach the mark of 100% BF slag utilisation.

- Installation of on-site Cast House Slag Granulation Plant (CHSGP) for the BF's which do not have this facility.
- Utilisation of air cooled BF slag for construction of road. In this regard, Bokaro Steel Plant has entered into an agreement with M/s Ashoka Buildcon Limited for supply of 25000 T of air cooled BF slag, for construction of road under two/four laning with paved shoulders of Govindpur (Rajgunj)-Chas-West Bengal Border Section of National Highway-32.

A limited quantity of BOF slag is recycled back in the process through the Sinter plant, BF and SMS. To enhance the utilisation of BOF slag (56% of BOF slag utilised during 2018-19) at the Company, following R&D based initiatives have been undertaken either through in-house research wing or in association with other research centres or academies of national repute.

- Steam maturing of BOF slag for further utilisation as construction material in road making and as ballast material for rail track.
- Dry granulation of BOF slag for further utilisation in cement manufacturing.
- Use of BOF Slag as soil ameliorant for treatment of acidic soils.
- Study on Use of composite slag (mix of BF slag and BOF slag) for making of Portland Slag Cement (PSC)
- Utilisation of SMS slag in construction of rural roads under Pradhan Mantri Gramin Sadak Yojna (PMGSY).

Through concerted efforts, SAIL has achieved 85% utilisation of total solid wastes during the year 2018-19.

Solid Waste Generation & Utilisation

Integrated Steel Plants

Type of Waste	Generation (T)	% Utilisation
BF slag	62,55,897	95.89
LD BOF slag	18,42,467	55.94
THF slag	96,143	23.06
BF Flue dust	1,56,168	93.82
BF Sludge	95,263	7.50
LD /BOF Sludge	1,21,551	22.59
Mill scale	2,82,486	102.37
Lime/Dolo Fines	3,11,878	90.88
Refractory Wastes	37,012	80.67
TOTAL	91,98,865	85.17

Special Steel Plant

CFP	Generation	% Utilisation
FeMn Slag	0	>100 (from stock)
Si Mn Slag	64,237	73.04
MCFeMn Slag	3,598	189.91
Mn Ore Fines	14,233	119.05
Coke Fines+Charcol fines	7,377	17.99
Quartz Fines	437	0
Flux Fines	260	0
Iron Ore Fines	417	0
GCP Sludge	5,414	0.92
Total	95,972.5	128.16

Special Steel Plant

SSP	Generation	% Utilisation
SGL Swarf	14.82	70.18
Boiler Ash	1,256.21	0
Steel Shot Dust	355.16	102.46
Mill Scale (HRM & APL)	2,181.38	100.88
SMS Slag	41,201.64	14.57
EAF Dust	2,005.69	0
AOD Dust	2,609.62	0
Grinding Swarf & Dust	313.60	0
Torch Cutting Bag house		
Dust & Caster Scale Pit	824.90	0
Other wastes	1,440	0
Refractory wastes	4,643.66	0
TOTAL	56,846.68	15.09

Special Steel Plant

ASP	Generation	Utilisation
EAF / AOD Dust	210	196.67
EAF Slag	2,618	0
Grinding Dust	572	100
Mill Scale	1,897	0
Refractory Bricks	762	71.26
Total	6,059	25.22

Solid Waste Generation from Mines (`000 T)

Mines	Overburden	Tailings
BSP	10,895	815
RMD	9,800	230
VISL	0	0
TOTAL	20,695	1045

Apart from the above mentioned solid wastes, some wastes which are hazardous to nature by reasons of their physical and/or chemical characteristic are also generated. Inventorisation and quantification of the hazardous wastes have been done at the plants/units and the identified wastes are being managed as per the Management of Hazardous Wastes is governed by the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 Rules. These wastes are safely disposed either in the Secured Landfill Facility or through the authorized agency dealing with Treatment, Storage and Disposal of hazardous wastes. Hazardous Waste Generated at the ISPs during the year was 13,9087 T.

Material Management

Conservation of raw materials is becoming increasingly important for steel makers, to ensure their availability in the long term while sustaining useful natural resources. Increasing the recycling of wastes has reduced the consumption of coal, iron ore and flux materials like dolomite and lime stone, thus optimizing the use of raw materials. The following details furnish a consumption pattern of raw materials at the SAIL plants, recycling of steel scrap and use of other wastes generated within the operational units.

Raw Material Consumption (MT) in SAIL for 2018-19

Iron ore	Coal	Dolomite	limestone
28.54	17.07	3.36	4.77

Explosive Consumption (T) in SAIL Mines for 2018-19: 6448.39

Scrap Utilization (T) in SAIL ISPs for 2018-19

Scrap utilization	BSP	DSP	RSP	BSL	ISP
Steel Scrap	7,19,165	1,59,840	4,82,640	3,96,032	77,408

Our Efforts for Ecological Restoration

Mining causes the destruction of natural ecosystems through removal of soil and vegetation. The restoration of mined out land and the re-establishment of the capability of the land to capture and retain fundamental resources is essential for maintaining and enhancing bio-diversity as well as replenishing the eco-system services. SAIL in collaboration with the Department of Bio-technology (DBT), Govt. of India through the University of Delhi, started the eco-restoration of degraded Purnapani Limestone & Dolomite Quarry situated in Odisha a long back and same is still being maintained.

Over the years, about 250 acre of degraded mined out area in Purnapani Limestone & Dolomite Quarry situated in Odisha has been restored back to biologically rich closed canopy forests by planting sapling of different native plant species and medicinal plants. 200 acres of mine void area has also been transformed into clean biologically productive aquatic ecosystem that provides fishing in the water body as alternative livelihood for local community.

None of the operations of SAIL are in the vicinity of protected areas. No species from the International Union for Conservation of Nature (IUCN) Red List have habitats in the area of operation.

Apart from this, the Company has long been adopting extensive afforestation program religiously in its plants and mines since its nascent stage. Structured plantation programme are being carried out every year in the SAIL Plants and Mines. Approximately, 205.97 lakh trees have been planted since inception and about 4.43 lakh saplings were planted during the FY 2018-19.

Cummulative Plantation in Plants and Units (in Lakhs)

2014-15	2015-16	2016-17	2017-18	2018-19
186.49	191.16	193.26	201.54	205.97

The Company is assessing its carbon footprint in one hand and potential of sequestration of CO₂ through its existing biotic resources, on the other. A project on carbon sequestration through afforestation has been taken up at the site of Rourkela Steel Plant. M/s Tropical Forest Research Institute, Jabalpur, has been engaged to carry out the same.

Land Area of Mines (in Ha)

Mines	Lease Area	Land for Mining	Waste Dump Area	Waste Dump Rehabilitated
RMD Mines	15,038.14	3,835.84	299.28	201.75
BSP Mines	6,592.06	471.55	216.48	86.92
VISL Mines	44.57	22.50	3.0	2.0

Environment Management System (EMS)

Environmental Management System (EMS) linked with ISO:14001 is a systematic framework to manage the immediate and long term environmental impacts of an organisation's products, services and processes. Therefore, with an aim, to “minimize harmful effects on the environment caused by its activities, and to achieve continual improvement of its environmental performance”, all the integrated steel plants, major units and warehouses of SAIL are compliant with EMS ISO: 14001 Standard.

SAIL Units accredited to EMS - ISO 14001

Plants/unit	Certification Status
BSP	Entire Plant & Township
DSP	Entire Plant
RSP	Silicon Steel Mill, Sinter Plant-II, Hot Strip Mill, Plate Mill, ERW Pipe Plant, SW Pipe Plant, Special Plate Plant, Environment Engineering Department and RSP Township
BSL	Entire Plant
ISP	Entire Plant
SSP	Entire Plant & Township
ASP	Entire Plant
VISL	Entire Plant
CFP	Entire Plant
CMO	Warehouses at Faridabad, Dankuni, Kalamboli, Chennai, Hyderabad, Ahmedabad, Ghaziabad, Delhi, Durgapur, Bangalore, Bokaro, Vizag and Kanpur
Transport and Shipping	BTSO Vizag

MINES	
Dalli (Mech.) Iron Ore Mine	Entire Mine
Kiruburu Iron Ore Mine	Entire Mine
Megatuburu Iron Ore Mine	Entire Mine
Bolani Ores Mines	Entire Mine
Barsua Iron Ore Mine	Entire Mine
Gua Iron Ore Mine	Entire Mine



Chairman SAIL planting sapling



PRODUCT

STEWARDSHIP

The Company has always been at the forefront when it comes to developing futuristic products that meet the requirement of the nation and other customers. SAIL has been amongst the pioneers in India for developing earthquake resistant, light weight, corrosion resistant TMT rebars. Such high strength and corrosion resistant materials have revolutionized the construction industry while making safe and reliable infrastructure accessible to the nation and has also given the much need thrust to the "Make in India" drive of the country. The Research and Development Centre for Iron and Steel (RDCIS) unit of SAIL plays a lead role in the product development activities of the Company. SAIL, being a customer oriented organization, undertakes product development and product improvement with an aim to improve in product performance and customer satisfaction.

RDCIS has earned credentials of being one of the globally premier R&D Centre in the field of ferrous metallurgy. The Centre works in tandem with Plants and CMO to reduce product cost, develop value added market centric products and demonstrate the application of SAIL products amongst the customers. Several new products, particularly special steels having superior quality, have been developed and commercialized to cater market segments having stringent application requirement in recent past.

The Company has quality and environment policies in place to ensure production of safe and sustainable products. In addition, the Company also has well-established systems and procedures to ensure compliance with requirements related to product labeling, marketing, communications and customer privacy. The product complies with the quality norms of the Bureau of Indian Standards or with the specific customer requirement depending upon the application. The Central Marketing Organization (CMO) is primarily responsible for marketing of steel products. All marketing communication is governed by the guidelines of the Corporate Manual.

Product Development and Improvement

The Company has embarked upon a 'Master Plan for Research & Development' in order to facilitate acquisition and development of appropriate technologies for sustainable growth. In alignment with the plan, Centres of Excellence (COEs) are being created at the individual plant level to focus on various product development and improvements in collaboration with key customers and technology suppliers. The plan identifies 'demanding markets' for steel, such as steels for supercritical thermal and nuclear power generation, defense, renewable energy, high strength profiles for high rise buildings with seismic and fire resistance, as focus areas for product development. SAIL's Corporate R&D set-up is an umbrella organization, overseeing both centralized R&D and the Plant-level COEs.

During the year, 21 new products for construction, railways, defense, etc., having a crucial role in the growth and development of economy, have been developed by the RDCIS. Out of these, 12 products have been developed through the newly commissioned production facilities at various SAIL Plants. Recognizing the opportunities available for reducing the weight of steel, the Company oriented its research capabilities to develop light weight high strength steel thereby facilitating significant reduction in environmental impacts during their usage in vehicle body's fabrication. SAIL manufactures products, the design of which incorporates social, environmental concerns, risks and /or opportunities. One such product developed is High Strength IPE600 Structural without Micro-alloying that would lead to the use of less amount of steel and thus fewer raw materials/resources and energy consumption. On similar lines, Structural sections IS 2062E250 BR NPB200 & MB300, BR MB250 & NPB250 have been developed to conserve natural resources and energy sources without sacrificing desired safety of the structures. The Company also launched a new brand "NEX" to promote Parallel Flange Sections being manufactured by DSP and ISP. The Company believes in regular interaction with its customers through customer feedback systems and uses the same as valuable inputs for product development with a view to further improve customer satisfaction.



SAIL Steel usage : Linke Hofmann Busch (LHB) wheels

Product and Service Labelling

SAIL's detailed product information is available on its website. Catalogues containing details on grade, size and application, are also available for costumers. All norms for physical dimensions, chemical composition and technical delivery conditions for the associated specifications are strictly adhered to during production and dispatch of various products manufactured by SAIL. Test certificates are issued along with the deliveries to the customers so that the material can be identified and there is no mix up and the correct quality gets supplied to the customer. Two key principles- Quality and Transparency are followed during delivery of SAIL's products. There was no incidence of non-compliance with respect to regulations and voluntary codes concerning product and service information and labeling.

SAIL has also established extensive rail network for transporting raw materials and finished products to improve hence reducing the environmental footprint.

Brand Management

Brand is a promise that the product will perform as per customer's expectations. In present challenging and dynamic business environment, management of Brand is a vital task. Branding is not only a marketing strategy but a vital tool for a sustainable business. The businesses necessitate constant advocacy and brand management as factors like heightened competition, regulations, supply chain issues and manufacturing costs constantly influence it. In order to address internal and external factors across multiple locations, the brand management practices are made flexible, acquiescent, growth-oriented as well as eloquent.

The Corporate Affairs Division (CAD) of SAIL is entrusted with the responsibility of corporate brand management of the Company while the product related branding is managed along with the Central Marketing Organisation (CMO). To strengthen the Company's image amongst key stakeholders, the Corporate Affairs Division disseminate the information through effective means of communications such as press releases, press meets, one on one interaction with media personnel etc. In addition, CMO also



organize presentations on product development to various project customers like CPWD, DMRC, NHPC, L&T, etc. for communicating the advantages of SAIL products over competitors' products. The other brand building initiatives undertaken by CMO for promotion of SAIL steel during the year includes circulation of product brochures, wall paintings, hoardings at important locations (viz. highways, major airports, in metros & tier-II cities) across the Country. As dealers are the main points of proliferation of Company's branding initiatives, regular meetings with dealers are organized for promotion of SAIL steel.

Customer Satisfaction

SAIL highly values its customers as their patronage has enabled SAIL to earn an unassailable position in the market. Understanding the importance of customer satisfaction in today's competitive steel industry the company gives highest importance to its customers as their association is unswervingly related with the company's profit. SAIL's Marketing Division, the Central Marketing Organization (CMO), is entrusted for reaching out to all the customers. The Company has a well defined Key Account Management (KAM) for customer relationship management that captures the specific requirements of key customers, and these requirements along with the customer feedback are reviewed monthly in the Plant-CMO meetings. Outcomes of these meetings and orders received from customers help in finalization of the product schedule.

The Company is reaching out to its customers through implementation of :

- Key Account Management programs for High Value Customers
- 2-tier Distributor-Dealer Network for Retail Customers, being ramped up for enhancing reach and penetration
- Sale Force Effective (SEF) program to focus on medium/small sized account through branch network.

In addition, to enhance the effectiveness of order servicing for its customers, Sales and Operations Planning (S&OP) system is being ramped up. New metrics such as On Time in Full (OTIF) to measure the effectiveness of order servicing are also being implemented.

Health & Safety of Customers



In line with its commitment to offer the highest level of service to its customer, the Company develops and uses best practices, procedures to achieve & maintain high standards of customer health & safety. Measures for preserving customer health & safety during the use of steel products are not specifically required as there are no identified health risks associated with the products. However, material handling is a safety concern for the customer and use of safety appliances is mandated in the warehouses. All of SAIL's products conform to applicable regulations and standards as prescribed by the Bureau of Indian Standards. There has been no incidence of non-compliance with respect to regulations and voluntary codes concerning health and safety impacts of products and services during the reporting period.

Communication and Media Relations

The job of building a positive image of the organization among various Stakeholders– both internal and external is entrusted with CAD. Through this nodal agency of the Company, sharing and dissemination of Company's information to various stakeholders is carried out. The Chief of Corporate Affairs is the official spokesperson of the Company who also keeps a regular touch with the media houses.

The Company recognized the need to evolve new and innovative ways to engage with its workforce and conducted a series of large group interactions at its Plants and Units. In these interactions, the Chairman and Directors of the Company held two-way communication with employees thereby apprising them of the challenges before the Company and encouraging them towards better performance. In addition to this, the Company followed an inclusive approach in its communication initiatives for internal communications through Messages, Intranet, Newsletters etc. The Company's intranet shares all important and valuable information pertaining to the Company with its workforce and provides interactive forums to partake in various competitions/quiz's and lets them share their feedback.

For building Company's brand image, promoting its products and their applications, highlighting its role in nation building, Make in India drive and to effectively communicating with external stakeholders, SAIL participates in various events and exhibitions, releases advertisements, maintains its website and presents itself on social media, sponsors various events, etc. SAIL website serves as an important source of information to our investors and other important stakeholders. SAIL has also been successfully participating in India International Trade Fair (IITF), regularly for over two decades.

The Company has produced crisp, trendy and emotional connect generating advertisements which successfully conveys the meaning of 'Brand SAIL' to society at large as well as commemorate Company's 60th year of production. These provide visibility to the Company across different formats such as print, electronic, online, mobile, etc. The organization's rural marketing initiatives are supported by having rural focus in the advertisements. SAIL's retail sales gets boost with SAIL's "Gaon Ki Ore" campaign. The Company has also created and showcased a number of films on various subjects like steel making, safety, swachhta, vigilance, steel applications, environment conservation initiatives, etc.

The Company is actively engaged in digital & social media and efforts have been undertaken to strengthen the Company's brand image through our presence at Facebook, Twitter, Flickr and Instagram. The Company has also actively participated in furthering GoI's initiatives such as Swachh Bharat, World Environment Day, Yoga Day, and Rashtriya Ekta Diwas through several medias.

Online Publication and Data Privacy

In order to conserve paper, the digital version of all PR publications has been initiated at the Company. SAIL recognizes its duty towards protecting the information collected during the course of its business, from its various stakeholders and endeavours to maintain the privacy of such sensitive information. The Company's corporate policies on data privacy, confidentiality and security are suitably designed to maintain the trust of the individuals and organizations who share their information. The privacy related to consumer information, such as specifications of special products developed for specific consumers, are protected through confidentiality agreements.

During 2018-19 no incident has been reported on noncompliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion and sponsorship. No complaint has been received regarding any breach of customer privacy and loss of customer data during the year. No fine has been imposed on us for noncompliance with laws and regulations concerning the provision and use of products and services during reporting period.



Director Technical at SAIL Pavilion



Rails

Supply Chain Management

SAIL is outsized family comprising not only the Iron and Steel Plants but also the forward linkages like suppliers and other important stakeholders. The support of this extensive family helps the Company in keeping the environment clean and green. The Company is aware of its responsibility towards environmental conservation even outside its operational boundaries and same is duly reflected in its Corporate Environmental Policy.

All those involved in the product lifecycle actively participate towards sharing responsibility for maximizing the overall value and minimizing any negative impacts across commercial, social and environmental attributes that result from the production, use and disposal of the product. Moreover, to ensure that all materials, processes, goods and services are managed in a socially and environmentally responsible manner, the Company has a structured framework for 'Corporate Environmental Responsibility' along with several inbuilt integrated programmes.

The Company prefers rail over roads for transportation of material, as there is enormous amount of raw materials and finished products to be handled. Railway is an important mean of logistics for the Company; not only for reception of raw material at its facilities, but also for dispatch of finished goods to the godowns or the end customers. However, in order to cater to market demands, SAIL also engages road transportations from its warehouses to customers' sites. In general this has not only improved the operational efficiency but also the environment in and around the Plants and Mines.

The Company has taken necessary measures towards compliance of regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle and hence there has been no incidence of non-compliance during the year 2018-19..

Striving Towards Zero Impact on Environment

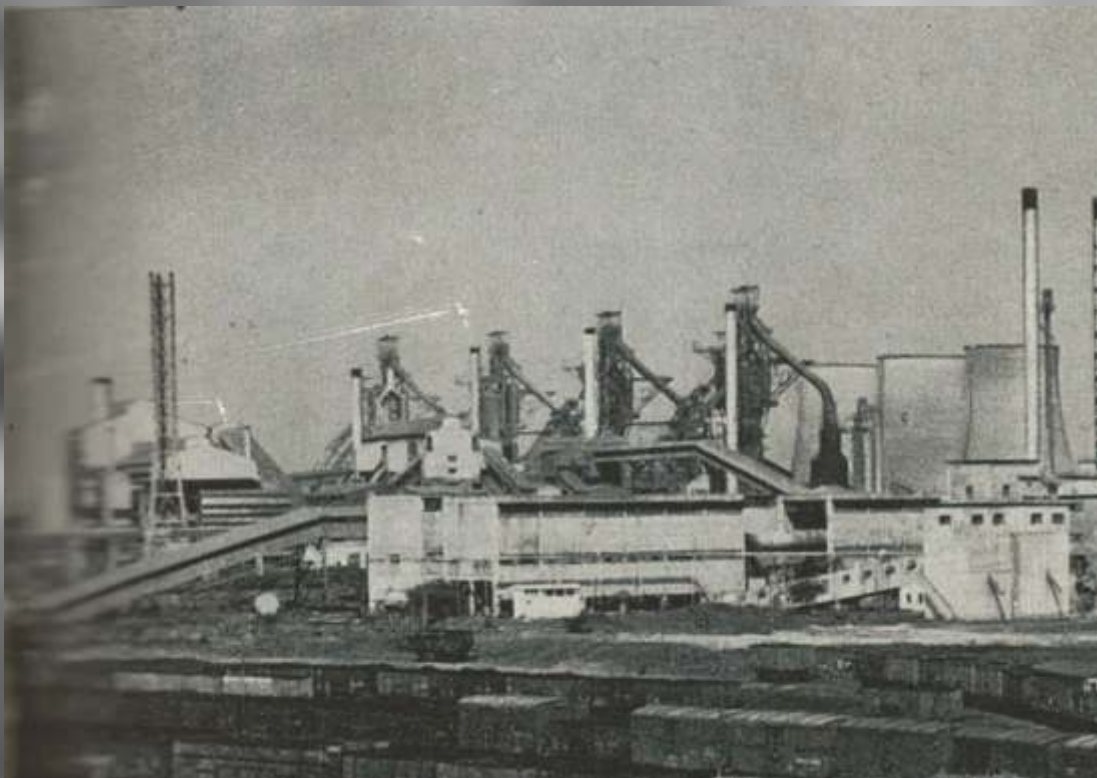
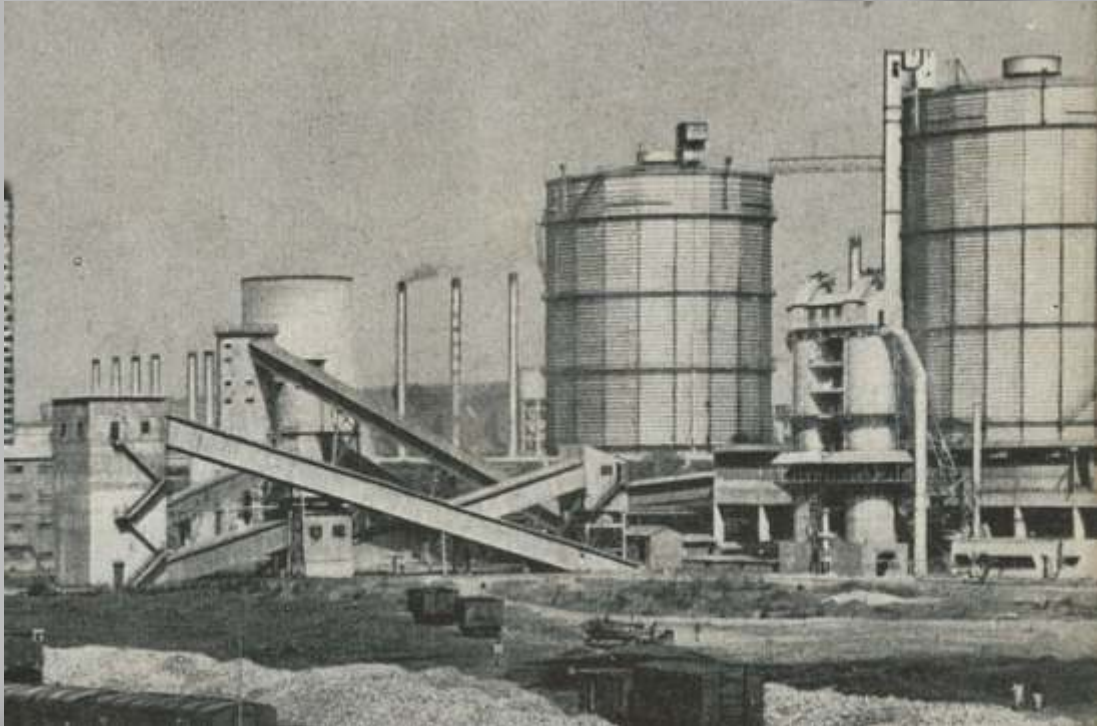
SAIL is determined to ensure that its products do not have any adverse effect on the environment. Although steel is 100% recyclable and has no adverse impact on the environment during its use. The Company assesses all its products, processes as well as associated services on continual basis to mitigate arising environmental impacts, if any.

A total 13 no. of SAIL warehouses are accredited with ISO 14001. The measures taken towards mitigation of environmental impacts at these warehouses include maintenance of proper road and hard stands, replacement of wooden railway sleepers with concrete sleepers, recycle/ reuse of used oil, afforestation drive, conversion of vacant plots into flower gardens, use of energy efficient lightings, hygienic toilets, rain water harvesting, DG Sets with acoustic covers, etc.

Moreover, the Company regularly interacts to local SSI/ MSME vendors to apprise them about environment friendly and energy efficient processes. In order to ensure a healthy & safe environment within warehouses, the Company has in place procedures and manual pertaining to health and safety, accordingly all handling equipments are subjected to periodical maintenance and checks.

Packaging materials are usually dispatched to customers along with consignments in good condition. The packing materials recovered in loose conditions after dispatching finished products are disposed-off sustainably from warehouses at regular intervals. Except for pollution resulting from deployment of vehicular traffic like trucks & trailers in the warehouses, no significant negative environmental impact is noticeable in supply chain. All vehicles get checked for compliance with respect to pollution control.

View of Durgapur Steel Plant
1969





SAFETY

AND HEALTH

At SAIL, ensuring a Safe and Healthy working environment and according priority to Safety of people at workplace is of paramount importance. SAIL has been continually & consistently improving its safety and health management systems & practices with the ultimate aim to have safe and healthy workplace. Safety is fully adhered in all processes and operations inside Plants/ Units premises. Safety & Health issues are monitored and guided from the apex level of management i.e. our Board as well as Board Sub-committee on Health, Safety & Environment. All pertinent issues related to safety & health are discussed and deliberated as opening item at all appropriate forums in various levels of management hierarchies.

A well defined Corporate Safety Policy at the organisational level exists which reflects the organization's concern and commitment towards safety. Individual Plants are having their respective Occupational Health and Safety (OH&S) Policy which visibly shows management's concern for the cause of safety & health. With the aim of continuous improvement, the safety & health objectives are planned and set well in advance and successfully achieved through well established OH&S management programmes. SOPs/ SMPs/ SWPs & Work permits / job protocols are strictly adhered to in the course of various operations as well as maintenance jobs. Safety is incorporated in the very design & development stage and state-of-the-art technology is adopted which helps in minimising human exposure to hazards and ensures safety of the workforce along with surroundings. Adequate emphasis is given towards safety during execution & commissioning of new projects / facilities by adhering to Safe Commissioning Procedures & Protocols.

Safety Policy and Safety Principles of SAIL aim for providing a safe and conducive work environment to all its employees, contractors and all stakeholders / people associated in its operations including those living in the neighbourhood of its Plants, Mines and Units. Bi-partite forums like Central/ Apex Safety Committees, Departmental Safety Committees etc. function with participation of Company's top management, trade union representatives & employees. Meetings of these Committees are held in a scheduled manner in which all health and safety issues are deliberated for bringing continuous improvement of the OH&S Standards. The Committees also monitor & review various activities undertaken and ensure adoption of OH&S agenda across the Company.

SAIL has achieved consistent improvement and steady growth in Safety and Occupational Health parameters as a result of proper systems, procedures and improved work practices. Internationally established standards - OHSAS 18001, ISO 9001 and ISO 14001 are followed religiously for Safety, Occupational Health and Environment protection. Internal as well External audits are conducted periodically to bring improvements and check compliance. The Company also involves bi-partite forums for reviewing / revising its Hazard Identification and Risk Assessment (HIRA) documents and approach towards Occupational Health and Safety. The management as well as workers representatives implement and maintain the standards as per requirement. Partnership with reputed bodies in the area of safety is made in the form of MoU signed with National Safety Council, Mumbai for mutual engagement and collaboration in the areas of Safety Audits, Training etc. Behavioural Based Safety (BBS) is followed for ensuring safety in grass roots or cultural level.

Joint Committee on Safety, Health & Environment in the Steel Industry (JCSSI), a unique bipartite forum at national level with representation from major central trade unions and management of major steel producers of the country acts as a common bridge by jointly evolving recommendations/ action plans for ensuring safe & healthy work environment in the entire steel industry. For recognising and rewarding good safety performance of the member organisations, annual award functions & meetings of the Committee are organized. Distinguished performance of the individuals is also suitably rewarded. Learning from each other approach is followed for sharing best practices of the participating steel producers through periodic meetings as well as various workshops / seminars, plant visits etc. Sharing of information among members is also facilitated through the JCSSI website - www.jcssi.com.

Some of the activities of JCSSI are:

- Scrutinizing key issues related to Safety, Occupational Health & Environment.
- Spreading awareness among the Committee members by sharing of best practices through meetings, workshops, seminars, plant visits etc.
- Supporting and encouraging participation of workforce in Safety, Health & Environment.
- Analysis of causes of incidents/ accidents and sharing views on corrective measures.
- Printing and publishing information material like booklets, manuals, films etc. on Safety, Health & Environment



Mock Drills

Safety Setup

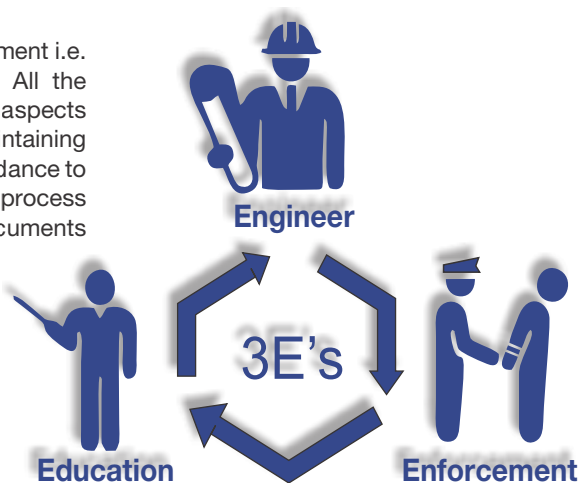
Safety performance is regularly monitored at the highest level of management i.e. Board, Chairman and Directors' level. The efforts of the Company for achieving a safe and healthy environment are guided and monitored by a Board Sub Committee on Health, Safety & Environment (BSC on HSE). Chief Executive Officers & Executive Directors of respective Plants & Units closely monitor safety aspects on day to day basis. At the Corporate level, SAIL Safety Organisation (SSO) coordinates and guides the Safety and Fire service activities. A full-fledged Safety Engineering Deptt. (SED) functions at each Plant/ Unit to ensure safety in operations & maintenance/ repair jobs. Fire Services Deptt., fully equipped with necessary resources & facilities, remains on alert for meeting various emergency requirements, relief & rescue operations as well as monitoring fire prevention related aspects.

Awareness generation drives and safety campaigns are regularly organised by SEDs in various deptts./ areas of the Plant/ Unit. In each department/ shop, Departmental Safety Officer (DSO) & Safety Steward/ Captain ensures adherence to laid down standards & safe working procedures. DSOs play an important role by monitoring safety aspects at the forefront on daily basis and working in close coordination with SED. In the recent years, senior officers have been appointed as DSOs which has yielded considerable positive results. In Project & expansion areas, Zonal Safety Officers (ZSOs) are deployed to monitor safety during various phases of project/ construction work.

Systems and Procedures

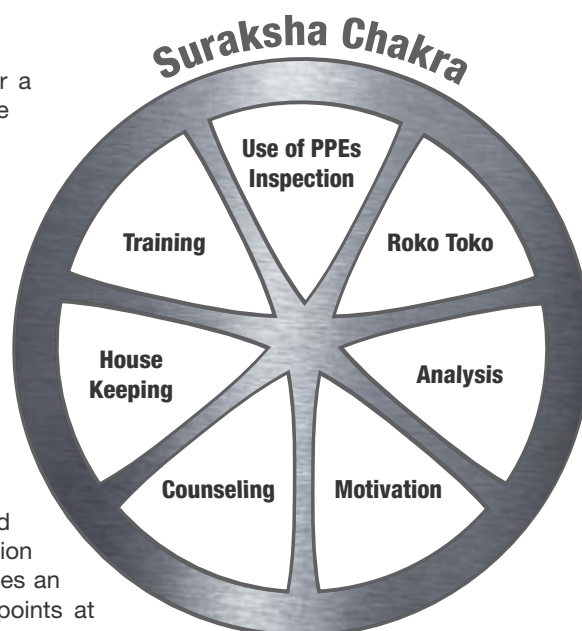
Systematic approach is adopted by following 3 E's of Safety Management i.e. Engineering, Enforcement & Education in all spheres of working. All the statutory provisions pertaining to safety are being adhered to. Safety aspects have been incorporated in SOPs, SMPs & WIs which helps in maintaining necessary technological discipline. These documents provide vital guidance to the workmen and are reviewed periodically with changing technology / process requirements and updated accordingly. The updated version of the documents is made readily available on web portals /Knowledge Management (KM) portals and can be easily accessed and referred by all employees.

'Permit to Work' & 'Protocol' Systems, having necessary safeguards, are religiously followed during execution of hazardous & critical jobs involving multiple agencies. The practice of taking extra precaution during major capital repairs/ shut down jobs through intensive safety surveillance & monitoring ensures safe & timely completion. 'Inter Plant Standards in the Steel Industry (IPSS)' in the area of safety also help in augmenting safety standards of the Company. IPSS 1:11 - Standards Committee on Personnel Safety Appliances and Procedures, formulates new standards as well as reviews and updates existing standards by utilizing knowledge & experience of the domain experts as well as core safety professionals. The standards developed are uploaded on IPSS portal which is available in the SAILNet as well as open domain i.e. internet and accessible for the benefit of common user. Emergency preparedness Plan has been prepared for handling emergency situations and mock drills with the involvement of all the connected agencies like deptt. concerned, SED, Fire Services, Gas Safety, OHSC etc., are conducted to assess preparedness. All work related incidents are investigated to find out the root cause and fix it. The needed corrective & preventive actions are taken to minimize the risk as per the hierarchy of controls.



Workers' Involvement in Safety Management

Joint participation of management & workmen is important for a sustainable health and safety culture which is maintained by the Company's Health and Safety Committees. All of our employees are covered by the formal joint management-worker Health and Safety Committees at Plant/ Units and are duly involved and consulted on Health & Safety issues. These committees are normally called for meeting once a month in all the departments where every issue related to health & safety, maintenance of good health, safe working environment, welfare, security of the Plant/ Unit etc. are openly discussed in a collaborative manner. Employee engagement initiatives are regularly undertaken to ensure commitment of every employee in enhancement of the safety culture and aiming for achieving 'zero accident' in his respective workplace, department and Company as a whole. Good safety initiatives taken by the employees from all plants & mines are identified and suitably rewarded in HazAn.Com - Hazard Analysis Competition organised at whole SAIL level by SSO which gives the employees an opportunity to showcase their work and spread the learning points at organisation level.



Safety Training & Education

Education is an important element of Safety Management System which is fulfilled in SAIL by regularly organising training for Company's regular & contractual employees on variety of topics including safe working, accident prevention, risk control etc. based on competency mapping. This helps in equipping them with requisite skills & knowledge. Apart from variety of skill enhancement training, awareness programmes, trainings/ workshops etc. are organised covering topics like statutory requirements, gas safety, electrical safety, crane safety, conveyor safety, material handling, Behavior Based Safety (BBS) occupational health & hygiene, first aid, stress management, preventive care for occupational diseases, HIV/ AIDS etc. For different work zones/ areas, 'Learning from Each Other (LEO)' workshops with participation of other Indian steel producers covering salient issues of concern as well as 'Large Group Interactions' are organised which helps in greater and effective sharing & learning. BBS approach is practiced to inculcate safe habits in employees and build positive safety culture. Refresher training is regularly imparted in class room as well as on the specific job. Post-learning test is conducted to ascertain the learning level.



Feedback is taken from the participants which is constructively used to bring further improvements. Safety related information is broadcast by Plant TV cable networks covering larger cross-section of people at Plant townships. Training on safety & health is also imparted to Central Industrial Security Force (CISF) workforce & security staff.

A compulsory safety and work environment related training is duly provided to every contractual worker before deployment on any job. For each contract worker, Induction training of two days duration followed by job specific training covering area specific hazards & associated risks and required control measures is imparted before engaging on the job. To assess learning level, post-test is conducted after the training and accordingly, re-training is conducted as well. For undertaking height, roof sheeting jobs etc. which involve greater risk, competence of the workers is assessed on training rig, especially fabricated for the purpose. As a result of dedicated & consistent efforts, a safe & healthy working environment has been achieved by the Company for all of its employees and those living in the neighbourhood.

Practicing IT Based Systems

Technology benefits of latest IT tools & systems have been harnessed by extensive deployment in the area of Safety & Health. Latest safety related information is shared amongst all cross section of employees through online safety portals maintained by SSO as well as Plants / units. These web portals are an effective tool in sharing information across the organisation. Employees can submit suggestions for bringing improvements in safety standards as well as submit near miss cases through these online systems.

SSO & Plants/ Units regularly bring out various publications, electronic newsletters/ magazines, e-digest etc., that have wide range of useful information pertaining to Safety & Health from experts from the steel industry.

Safety Audits & Review

To assess the effectiveness of prevailing OS&H systems, compliance to regulatory requirements and identify areas for improvement, Safety Audits are conducted on regular basis in accordance with Indian Standard IS 14489:1998 i.e. 'Code of Practice on Occupational Safety & Health Audit'. Major departments of all Plants/ Units including Mines and Warehouses are covered during such audits. Emphasis is laid on identifying issues of concern and carry out in-depth system-based audit. Compliance audits are also conducted to verify implementation status of suggested measures. Besides this, inspections, walk-around surveys etc. are also conducted to identify gaps and action plans are drawn to bridge the gaps. As a new initiative, training programmes for DSOs were organised on Occupational Safety & Health audit and cross – functional teams of the trained participants conducted an internal audit across the whole plant.

Periodic review of safety performance is made at top management level of respective plants/ units. Structured review meetings are conducted by SSO through scheduled Heads of Safety, Heads of Fire Services & OHS heads meetings of all SAIL plants /units. Issues of concern are discussed and strategic action plans are drawn on priorities for action to bring continuous improvement. Such meetings also serve as an experience sharing platform to the concerned professionals through Learning from Each Other (LEO) approach. Good practices of other plants/ organizations are also shared to promote benchmarking. The decision points are followed up for timely implementation. Recently, Video Conferencing (VC) as modern communication tool is being increasingly utilized for such review meetings and interactions. This helps in efficient resource utilization & effective / better communication. SSO leadership conducts periodic reviews and surprise visits to plants, interacts with cross – section of people such as DSOs, SED collective and submits feedback to CEO/ ED (works).

Three tier Safety Audits are being conducted at plants & units as mentioned below:

Three Tier Safety Audit Structure at SAIL	By External Agencies	By SAIL Safety Organization in association with Representatives of other Plant/ Unit and Mines	By Safety Engineering Departments of Plant, Units and Mines
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During 2018-19, Safety Audits conducted by SSO in BSP (Whole Plant, BF's zone); DSP & RSP (Steel Zone); BSL (Rolling Mills zone) & ISP, Burnpur (Utilities zone). Compliance audits were conducted at BSP, DSP, RSP, BSL & ISP for checking implementation status of recommendations of fatal accidents & safety audits.

Salient Good Safety Initiatives & Practices.

- HazAn.Com – Hazard Analysis Competition organised for non-executives of all Plants & Units on the occasion of 1st Steel Safety Day.
- New system of issuing Safety Alert Messages (SAM) introduced on double earthing in welding machines, grinder safety, safety in crane maintenance, safety in dumper operation.
- Training programmes organised on Occupational Safety & Health Audit for Statutory Compliance, Process Safety Management, Industrial Safety Management, Safety Management for DSOs & LEO workshop on 'Safety in Rail movement'.
- As a new initiative, the DSOs trained in OS&H Safety Audit training programme were utilised to carry out Internal Safety Audit within the Plant's deptts.
- MoU renewed with National Safety Council (NSC) – India for a period of one year to develop, maintain and implement the high standards in OS&H and Environment through technical co-operation exchanges between the two organisations for strengthening activities in the field of Safety, Health and Environment (SHE).
- World Steel Safety Day, National Safety Day, Steel Safety Day, Road Safety Week, National Fire Services Week, Bhopal Gas Tragedy Remembrance day, Chemical Accident Prevention day etc. observed in Plants/ Units.
- 'Road Safety Week' celebrated and special campaigns conducted by organising activities like heavy vehicle checking/ bike rally/ road show/ safety skit in township area including crash helmet checking/ counselling, essay, drawing & Slogan & Speech Competition for employees and School children.
- A new Safety window has been opened at BSP Home Page wherein any BSP employee can log in through their e-Sahyog password and submit safety suggestion, near-miss cases & unsafe act / conditions, along with relevant photographs.
- Emergency Breathing Apparatus, conforming to IS: 10245 procured and issued to concerned deptts. for safe evacuation of persons in the event of sudden gas detection at BSP.
- LEO Workshop on 'Gas Safety Practices and Gas Management' organized at Bhilai Steel Plant with



Mock Drill

participation from all SAIL Plants, Mecon, RINL, Tata Steel, JSW, JSPL etc.

- Workshop on 'Safety System Effectiveness in BSP' organized for worker representatives.
- 'Safety Sensitisation Workshop' organized for frontline executives and top union representatives through National Safety Council of India (NSC) – India at DSP.
- Safety Perception Survey conducted at BF and CO&CC deptts. of DSP.
- Concept of theme-based Safety Calendar introduced with monthly safety activities at DSP.
- ERWPP made Safety 'AAINA' and good safety practices of this unit were shared among other factories of the State of Odisha at RSP.
- Suraksha chakra interaction session started by ED(W) for improving the effectiveness of Suraksha Chakras at RSP.
- Online contract labour management system implemented at RSP.
- Communiqué issued regarding 'No Use of Mobile in working area as well as on roads' at BSL.
- Launched Behavior Based Safety (BBS) model at BSL.
- Online Safety Clearance System on SAP for Contractual Agencies being maintained successfully at BSL.
- Structural stability test of PBS#2, BF#5, BOF-CCP, Old SMS & Old Oxygen Plant, Mills Complex, COB#11 Battery & CDCP completed at ISP.
- Training provided on 'Behavior Based Safety' exclusively for Dumper Operators, EOT Crane Operators, JCB & HEME operators by in-house faculty at ISP.
- Audio-visual alarm installed at rail-road crossing to alert the nearby persons about loco movement at ASP.
- Hooters have been provided for transfer trolley in Forge

Shop, Conditioning and Plate Mill at ASP.

- Committees formed for checking of Road worthiness & checking of chain slings used for material handling at ASP.
- Constitution of Apex Shop-floor inspection committees at SSP.
- Hot line provision made between Fire Service & LPG at SSP.
- Surprise Safety Inspection & Monitoring of all Work Permit jobs & Height jobs at VISL.
- Gas safety audit was conducted by team of RSP & BSP at CFP.
- Basic and Refresher training imparted to all contractual and departmental employees. Also Skill development training attended by employees at MTI, RTC Kiriburu & RSP.
- Annual mines safety week - 2018 organised.
- Iron Ore mines at Kiriburu, Meghahatuburu, Gua & Bolani successfully implemented ISO-45001 new Occupational Health & Safety Management System.
- Proper lighting ensured in all mines areas as per DGMS recommendations by installing high mast lights, LED lamps in haul road & other areas.
- PME & Eye Refraction test of all employees and HEMM drivers / Operators conducted on regular basis for all mines.
- Mock rehearsals / drills conducted to measure the effectiveness of Emergency Response Plan which is prepared for the Mine as per the DGMS guidelines & circulars.
- Health & Eye Camps organised at all major warehouses. Demonstration on Fire Safety Mock Drills and Safe Handling Practices organised at all warehouses of CMO.

Occupational Health Management

SAIL has established full-fledged and well equipped Occupational Health Services (OHS) centres with required infrastructure & modern healthcare equipment at all Plants & Mines to deliver a comprehensive, multidisciplinary and multidimensional health programme. OHS is committed 'to promote and maintain the physical, mental and social wellbeing of our employees at the highest possible level'. The committed services provided by the OHS in Plants have made them an integral part of the production setup and they've contributed actively to prevent illness & disability as well as to protect & promote the health of the employees. The Company has been giving priority towards improving workers' health by covering 100% employees under various OHS programmes. National OHS Centre (NOHSC) at BSP is a multi-disciplinary, multi-dimensional OHS centre which functions as a Central Nodal Agency to monitor Occupational Health activities in different SAIL Units.

An integrated approach towards comprehensive health care is followed for preventive, curative, promotive and rehabilitative health services and maintaining a conducive work environment in line with the requirements of OHSAS 18001 & SA 8000 Standards. Periodic internal as well as external surveillance audits are conducted to make the systems more effective. Computer based software tool named Health Information System (HIS) is utilised for collection, compilation, analysis, retrieval and dissemination of necessary information.

Health awareness is promoted across the company by celebrating special days like World Health Day, International Yoga Day, Occupational Health Day, Doctors' Day, AIDS Awareness Day, World TB Day, Diabetes Day, World Kidney Day, World Malaria Day, International Women's Day etc. Various programmes focused on regular and contracted female employees are also organised. To promote learning & experience sharing among the OHS fraternity, seminars, workshops such as All India Steel Medical Officers' Conference (AISMOC) are held regularly where good performance is recognised & rewarded. Also important



issues are deliberated among doctors/ medical professionals belonging to our steel hospitals. SSO organises annual meetings of OHS heads wherein individual good practices being followed are shared among others and issues requiring concern at different units are discussed. OHS bulletin covering vital information are published by NOHSC for the benefit of employees.

Infrastructure & Facilities

Preventive: Periodical Medical Examination (PME), shop floor based health & hygiene survey, Departmental health check-up (DHC), Hazard Identification & Risk assessment (HIRA) at shop-floor, fundamental research on occupational health and several programme on health education, Occupational Medicine Clinic, Industrial Hygiene Survey setup, Computerized Health Information System (HIS).

Promotive: Awareness programmes, Training on Ergonomics & work design, Occupational health hazards, Industrial Hygiene, Use of PPEs for dust & noise, First Aid and Emergency care, Stress Management, Yoga at OHS centre, AIDS Control, Life Style Diseases, Special programmes for working women, Celebration of Special Days.

Curative: General OPD, Pharmacy, Plant Casualty services with Disaster Management facilities. Round-the-clock Ambulance services, Eye wash Fountains, Minor OT.

Rehabilitative: Disability assessment following any work injury through Disability Medical Board, Redressal of complaint cases from work places / departments, Job rotation based on deviation found in PME & recommendations of DMB being implemented by redeployment Committee, documenting follow up & feedback.

Facilities: Lung Function Test, Biochemical investigation, Clinical Pathology, Digital X-Ray, Vision Test, Health Education & Training, OHS Library, ECG, Psychology, Health Information System, Audiometry etc.

Occupational Health Research: Fundamental research in various areas of occupational health is considered to be one of the prime activities of OHS centres. Several scientific papers are published and presented on regular basis in the National and International Journals & Conference proceedings on Occupational health & Ergonomics. Several National Institutes & Universities have a close coordination with OHS centres and many post-graduate students have completed their Master's programme thesis under the guidance of OHS professionals.

Salient Activities undertaken by OHS Centres

- Periodic Medical Examination of 39,839 employees working in works areas conducted.
- OHS OPD services provided to 119,357 employees.
- 19 Training programmes conducted at NOHSC for 504 participants.
- New poster on Hypertension, Brochure on Electrical & Mechanical Hazard published and distributed among the employees.
- SAIL OHS Bulletin (published twice in a year) made available online at SAIL Corporate Office portal.
- Special Days like World Day for Safety & Health at Work, International Yoga Day, World Malaria Day, International Women's Day, National Occupational Health Day, World No Tobacco Day, World Diabetes Day & World AIDS Day celebrated.
- Evaluation of Musculo-skeletal Disorders and Ergonomics rectification through postural corrections and work place modifications.
- Cycling encouraged among employees to increase the fitness level at VISL.
- The measurement of Waist Hip Ratio was introduced at VISL.

Safety Statistics (Plants and Mines)

Injury Rate (per 200,000 hours worked)			Mandays Lost [*]		
2016	2017	2018	2016	2017	2018
0.070	0.110	0.100	1,729	2,080	2,060

^{*}Excluding Mandays lost on account of fatal accidents

Accidents by Category (nos.)				Total Nos. of Safety Training Imparted	
Year	Regular Employees	Contractor Worker	Total	Year	Numbers
2016	84	46	130	2016	1,31,143
2017	127	70	197	2017	1,45,385
2018	116	53	169	2018	1,30,319



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HUMAN CAPITAL

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1970-72 Skelp Despatch



First consignment to Australia

- 1983



Bhilai Steel Plant produced Rail Quality Steel for the first time

-1985

SAIL recognizes Human Resources as its most important resource. By continued investment in its human resources over the years, SAIL is proud to achieve its present level of excellence. Human Resource management at SAIL covers key areas like employee selection and recruitment, development, reward, grievance redressal, health, employee welfare, etc.

Identifying talent needs, development of employee skills and knowledge constitute the basis of every initiative at SAIL. Human Resource Policy ensures a competent and committed team, engaged in building a culture of learning so that the employees continue to achieve excellence in performance and employee satisfaction. Ample opportunities are given to our employees for learning, nurturing creativity and innovation.

Employee selection and recruitment process at SAIL is well structured and transparent. The Company promotes inclusion of local people in various kinds of jobs through local employment exchange, and also through open advertisement for recruitment purpose. SAIL provides equal and uniform benefits to its esteemed workforce. Wages of all SAIL employees, irrespective of their gender, are above the minimum wages. The wages of non-executive employees are based on negotiated agreement under National Joint Committee for Steel (NJCS), whereas the salary of Executives is based on government guideline.

For jobs of specialized and intermittent nature and for various project activities, contract labours are engaged by the contractors in the composite Job Contracts. These contracts are awarded to them by Plants and Units of SAIL. The contractors make payment to workers engaged by them over and above the minimum wages. These wages of contract workers are fixed by the respective State government for that location, without any gender differentiation.

The closing manpower data as presented on 01.04.2019 by respective Plants & Units has been compiled and made available by the Manpower and Planning Group of Corporate Personnel.

By the end of Year 2018-19, the total number of employees across all the Plants, Units and Mines of SAIL in India was 72,339. The ratio of employees in the gender category (female/Male) is 6:94.

Name of the Plant/Unit	Permanent (Gender wise Manpower as on 1.4.2019)				Contract Labour (As on 1.4.2019)
	Executive		Non-Executive		
	Male	Female	Male	Female	
BSP	2,878	239	17,292	788	12,966
DSP	1,265	60	7,315	377	4,250
RSP	1,562	112	11,392	772	12,953
BSL	1,840	152	9,861	563	10,330
ISP	1,008	51	4,988	280	9,004
ASP	164	10	562	30	458
SSP	180	19	740	34	834
VISL	65	6	244	24	1,566
RMD	525	20	2,389	136	9,014
CCSO	21	0	73	2	21
CMO	498	118	390	81	2,375
RDCIS	193	17	81	5	197
CET	197	12	15	5	36
MTI	19	2	25	4	33
CO	180	73	145	29	0
GD+SGW	12	1	6	0	556
EMD	9	4	9	1	6
SSO	10	0	3	0	0
SPU	117	10	491	63	1,628
CFP	70	3	213	5	414
COLLI.	125	4	1,010	45	2,480
TOTAL	10,938	913	57,244	3,244	69,121

Ensuring Cordial Work Place

The Company believes in providing equal employment opportunities at work place irrespective of gender, caste, religion or marital status. The Human Resource Policy of the Company caters for innovation, involvement and creative work culture. Any changes to the Human Resource Policy are communicated to its employees and their representatives.

Engaged Work Culture

SAIL has maintained its glorious tradition of building and maintaining a conducive and fulfilling employer-employee relations environment. SAIL has adopted collective bargaining for maintaining the participative culture in the organization. Over the years, collective bargaining has become an integral part of the Company's governance framework and it contributes to responsible management. The Company believes in workers participation and hence recognized unions for non-executive employees exist in all Plants/Units. The Collective bargaining for non-executive employees is taken care by National Joint Committee for Steel Industry (NJCS).

NJCS is a unique bipartite forum consisting of workers representatives from major Central Trade Union Organizations, representatives from recognized unions of SAIL Steel Plants and RINL and management representatives of SAIL Steel Plants & RINL. Collective and cordial industrial relation ambience with trade unions/workers' representatives is maintained by a healthy practice of sorting out and settling issues through participative discussions.

To ensure safe and harmonious work culture, bipartite forums like NJCS, Joint Committee on Safety, Health & Environment in Steel Industry (JCSSI) with representation from major Central Trade Unions and representative Unions of Plants/ Units meet periodically. They jointly evolve recommendations / action plans for wages and benefits for non-executive employees. The discussions and agreement also includes chapter on Productivity, Safety, Health and Environment for its members.

The provisions under the NJCS settlement provides for commencement of negotiations for a fresh agreement, six months before date of expiry of the current agreement.

In the case of Executives, the Steel Executives' Federation of India (SEFI) - the apex body representing the executives in SAIL, carries out the collective bargaining.

HR System and Processes

SAIL recognizes that monetary and non-monetary benefits are an essential part of compensation and its importance for its work force. Workers' participation at SAIL, at different levels, right from National level up to shop-floor level, is ensured through an established system. NJCS decides wages and benefits of non-executive employees. Fair dealing & compliance on labour issues are ensured by the designated Labour Welfare Officers of the respective Plant/Unit/Mines.

The Company treats all employees equally and there is no discrimination towards any section/category of employees. The personnel department regularly monitors fairness in activity and services. The Company encourages Freedom of Association, as enshrined under the Constitution of India and envisaged in the Trade Union Act. The Right to exercise the Freedom of Association and Collective Bargaining in our operations is also actively used at SAIL.

SAIL protects Fundamental Rights of its workforce as described in the Constitution of India. As a result of this, the Company is proud that there was no recorded case during the reporting year on any violation of Human Rights. Efforts have been made to successfully manage succession planning and career development aspect of all employees. Regular performance and career development reviews are done for all the employees. Aspects of human rights are communicated to all our vendors & suppliers through implementation of SA 8000. SAIL arranges for training & awareness workshops for employees on different aspects of SA 8000 which cover areas relating to child labour, forced labour, non-discrimination, freedom of association, safe work environment and health & safety. The SA 8000 clause on child labour includes employment of persons of age 18 and above as a precondition to partnering with SAIL. In the event of any kind of violation of SA 8000 clause by a vendors within or outside the Company premises, liabilities for the education of the child until the completion of high school accrue to the defaulting party. This condition is clearly communicated to all our vendors and suppliers during their engagement with the Company.

The Company avails the inclusive support and services of Central Industrial Security Force (CISF) for ensuring security in and around our Plants and Mines. Training on aspects of safety and human rights is duly provided to CISF personnel.

The importance of communicating to its employees on a regular basis is well understood at SAIL. As part of its communication strategy, SAIL targets employees at all levels in both structured and semi-structured manner. Communication includes a wide range of topics from Company's performance to employees' welfare. Mass communication campaigns are undertaken at Chief Executive Officer / Senior Officers' level involving structured discussion with large group of employees. These interactive sessions help employees to align their working with the goals and objective of the Company leading to not only higher production and productivity but also enhance the sense of belongingness of the employees.



Being a large and multi-unit organization, the need for having uniform and codified rules and policies had driven the organization to evolve with significant changes in the personnel policies and rules over the years. In case of transfer from one Plant/ Unit to another, an employee, is extended benefits to cater to all their needs which include travelling allowances for self & family, transportation of personnel effects including packing charges. In addition, the transferred employee is given reasonable time to join their new place of posting i.e. six working days for change of station and one working day within same station. Sufficient time to execute the journey is also provided to the transferred employee. If the employee desires to retain facilities at previous location, permission for retention is also granted as per the Rules.

A well-structured exit policy is also in place at SAIL. An employee has to serve three months' notice period after putting in the resignation.

SAIL champions the philosophy of work life balance, which provides and maintaining harmony at workplace and outside for its workforce. To support work life balance appropriate leave policies are available for the employees. All regular employees enjoy benefits like Health care, Disability / Invalidity coverage, Maternity Leave, Retirement Benefits. Maternity leave up to 6 months and 730 days child care leave is also provided to women employees. Workman engaged by the Contractors in establishments of SAIL, are covered under the ESI Benefits.

To help them maintain the work life balance, SAIL provides its employees with various social benefits in the form of housing, education, civic amenities, sports & recreation and social welfare. Full-fledged townships have been developed over the years at all Plant locations with modern infrastructural facilities along with premier schools, super specialty hospitals, shopping malls, multiplexes, parks, gymnasium and stadiums.

Grievance Redressal Mechanism

To achieve consistent treatment in the handling of grievances at the workplace, well laid out procedures have been defined at SAIL to defend employee rights. Effective internal grievances redressal machinery has been established at SAIL Plants and Units, separately for executives and non-executives. Joint grievance committees have been set up at Plant/Unit level for effective redressal of grievances.

SAIL Plants/Units maintain 3 stage grievance handling mechanism. The employees are given an opportunity at every stage to raise grievances on areas relating to wage irregularities, working conditions, transfers, leave, work assignments and welfare amenities. Due to the participative nature of environment existing in the steel plants, majority of the grievances are redressed informally. The system is comprehensive, simple and flexible and has proved effective in promoting harmonious relationship between the employees and the management. Against 257 staff grievances received during the Financial Year 2018-19 and with 10 grievance pending from previous year, 254 staff grievances were disposed off during the year, achieving 95.13% fulfillment. SAIL continues to adhere to its human rights objectives. There are no known cases of discrimination or any violations of human rights at SAIL.

Provident Fund, Gratuity & Employee Pension Scheme

At SAIL well defined Provident Fund, Gratuity & Employee Pension Scheme is in place to support the employees at the time of retirement. The PF and Employee Pension is being paid as per the statutory requirement. The gratuity liabilities of the employees are valued by a professional Actuary at the end of each Financial Year and based on the actuarial valuation, the contribution to the Gratuity Trust is made. The total contribution made by the Company to SAIL Gratuity Trust up to 31st March 2019 was ₹3,349 crore. The fund size has grown to ₹6,277.44 crore as on 31st March 2019, net of settlement done towards payment of Gratuity.

Well Being of Employees

SAIL is committed to health and wellbeing of its employees and has made consistent efforts towards the holistic health of its employees. As employees' health and wellness is of paramount importance to the company, SAIL provides its employees with a range of options for medical policies. These medical policies are available to all employees, even post retirement. The employees are considered as part of one extended family and SAIL believes in supporting them during service as well as after superannuation.

Celebration of International Yoga Day at SAIL





Medical Facilities for Serving Employees

The Health Policy of SAIL states that: "SAIL, one of the largest steel producer of India, in its endeavour to maintain a healthy workforce shall focus on promoting and maintaining the health of its employees by providing them a conducive and healthy environment to work, and an efficient and advanced health care system with a balance of preventive, promotive and curative measures."

SAIL firmly believes in taking care of its employees at the time of need. The Company has also extended its medical facilities to the entitled dependent family members of the employees.

To support its policy, SAIL has a huge medical setup comprising of 18 multi-specialty Hospitals and more than 24 Primary Health Centres, located across its Plants / units. For treatment not available at SAIL hospitals, the employees (& their dependants) are referred to hospitals located pan-India as per rules and requirement. For the city based employees and their dependents, where SAIL's own hospitals are not available, employees are provided comprehensive medical facilities in empanelled hospitals. The facility of reimbursement of medical expenditure is also permissible for expenses incurred in non-empanelled setups as per rules & approved provisions.

Medical Facilities for Retired Employees

The Company provides free of cost medical benefits and health care benefits for all employees and their spouses even after their superannuation. The medical facilities are extended to ex-employees and their spouses at Plant Hospitals are at par with serving employees. A Mediclaim Scheme was also introduced in 1991 for all retired employees and their spouses. The premium applicable to the Mediclaim scheme is highly subsidized by SAIL and is amongst the largest group Mediclaim Schemes in India. At present this scheme covers more than 1.22 lakh members located pan-India.

Extension of Employees Deposit Linked Insurance Scheme, 1976

Employees Deposit Linked Insurance (EDLI) Scheme, 1976 helps the family members by extending financial assistance in case of accident (Permanent Total Disablement) or death of an employee. At SAIL monetary benefits have been provided with a top-up of Rs. 2,000/- per case for employees and their family members.

Employee Family Benefit Scheme

SAIL believes in taking care of its employees at the time of distress. Employee Family Benefit Scheme (EFBS) supports families in cases of death of an employee while in service or on account of Permanent Total Disablement, an amount equal to his last drawn Basic Pay + DA is paid to his/her nominee or the employee (as the case maybe), on monthly basis till his notional date of superannuation. Benefits are extended if the nominee/employee deposits an amount equivalent to his/her PF and Gratuity amount with the Company. This amount is returned back to nominee/employee after attainment of notional date of superannuation.

Employees Superannuation Benefit Fund

Employees Superannuation Benefit Fund (SESBF) at SAIL exhibits the Company's commitment towards its employees even after their retirement. SAIL employees contribute @ 2% of their Basic Pay plus DA towards SESBF. The SESBF Fund is managed by a Trust representing Unions, SEFI and Management.

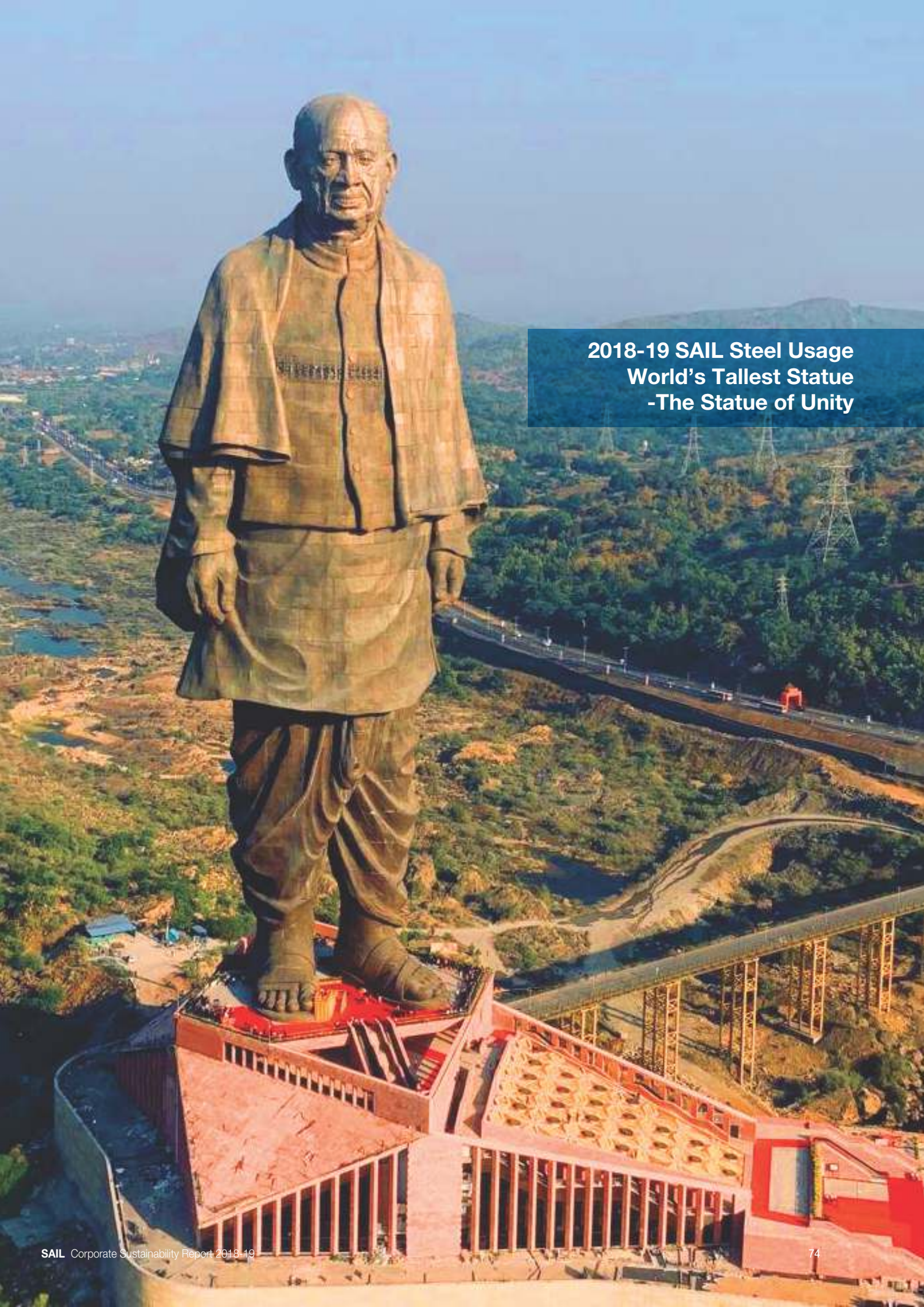
The Company takes care of its employees during the course of their employment and even after retirement and hence is seen as a champion of best practice of after retirement benefits.



TRAINING

AND DEVELOPMENT





**2018-19 SAIL Steel Usage
World's Tallest Statue
-The Statue of Unity**

Training and development plays an important role in effective development of employees capability for achieving organisational goals. Training enables employees to improve performance in their present role and acquire skills and knowledge to progress in their career. It helps an organisation to meet its goals, objectives and financial targets through better performance and higher productivity of employees. SAIL is cognizant of the requirement to train and develop its staff at all levels and its training and development approach is fully supported by its Human Resource Policy.

SAIL has a policy of providing training to every employee at least once every three years. The training and development activities focus on extending an employee's knowledge in existing skills, support succession planning, increase their efficiency and productivity especially through use of technology. Preparing employees for tomorrow for effectively taking up challenges in a competitive market and be able to effectively deliver their responsibilities is a major driver for training of our employees. To provide effective training to our employees, in addition to our highly professional HRD team we work in association with reputed organizations and premier institutes for development of training and development programmes.

At SAIL, we adhere to the basic human rights and statutory norms. To ensure that we are compliant with statutory norms, the training functions are validated by an apex body known as Training Advisory Board (TAB). TAB is headed by the Chairman and has Directors and CEOs of the Company as its members. TAB is an advisory body on training matters and its key role is to fix the goal and set a direction for focusing on future training needs. At the Plant/Unit level there is a Training Advisory Committee (TAC) to oversee and monitor the implementation of training and development initiatives in line with TAB guidelines. TAC is attended by zonal and departmental heads and chaired by the respective CEOs. These bodies generate several organizational learning needs and thrust areas which are included in the annual development plans.

To enhance our competencies, an Annual Training Plan (ATP) is prepared for each Plant/Unit under the following major categories:

• **New Entrants** • **Competence Enhancement** • **Workshops and Special Areas and** • **Other Areas**

Our newly recruited Management Trainees (MTs) are trained under 52-week Management Trainees Training System (MTTS) which starts with Central Induction Programme at one of our Plant HRD centres. In addition, as part of training, the new recruits are provided mentoring by high performing senior managers. Mentoring helps new entrants settle into their new role, understand the organization and instil confidence. This method also allows the mentor to determine what is required to improve mentee's performance and identify training areas. Training modules are continually updated to bridge the gap in competence of the employees based on their training needs.

For our executive level employees, we carry out Annual Training Need Assessment (TNA) through online Executive Performance Management System (EPMS). The executives are imparted need based technical and managerial training which they can opt for in consonance with their KPA fulfilment form among the centralized training modules.

At SAIL, we give an equal amount of significance and thrust on training and development of non-executive employees. For non-executive employees at the shop floor, the line managers are responsible for identifying and advising the Training Engineers of their training needs. This assessment is done through:

• **Competency Mapping** • **Skill-Gap Analysis and** • **Requirement for Multi-skill training**

For the non-executive employees and frontline executives, special Performance Improvement Workshops (PIWs) involving root cause analysis, brain storming are planned and undertaken. Action plans are built for addressing issues covering production and productivity, cost reduction, maintenance, housekeeping and safety at the respective area/shops.

We have our own training coordinators at each shop of our Steel Plants. These coordinators along with the identified trainers are responsible for imparting training in various areas. The work profiles of all the roles/positions are analysed and any gap between the job requirements and employee skills are identified and improved through training programmes. In addition, training need for the thrust areas like multi-skill training, training for upcoming units, training in critical skills etc. are reviewed at apex level.

We also organise specialized technical training and vocational training programme for college students every year.



Every year, at least one-third of SAIL employees are provided training at various locations. In addition, technical and managerial journals are also shared through Company's Portal, in-house magazines for enhancing the skills and knowledge of the employees for their continued growth and future performance.

Training programmes at SAIL provide its employees with lifelong learning and skills that not only enable a successful and fulfilling career at SAIL but also benefit them in their retired life.

Average Hours of Training	Executive	Non-Executive	Total
External Training (including MTI/CPTI)	75,904	27,856	1,03,760
Foreign Training	240	64	304
Specific Areas	21,792	1,01,288	1,23,080
Managerial Competence Enhancement	1,41,240	37,304	1,78,544
Technical Competence Enhancement	35,616	2,60,896	2,96,512
Fresh/New Entrants	5,38,872	36,11,536	41,50,408
Other Areas	17,720	6,53,064	6,70,784

Performance Indicator	2018-19
Percentage of employee trained	57.7%
Training man-hours per employee	72
Number of employees trained	44,369

Average Hours of Training by:

Gender	Average Hours of Training
Male	53,57,696
Female	1,65,696
Total	55,23,392
Category	Average Hours of Training per employee
Top Management	20
Middle Management	25.6
Lower Management	44.8
Non-executive employees	72
Works (Technical/Production)	77.2
Non-works (Administration)	66.4





CORPORATE

SOCIAL RESPONSIBILITY



Smt. TEEJAN BAI
ambassador for SAIL ever
since her musical
storytelling spread fast in
Bhilai.

SAIL's Social Objective is synonymous with Corporate Social Responsibility (CSR). The objective of the Company is not only to manufacture steel, but also to conduct business in ways that result in social, environmental and economic benefits to the communities in which it operates. For any organization, CSR begins by being aware of the impact of its business on society. With the underlying philosophy and a credo to make a meaningful difference in people's lives, SAIL has been structuring and implementing CSR initiatives right from the inception. These efforts have seen the erstwhile obscure villages located around SAIL plants, turn into large industrial hubs today.

SAIL CSR initiatives have always been undertaken in conformity to the CSR provisions (Section 135) of Companies Act, 2013, CSR Rules, 2014 and Schedule-VII of the Company's Act, 2013. SAIL carries out CSR projects in periphery of steel townships and mines in the thrust areas falling in line with the schedule-VII, namely, promotion of education and health, women empowerment, sustainable income generation through self help groups, assistance to divyangs (people with special abilities), access to water & sanitation facilities, village development, environment sustenance, trainings to promote sports, promotion of traditional art & culture, etc.

Various Social initiatives associated with our operations and their mitigation strategies adopted by us are listed below:

Social Challenges

- Fulfilment of social responsibilities concurrently with Plant / Units/Mines activities
- Maintenance of ethical transactions across supply chain
- Motivation of employees and talent retention
- Ensure development programmes in villages

Mitigation Strategies

- Appropriate need assessment and community engagement programmes
- Ethical business conduct
- Ensure professional growth
- Social up-liftment by investing on community and its development

A Responsible Strategy

Statutorily, the CSR Budget in SAIL is 'Nil' since the Company was under losses during the fiscals 2015-16 to 2017-18. However, the Board of Directors of SAIL in order to sustain the ongoing CSR activities in the periphery of Plants and Mines (which primarily consist of the backward districts), allocated budget for carrying out CSR interventions (in consonance with Schedule-VII of Companies Act, 2013) out of the Operation Budget.

During 2018-19, SAIL mainly focused on sustenance of ongoing CSR activities intertwined with theme of national priority, in the areas of Education, Health, Skills Development, Women Empowerment, Assistance to Divyangs and Sr. Citizens, etc.



Provision of Mid-Day Meal at BSL

Healthcare

Healthy population contributes to a better economic growth. The Company has been providing specialized and basic healthcare to people living in the vicinity of its Plants/Units through extensive & specialised Healthcare Infrastructure. Nearly 172 Lakh people living in the vicinity of its plants and units were benefitted during the period 2011-18. Surgeries like cataract and lens implant, cleft lip and palate disorder, polio-leg correction, etc. are conducted. treatment of hearing impaired, anaemia and identification & counselling of sickle cell & thalassemia patients, women with gynaecological disorders, leprosy & tuberculosis patients are provided free of cost during the year.

In order to deliver quality healthcare at the doorsteps of the needy, regular health camps in various villages on fixed days are being organized for the people living in the periphery of plants/units, mines & far-flung areas. During FY 2018-19, about 3050 Health Camps were organized benefitting approx. 60,000 villagers. 5 Mobile Medical Units (MMUs) running in the plant peripheries have benefitted about 44,000 villagers at their doorsteps.

24 Primary Health Centers at Plants exclusively provided free medical care and medicines to above 69,000 villagers.



Medical Facilities by SAIL

Education

SAIL firmly believes that education leads to a lifelong learning. To develop the society through education also, SAIL is supporting about 77 schools providing modern education to more than 40,000 children in the steel townships and is assisting over 600 Govt. schools in Bhilai and Rourkela by providing Mid-day meals to about 64,000 students in association with Akshya Patra Foundation.

19 Special Schools (Kalyan & Mukul Vidyalayas) benefitting around 3,741 BPL category students at Integrated Steel Plant locations with facilities like free education, mid-day meals, uniform including shoes, text books, stationary items, school bags, water bottles, etc. are running under CSR.

Tribal children are getting free education, accommodation, meals & uniforms, textbooks, etc. at Saranda Suvan Chhatravas, Kiriburu; RTC Residential Public School, Manoharpur; Gyanodaya Chhatravas, BSP School Rajhara, Bhilai; Kalinga Institute of Social Sciences, Bhubaneswar; Gyanjyoti Yojna, Bokaro.

Over 2,300 school students are awarded annual scholarships in Plant peripheries.

Gyan Jyoti Yojana: Bokaro Steel Plant has introduced the initiative for providing education and holistic development for the



Children of Birhor Tribe adopted by BSL

children of Birhor tribe, which is at the verge of extinction. 15 Birhor children were adopted and provided free, education along with boarding, lodging, nourishing and wholesome food, clothing, free medical treatment, sports and cultural opportunities in a conducive atmosphere. They are the first matriculates and 12th pass from their community. For skill development and better employability, 9 Matriculate Birhor Boys adopted under Gyan Jyoti Yojana had been sponsored for ITI training in "Welder trade" along with stipend of Rs. 2,500/- each, boarding and lodging facility at Bokaro Pvt ITI.

Inspired from their achievements, new batch of 15 Birhor children has been adopted, who have begun their life in new surroundings.

Women Empowerment and Sustainable Income Generation

Vocational and specialised skill development training targeted towards sustainable income generation were imparted to approx. 710 youths. Around 1,168 women folks are undergoing skills trainings in areas such as Nursing, Physiotherapy, LMV Driving, Computers, Mobile repairing, Welder, Fitter & Electrician Training Improved agriculture, Mushroom cultivation, Goatery, Poultry, Fishery, Piggery, Achar/Pappad/ Agarbati/Candle making, Screen printing, Handicrafts, Sericulture, Yarn Weaving, Tailoring, Sewing & embroidery, Gloves, Spices, Towels, Gunny-bags, Low-cost-Sanitary Napkins, Sweet Box, Soap, Smokeless chullah making etc. These activities are being carried out at various centres located in and around Steel Plants and Mines locations.

Around 816 youths have been sponsored for ITI training at ITCs Bolani, Bargaon, Baliapur, Bokaro Pvt ITI and Rourkela. The ITIs at Bolani & Bursua have been adopted for upgradation and operation by SAIL/RMD. Also, at Bokaro Pvt. ITI youths from the periphery are being trained in streams of Electrician, Welder & Fitter.



Water Facilities and Connectivity Rural Areas

Over 8,176 water sources have been installed and maintained, since inception, thereby enabling easy access to drinking water to over 50 lakh people living in far-flung areas.

Over 79.03 Lakh people across 450 villages have been connected to mainstream by SAIL since its inception by constructing and repairing of roads.



Promotion of Sports, Art & Culture

SAIL regularly organizes inter-village sports tournaments, extending support to major national sports events & tournaments. The Company is also supporting and coaching aspiring sportsmen and women through its residential sports academies at Bokaro (Football), Rourkela (Hockey), Bhilai (Athletics for boys), Durgapur (Athletics for girls) and Kiriburu, Jharkhand (Archery).

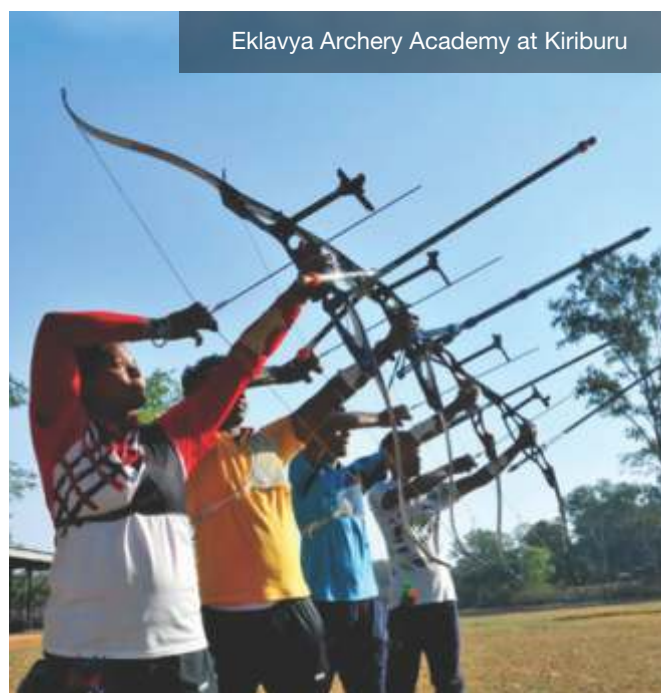
Cultural events like Chhattisgarh Lok Kala Mahotsav, Gramin Lokotsav are organised every year.



Eklavya Archery Academy at Kiriburu is now an established name among the aspiring archers in the country. The academy provides international standard archery training to the young boys and girls at free of cost. Many cadets of the academy participated in number of national and international championships and brought laurels.

Established in 2008 by Raw Materials Division (RMD) under CSR project, the academy is unique by its own merit in remote tribal region of Saranda forest near Jharkhand and Odisha border. The idea is to create and an opportunity for the tribal boys and girls to hone their natural prowess in archery which can take them to national and international arena of sports. With time the academy has been inducting talents from different parts of the country.

Here the cadets undergo rigorous archery training with imported instrument. Proficient archer Rajendra Guiya, who is also an employee of RMD-SAIL, coaches the cadets of the academy. The cadets have already brought laurels proving their might in national and international championships. So far total 146 medals including 45 Gold, 58 Silver and 43 Bronze have been won by the cadets at national and international meets. From time to time talented archers of the academy



Eklavya Archery Academy at Kiriburu

represented India in different international championships held in USA, Poland, Turkey, China, Mongolia, Korea, Thailand, and Bangladesh. SAIL sponsored the cadets to take part in all the meets. Sumita Kumari, Hurdub Tiriya, Snehal Divakar, Nomula Lavanya, Gurcharan Singh, Archana Sharma, Indrachand Swami and Reeta Sawaiya are some of the shining cadets of the archery academy, who bagged a number of medals at national and international level competitions.

The academy presently trains 16 cadets (9 girls and 7 boys) at free of cost. Besides imparting free of cost training, RMD also provides them free hostel, food, schooling, and other facilities.

Mines are located in remote areas. The life in the remote forest filled areas is challenging. Over five decades RMD has been sincerely working to uplift the quality of life of the people who were living in the villages surrounding its units. Eklavya Archery Academy is chiselling out the best talents from the obscured potentials of Saranda forest.

Football Academy at BSL



Support to Divyangs (Differently abled) & Senior Citizens

SAIL has been supporting Divyang children/people through provision of equipment like- tricycle, motorized vehicles, callipers, hearing aids, artificial limbs, etc. Various schemes and centres at Plants are being supported by the Company. Some of them include:

- “Schools for blind, deaf & mentally challenged children” and “Home and Hope” at Rourkela
- “Ashalata Kendra” at Bokaro
- “Durgpaur Handicapped Happy Home” at Durgapur and
- “Cheshire Home” at Burnpur
- Old age homes are also supported at different Plant townships like 'Siyan Sadan' Bhilai, 'Acharya Dham and Badshah' at Durgapur and 'Sr.Citizens' Home' Rourkela, etc.

Programs like “Handicapped Oriented Education Program” (HOPE) at Durgapur are also being conducted by the Company. SAIL has adopted, developed and is maintaining a Lepers Colony at Kajora through Durgapur Steel Plant wherein all the social and infrastructure facilities have been maintained.

SOME MORE CSR PROJECTS AT SAIL

Environment Conservation

To promote renewable sources of energy, solar street lights have been installed in rural areas, solar lanterns and smokeless chullahs have been distributed among the rural people of Saranda and other locations. Maintenance of parks, botanical gardens, water bodies and plantation/maintenance of over 5 Lakh trees in its townships were undertaken during 2018-19.

SAIL has also supported setting up and operation of 100 KW Capacity Solar Power Plant at Jari, Gumla in Jharkhand.

Development of Communities in Saranda Forest

In order to bring the marginalized masses of the remote forest areas to the mainstream of development, SAIL in association with Govt. of Jharkhand and Ministry of Rural Development, Govt. of India actively participated in the development process of Saranda forest, Jharkhand. SAIL provided ambulances, 7000 each of bicycles, transistors, solar lanterns and established an Integrated Development Centre (IDC) at Digha village in Saranda forest with provision of facilities like Bank, Panchayat Office, Ration shop, Telecom office, Anganwadi Centre etc. for the local populace.

Model Steel Villages

In order to bridge the gap between rural and urban areas and to provide comprehensive development of both physical and social infrastructure, 79 villages were identified as “Model Steel Villages” across the country (in eight states). The CSR activities undertaken in these villages include medical & health services, education, roads & connectivity, sanitation, community centers, livelihood generation, sports facilities, etc. The facilities developed at these MSVs are being run and maintained regularly.

Development of Aspirational Districts

SAIL is implementing CSR projects in 7 Aspirational Districts, viz. West Singhbhum, Bokaro & Ranchi in Jharkhand and Kanker, Narayanpur & Rajnandgaon in Chhattisgarh and Nuh in Haryana.

In its endeavor to develop District Nuh, an ‘Aspirational District’ in Haryana, under the aegis of Ministry of Steel, SAIL is supporting the District Administration, Nuh towards implementation of the Menstrual Hygiene Management program, i.e., the drive for: distribution of 20 lakh sanitary napkins among girl students and their female family members; installation of one each of sanitary napkin dispenser and incinerator and conduct of awareness/training programs on menstrual hygiene covering 100 schools of district Nuh, Haryana.

Disaster Relief

SAIL, as a responsible corporate citizen, supported the rehabilitation initiatives for the people affected by National & Natural Calamities, the recent being flood ravaged Jammu & Kashmir, Phyllin Cyclone in Odisha and Flash Floods in Uttarakhand.

Monitoring Mechanism

The implementation and monitoring of Corporate Social Responsibility Program, is in compliance with CSR Objectives and Policy of the Company.

Reporting on CSR

The Annual Report of SAIL for 2018-19 includes reporting on CSR as per the format prescribed under the Companies (Corporate Social Responsibility Policy) Rules, 2014. The Annual Report is shared with stakeholders and is also available on the Company’s Website.

Impact Assessment of SAIL CSR Projects

The CSR quality in SAIL is measured both by Professional Agencies and by internal evaluation on a regular basis.



BOKARO STEEL KALYAN VIDYALAYA

III / D, (C.B.S.E.)

CSR Scorecard

• No. of Model Steel Villages developed	79
• No. of people given specialized and basic healthcare during 2011-2019	1,72,00,000
• No. of Health Camps during 2018-19	3050
• No. of Beneficiaries of Health Camps	60,000
• No. of Beneficiaries provided with access to drinking water	50,00,000
• No. of Villages connected by construction and repair of roads since inception	450
• No. of Schools supported by the Company	77 (>40,000 students)
• No. of Govt. Schools being provided assistance through Mid Day Meals in association with Akshya Patra Foundation	>600 (with about 64,000 students)
• No. of Special Schools (Kalyan/Mukul Vidyalayas) exclusively for BPL families	19 (benefitting around 3,741 students)
• No. of school students awarded annual scholarships	2,300
• No. of Youths provided with specialised skill development training during 2018-19	710
• No. of Women provided with specialised skill development training during 2018-19	1,168
• No. of rural youths sponsored for ITI training during 2018-19	816



GRI CONTENT INDEX



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	102-33 Communicating critical concerns	23	
	102-34 Nature and total number of critical concerns	23	
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	102-38 Annual total compensation ratio		Not applicable as remuneration policies for the highest governance body and senior executives are fixed as per guidelines issued by DPE on the terms and conditions as fixed by the Government of India.
	102-39 Percentage increase in annual total compensation ratio		Not applicable as remuneration policies for the highest governance body and senior executives are as per guidelines issued by DPE on the terms and conditions as fixed by Government of India.
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ABBREVIATIONS

AGM	Annual General Meeting	CTC	Carbon Tetra Chloride
AIDS	Acquired Immune Deficiency Syndrome	DBT	Department of Biotechnology
AIMA	All India Management Association	DG	Diesel Generator
ISMOC	All India Steel Medical Officers' Conference	DMB	Disability Medical Board
AOD	Argon Oxygen Decarburization	DMRC	Delhi Metro Rail Corporation
ASP	Alloy Steels Plant	Dolo	Dolomite
ATP	Annual Training Plan	DPC	Delhi Productivity Council
BDL	Below Detectable Level	DPE	Department of Public Enterprises
BF	Blast Furnace	DSO	Departmental Safety Officer
BOD	Biochemical Oxygen Demand	DSP	Durgapur Steel Plant
BOF	Basic Oxygen Furnace	EAF	Electric Arc Furnace
BPL	Below Poverty Line	EBIDTA	Earnings Before Interest, Tax, Depreciation and Amortization
BPTG	Back Pressure Turbine Generator	ECG	Electrocardiography
BSC	Board Sub-Committee	ED	Executive Director
BSL	Bokaro Steel Plant	EMD	Environment Management Division
BSO	Branch Sales Offices	EMS	Environment Management System
BSP	Bhilai Steel Plant	EPMS	Executive Performance Management System
CAD	Corporate Affairs Division	ETPs	Effluent Treatment Plants
CCO	Customer Contact Offices	EU	European Union
CCP	Continuous Casting Plant	FICCI	Federation of Indian Chambers for Commerce and Industry
CDA	Conduct, Discipline and Appeal	GCal	Giga Calorie
CDC	Consultancy Development Centre	GCP	Gas Cleaning Plant
CDCP	Coke Dry Cooling Plant	GD	Growth Division
CEMDE	Centre for Environment Management of Degraded Ecosystem	GHG	Green House Gas
CEO	Chief Executive Officer	Gol	Government of India
CET	Centre for Engineering and Technology	GRI	Global Reporting Initiative
CFP	Chandrapur Ferro Alloy Plant	HEMM	Heavy Earth Moving Machineries
CHSGP	Cast House Slag Granulation Plant	HIRA	Hazard Identification and Risk Assessment
CII	Confederation of Indian Industries	HIS	Health Information System
CMO	Central Marketing Organisation	HR	Human Resource
CO	Coke Oven	HRD	Human Resource Development
CO ₂	Carbon Dioxide	HRM	Hot Rolling Mill
CoD	Centre for Organisational Development	IICCI	The Indian Iran Chamber of Commerce and Industry
COD	Chemical Oxygen Demand	IIM	Indian Institute of Metals
COE	Centre of Excellence	IIEPE	Indian Institute of Plant Engineers
COP	Conference of the Parties	IITF	India International Trade Fair
CPP	Captive Power Plant	ILO	International Labour Organization
CPTI	Central Power Training Institute	INDCs	Intended Nationally Determined Contributions
CPWD	Central Public Works Department	IPE	Institute of Public Enterprises
CREP	Corporate Responsibility for Environment Protection	IPSS	Inter Plant Standard - Steel
Cr.	Crore (Ten Millions)	IRCON	Indian Railway Construction Company Limited
CSR	Corporate Social Responsibility		

ABBREVIATIONS

IRT	Institute of Rail Transport	NOHSC	National Occupational Health Service Centre
ISO	International Organization for Standardization	NOx	Oxides of Nitrogen
ISP	IISCO Steel Plant	NSC	National Safety Council
ISPs	Integrated Steel Plants	NTPC	National Thermal Power Corporation
ISTD	Indian Society for Trade and Development	ODS	Ozone Depleting Substances
ITI	Industrial Training Institute	OH&S	Occupational Health & Safety
IUCCI	Indo USSR Chamber of Commerce and Industries	OHS	Occupational Health Service
IUCN	International Union for Conservation of Nature	OHSAS	Occupational Health and Safety Management System
JCSSI	Joint Committee on Safety, Health and Environment in the Steel Industry	OPD	Out Patient Department
JV	Joint Venture	OT	Operation Theatre
JVC	Joint Venture Company	OTIF	On Time in Full
KAM	Key Account Management	PAT	Profit After Tax
KIOCL	Kudremukh Iron Ore Company Limited	PCB	Polychlorinated BiPhenyls
KL	Kilo Litres	PIWs	Performance Improvement Workshops
KPI	Key Performance Indicators	PM	Particulate Matter
kWh	Kilo Watt Hour	PMA	Project Management Association
L&T	Larsen & Toubro	PMGSY	Pradhan Mantri Gramin Sadak Yojna
Lakh	Hundred Thousand	POPs	Persistent Organic Pollutants
LD	Linz Donawitz	PPEs	Personal Protective Equipments
LED	Light Emitting Diode	PSC	Portland Slag Cement
LEO	Learning from Each Other	PSU	Public Sector Undertaking
LHB	Linke Hofmann Busch	QCFI	Quality Circle Forum of India
IISCO	Indian Iron & Steel Company	QMS	Quality Management System
LMV	Light Motor Vehicle	R&D	Research & Development
LODR	Listing Obligations and Disclosure Requirements	RDCIS	Research & Development Centre for Iron & Steel
M kWh	Million Kilo Watt Hour	RH	Reheating
MMUs	Mobile Medical Units	RINL	Rashtriya Ispat Nigam Ltd.
MODEX	Modernisation-Expansion	rites	Rail India Technical and Economic Service
MOEFCC	Ministry of Environment, Forest and Climate Change	RMD	Raw Materials Division
MoU	Memorandum of Understanding	RSP	Rourkela Steel Plant
MSME	Micro, Small & Medium Enterprise	₹	Rupees
MSVs	Model Steel Village	S&OP	Sales & Operations Planning
MT	Millions Tonnes	SA	Social Accountability
MTI	Management Training Institute	SAIL	Steel Authority of India Limited
MTs	Management Trainees	SCL	Steel Complex Limited
MWp	Megawatt Peak	SCOPE	Standing Conference of Public Enterprises
NCQC	National Convention on Quality Concepts	SD	Sustainable Development
NGO	Non-Governmental Organization	SEBI	Securities & Exchange Board of India
NHPC	National Hydroelectric Power Corporation	SED	Safety Engineering Department
NIPM	National Institute of Personnel Management	SEF	Sale Force Effective
NJCS	National Joint Committee for the Steel Industry	SEFI	Steel Executives Federation of India
NMDC	National Mineral Development Corporation	SESBF	SAIL Employees Superannuation Benefit Fund
		SGL	Shot Grinding Line

ABBREVIATIONS

SGW	SAIL Growth Works, Kulti	TJ	Tera Joule
SHE	Safety, Health and Environment	TMT	Thermo Mechanically Treated
SMPs	Standard Maintenance Practices	TOLIC	Town Official Language Implementation Committee
SMS	Steel Melting Shop	TRT	Top Pressure Recovery Turbine
SO ₂	Sulphur Dioxide	TRTG	Top Recovery Turbine Generator
SOP	Standard Operating Practices	UNIDO	United Nations Industrial Development Organisation
SRU	SAIL Refractory Unit	VC	Video Conferencing
SSO	SAIL Safety Organization	VISL	Visvesvaraya Iron and Steel Plant
SSP	Salem Steel Plant	VVVF	Variable Voltage Variable Frequency
SWP	Safe Work Procedure	WCPS	World Confederation of Productivity Science
TAB	Training Advisory Board	WIPS	Forum of Women in Public Sector
TCE	Trichlorethylene	WSA	World Steel Association
tcs	Tonnes of Crude Steel	ZLD	Zero Liquid Discharge
TERI	The Energy and Resource Institute	ZSOs	Zonal Safety Officers
THF	Twin Hearth Furnace		





OUR VISION

To be a respected world class corporation and the leader in Indian steel business in quality, productivity, profitability and customer satisfaction.

OUR CREDO

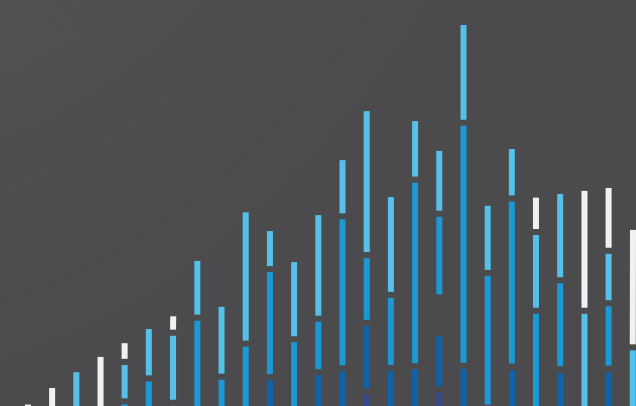
We build lasting relationships with customers based on trust and mutual benefit.

We uphold highest ethical standards in conduct of our business.

We create and nurture a culture that supports flexibility, learning and is proactive to change.

We chart a challenging career for employees with opportunities for advancement and rewards.

We value the opportunity and responsibility to make a meaningful difference in people's lives.





स्टील अथॉरिटी ऑफ इण्डिया लिमिटेड
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