

COMMUNICATION ON PROGRESS

2016-17



TATA SPONGE IRON LIMITED

Bileipada, At/P.O.- Joda, Keonjhar, Orissa- 758034

Message from the Managing Director



In the Corporate World, Tata group is regarded for its long and impressive heritage of integrating ethical, social and environmental principles into its core business. Imbibing this philosophy, Tata Sponge has always been sensitive of its role as a responsible corporate citizen to contribute to the societal wellbeing and benefits, and has played its part most diligently to excel beyond minimal compliance. Today, Tata Sponge is recognised for its unique environment management practices, distinctive social welfare programmes, model ethical standards. Some of its existing practices on CSR, viz. resource conservation, waste management, reduction in carbon footprint, social welfare through a set of sustainable programmes, are considered exemplary.

Ever since its inception, Tata Sponge has meticulously worked towards bringing about a social transformation in its surrounding villages, which is now all pervasive. The company has subsequently centered its priority to meet the identified needs of the community residing in its vicinity, through several customised programs. This article primarily covers our strive in the direction of providing the apposite opportunities for the community surrounding us, as are required for their inclusive growth, while conserving resources through adoption eco-friendly techniques, and conduct the business in the most transparent & ethical manner.

We welcome the responses & suggestions of our readers to further improve our operational & business approach, in line with the 10 principles of UNGC

Sanjay Pattnaik
Managing Director

Tata Sponge Iron Limited – PROFILE

Tata Sponge is in the business of manufacturing sponge iron and in the process, also generates power from the waste heat recovered from the kilns during sponge iron production. Current capacities of the existing facilities are 390,000 TPA of sponge iron from its 3 sponge iron plants and 26 MW of power from its 2 modules of co generating plants. The registered office-cum-Works is located at Bilaipada, which is situated in the district of Keonjhar, Odisha. Tata



Sponge primarily caters to the needs of secondary steel sector – Electric Arc Furnace & Induction Furnace steel producers. Besides the domestic consumers, it also regularly exports to some Asian countries.

Tata Sponge has maintained a consistent track record of highest standards on product quality, safety & CSR. It is considered a benchmark on environment management among the DRI industry. Tata Sponge holds the distinction of being the first sponge iron company in the world to receive TPM Award from JIPM, Japan. Besides, apart from being the first Indian company in the sponge iron sector to receive a combined certification of ISO:9001, ISO:14001 & ISO 18001 (OHSAS) certifications, Tata Sponge is also the first sponge iron company to have received several national awards & commendations on quality, safety, energy management and all other dimensions of corporate social responsibility.

Overall local geo-ecological context, social environment

The sponge iron plant is located in village Bilaipada of Birikala Gram Panchayat under Joda Block of Keonjhar district Odisha. The entire area is predominantly a mining belt, primarily inhabited by poor, illiterate, under nourished children and unemployed youths mostly belonging to the scheduled tribes. The primary source of their livelihood is from the wages earned as daily labourers in the surrounding mines, very low percentage of families practice agriculture as source of livelihood, inhabitants depend upon the minor forest produces, which is again in depleting trend.



Prime Focus Area

143 sq km area

38 villages

5 Gram Panchayats

Population : 34,037

SC/ST Populace : 77%

Intent towards social development : Company's Vision is to become a sustainable and learning organisation for setting a benchmark in creating value in the sponge iron business. The Vision also underscores company's resolve to "continue to remain a responsible corporate citizen" while the Mission accentuates the Tata Group's ethos of "improving the quality of life in its sphere of influence, by contributing to society, from what it earns". This is further validated through one of company's values of pursuing "Responsibility" which underscores company's intent to integrate environmental and social principles in the business. To emphasise CSR in the company, a dedicated CSR department has been formed to identify the needs & aspirations of local community, develop & implement social welfare & peripheral development programmes in tandem with the beneficiary groups, and continuously explore opportunities for further improvement in the relationship & commitment towards them. Besides, the organisation has also established a Trust by the name "Vidya Shakti Niyas (VSN)", mostly comprising spouses of employees who act as an extended arm of company's endeavors on social welfare and primarily focus on the empowerment of AA women.

VSN is self-sufficient in resource mobilisation, as it independently operates a brick manufacturing plant setup by the company to convert the fly ash generated in the plant during the boiler operation, into useful bricks. The profit generated from its operation is exclusively used for meeting the community expenses. Together with VSN, the company has earmarked a budget of ~Rs.2.60 Crore this year for its social welfare programmes.

According to a study conducted by Tata Sponge during 2015-16, it has been found that 77% of total population residing in the surrounding of the company belongs to Schedule Caste. Only 2% of total population living in 5 surrounding Gram Panchayats use toilets. Most of the tribal children in the region are scholastically backward as they do not receive any support from their illiterate/ semiliterate parents at home for their studies. Also, in many of the government schools, the teachers are not well equipped to impart quality education for these students and in some cases, they find difficult to understand the dialect of the local students. Another basic problem that the study highlighted was scarcity of drinking water during the peak summer. Superstition has been another social issue in this region.

EDUCATION

Education has been the prime focus area under the CSR programme of the company right from its inception. Every year, the company spends a considerable amount of its resources for the improvement of educational standard in the surrounding 5 gram panchayats, to address the challenge of poor literacy rate in this area, some of which are explained in the later part of this report.

Tata Sponge has been involved with the entire spectrum of formal education, in its close surrounding. However, in order to cater to the particular needs of education at various levels, the company has implemented some specific projects which have so far been quite successful. Details of these projects are available in the figure given alongside. Besides these projects, efforts on education are also supplemented through the initiatives of VSN which, among other things, includes development of teachers, scholarship to meritorious SC/ST students, providing mid-day meals, supplementing the requirements of additional teachers, etc.

| Project | Objective | Catering to | Fund allocated |
|--|---|-------------------------|----------------|
| Prarambh | Build education capability of all 67 Anganwadi centers covering 5 GPs over a period of 5 years and construction of 10 Model Anganwadi Centers | Primary school children | Rs.175 lakh |
| Guru Diksha | Introduce technology in schools through computer aided learning | Std. V to VII | Rs.60 lakh |
| Vidyarthi | Promote science education amongst the school children through science exhibition, talks, books, etc. | High School | Rs.45 lakh |
| Protsahan | Promote higher studies – Scholarship for poor & meritorious students | Beyond high school | Rs.12.50 lakh |
| <i>Intervention of company at various spectrum of formal education</i> | | | |

Partnering and Building Infrastructure : The company has partnered with the following agencies for the improvement of educational standards in its surroundings:

- Kalinga Institute of Social Science (KISS) – for conducting baseline study, including on education
- America Indian Foundation Trust (AIFT) – for implementing computer aided learning efficiently among 50 schools in Keonjhar
- Sarva Sikshya Abhiyan (SSA) – A Government wing, involved in the provision of IT hardware in 36 government aided schools in Keonjhar



- Integrated Child Development Services(ICDS) – to train all 67 Anganwadi workers on preschool education in 5 surrounding GPs.

As regards infrastructure, the company caters to the needs of various schools in its surrounding area. The infrastructural facilities provided by the company in the past few years are given in the table alongside.

| Facilities provided | Upto FY13 | FY14 | FY15 | FY16 | Cumulative |
|--------------------------|-----------|------|------|------|------------|
| New School building | 11 | - | 2 | - | 13 |
| Building Renovation | 17 | 4 | 1 | 3 | 25 |
| Kitchen cum dining unit | 5 | - | 4 | - | 9 |
| Dual bench desk | 1046 | 100 | 150 | - | 1296 |
| Boundary wall | 18 | - | - | - | 18 |
| Construction of AWC | - | - | 3 | 4 | 7 |
| Tubewell at School & AWC | 10 | - | 1 | - | 11 |
| Almirah / Book shelves | 21 | 1 | 3 | 4 | 29 |
| Toilet facilities | 4 | - | 1 | 6 | 11 |
| Computer & Projector | - | - | - | 14 | 14 |

Support to mid-day meals programme

in schools having predominate ST/SC children: The company through VSN has introduced sprouted cereals in addition to the mid-day meal programme by the government, at the Primary school in the adopted village Kanhupur, where 100% students are from the ST community. Approx. 65 students avail this facility every day. This has also resulted in registering increased attendance of the students. Similar facilities are also extended by VSN in a few other Anganwadi schools.

Scholarship : Various schemes have been adopted by the company and VSN in providing scholarship to the needy & meritorious children from the nearby community, as given in figure below. The consideration is always based on meritocracy of the student and his/her family income.

| Cause | Level | Commitment (Rs. per year) | Beneficiary SC/ST | Remark |
|---|----------|---------------------------|-------------------|---|
| Financial support to meritorious SC/ST students pursuing professional courses, through FAEA | National | 70,000 | 1 | Contribution being made through Tata Sons |
| Financial support to local student for pursuing a 4 year degree course | State | 125,000 | 5 | 50% of course fee |
| Financial support for pursuing 3 year Diploma engineering course | State | 50,000 | 2 | 50% of course fee |
| Complete waiver of tuition fee for primary school students in Shishu Mandir | State | 35,000 | 5 | 100% tuition fees |
| Tuition fees for Nursery students | State | 25,200 | 7 | The entire tuition fee is being born by VSN |
| Tuition fees for SSM | State | 25,446 | 5 | |
| Tuition fees for English medium School | State | 71,322 | 5 | |
| Course fees for College students | State | 57,782 | 7 | |
| Tuition fees for ITI | State | 71,090 | 4 | |

Scholarship & other financial support by Tata Sponge to ST/SC students in various spectrum of formal education

As was mentioned earlier, VSN ably supplements company's efforts in this direction by providing scholarship and other financial assistance to the children at the lower primary & primary levels.

Provision of other educational aid : To encourage children to regularly attend the classes, students of some of the surrounding Primary schools have been provided with uniforms, shoes, school bags, note books, pencils & satchels. To inculcate hygiene habits at early age, monthly ration of medicated soap & coconut oil are also distributed in some of these schools.

Physical & Sociological Development : A number of competitive programmes are organized across the schools by Tata Sponge. Company's resources are utilized for all such schools which do not have proper infrastructure (play ground, etc), for holding annual competitions. All the rewards are sponsored by the company. Like projects in other areas, the company has also made a focused approach towards



promoting sports in the schools, through a special project called "Krida", going by the fact that the tribal population possesses a latent talent in some of the core sports. A budget of Rs.6.5 lakh has been sanctioned for this purpose. Among other initiatives, a professional football coach's services has been hired for developing a local team to participate at higher levels.



Some of the specific projects taken up by the company under education are discussed hereinbelow :

PRARAMBH : Backed by the baseline report and interactions with the Anganwadies, the company decided to start its endeavors from the pre-primary level, by kindling & honing the intellectual levels of the children through a special project - **Prarambh** got evolved as a model to meet with this objective of the company. It was also to supplement the noteworthy services being extended by Vidya Shakti Niyas (VSN) in the nearby villages, through the Anganwadi workers.

In the five surrounding gram panchayats, 67 Anganwadi centers are operational with 1792 preschool children, out of which 1326 belong to the scheduled tribe and scheduled caste communities, i.e. 74% of student strength.





After deliberation with the decision makers, VSN and Anganwadi authorities, Tata Sponge decided to adopt a two-pronged approach under **Prarambh** - construction of model Anganwadi which will offer multiple child-friendly features and facilitate a teaching environment which will have a joyful-simulative learning environment; and secondly, capability building of the Anganwadi workers to improve preschool education standards. In coordination with ICDS, training programs were organized for the Anganwadi workers and tested through regular follow-ups.

As its plans, Tata Sponge has already constructed seven model anganwadi centers, out of its commitment of ten centres. These centers comprise a spacious classroom, office room, kitchen & store room, long verandah to take MDM (Mid-Day-Meal), toilets, water facility and compound wall (wherever necessary), etc. All the walls have been adorned with a number of child friendly paintings based on the preschool syllabus, to aid the teaching & learning processes. The project cost is approx Rs.175 lakhs for construction & implementation of entire facilities at 67 AWCs.

GURUDIKSHYA : While general educational support had always been extended by Tata Sponge in the past, it had become necessary to critically analyse the prevalent school performance and initiate a focused approach. The company thus decided to address the situation through a multi-pronged approach, beginning with consultations with the students, teachers, parents, PRI members and opinion leaders to familiarize itself with the ground realities existing in the 5 gram panchayats in the close surrounding of the company. Thereafter, it hired the services of Kalinga Institute of Social Science(KISS), Bhubaneswar to conduct a baseline study and identify the needs to undertake a robust program focusing on education. Some of the issues revealed by the study were as follows:

- Low motivation and teaching ability among the teachers
- Low availability of teaching & learning materials in the schools
- Almost > 75% of the total students primarily belonging to ST and SC communities did not have anyone to guide them at home to handhold them
- Tribal students have their own dialect, which lowered the learning process, as most of the teachers were not familiar with the tribal language
- Lack of infrastructure e.g. adequate classrooms, water facilities, toilets, etc. contributed to the dropouts
- Teacher-Student ratio in many schools were grossly disproportionate

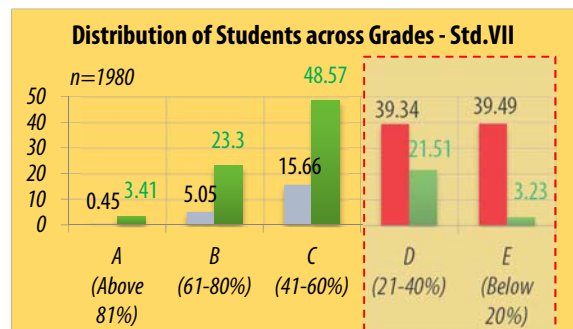
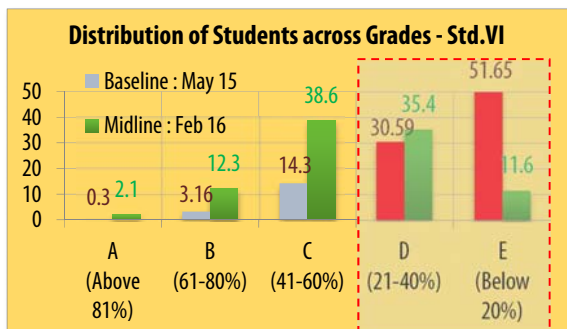
While continuing with its earlier practice of providing general & infrastructural support, scholarship, etc, Tata Sponge joined hands with AIFT & SSA to conduct a series of training programs for the teachers, various awareness campaigns in the schools and built a number of infrastructural facilities in the periphery schools to bring about a transformational shift in the space of education. "Project Gurudikshaya" first began with a comprehensive training of the teachers of 50 schools from the seven blocks of Keonjhar district, on Computer Aided Learning(CAL). Necessary hardware were provided to the 14 Non-CAL schools to foster an environment of collaborative learning by empowering teachers to use technology as a pedagogic tool, leading to better learning outcomes among students of under-resourced government schools. In the other 36 government run CAL schools, they have been provided with the desktops, whereas Tata Sponge became the first in the state of Odisha to provide Laptops, projectors and ensured electricity connections in the 14 Non-CAL schools situated at its neighbouring 5 GPs.



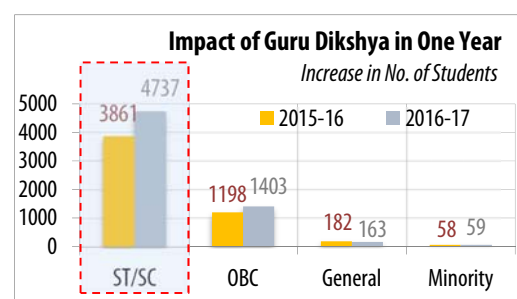
The partnership with AIFT & SSA helped Tata Sponge to create maximum impact in terms of learning outcomes through teacher training, coaching, mentoring and continuous assessments and evaluation. At every step, the model tracked the impact of activities carefully designed to improve the overall academic standards. This included conducting pre-tests and post-tests for teacher trainees and District Resource Group(DRG) trained by the project resource persons, and carrying out formative and summative assessments for carefully designed instructional packages worked out in collaboration with teachers at the school level. The project model systematically tracked changes in teacher perception as far as adoption of new pedagogic techniques is concerned.

Apart from centralized training of teachers and reviews at TSIL computer academy, on-the-job coaching and mentoring were provided regularly by the trained cluster coordinators appointed by AIFT, with the support of Tata Sponge. Moreover, to track the progress of teaching skill among the teachers and learning improvement made by the students, various tools were introduced which included handbook to track progress at school level, school visit log, Computer lab transaction/ usage log, Class Data (Plan/ Activity), Classroom observation, Output tracking, etc. Flipped classroom, Monthly HM Meeting, Project Based learning, etc. were designed to achieve set objectives

Evaluation & Improvement : Within 9 months of implementation, a marked improvement in performance was observed in the students, as is projected in the 2 graphs below :



However, as the project progressed, it was felt that intervention at a middle level i.e. in standard VI onward would not yield the desired result due to the poor grooming of students at the primary level of education. Hence, during 2016-17, the project has also included students of standard V under its scope. With this, the total student coverage in 50 schools stands at 6,362 students out of which 55% are girls. 74% of the students are from AA community, which is an increase of 1% as compared previous year.



VIDYARTHI : Tata Sponge in its endeavour emphasizes sharpening teaching skills of the teachers to enrich quality of education in this tribal belt through promotion of participatory, interactive and innovative classroom teaching & learning. Rounds of training programmes were organized for the teachers from 25 primary schools on "Interactive Learning", "Developing Language Skills among Yong Children", "Discovery – Primary Science Made easy", etc. This intervention would benefit more than six-thousand students pursuing their education in these primary schools.

Input

Capacity building of district resource group and teachers (218 nos. from 109 schools)

Throughput

Coaching and mentoring of teachers at the school level by resource persons

Outputs

- Better instructional design due to more planning and preparation by teachers
- More engaged students leading to better learning outcomes

The Gurudikshya Model

Tata Sponge firmly believes and promotes children's rights to participation and had organized series of consultations with the students in five High Schools and selected primary schools situated in all its five surrounding Gram-panchayats. In this process, children's thoughts and voice were captured for promoting education. The consultation process has also captured the concern and suggestions of the teachers, parents, elected representatives to improve quality of education in the region. All these process forms the basis of education programme initiatives.



representatives to a common platform to address issues related to education, child labour, children's participation and protection issues, so that an inclusive education process can be ensured.

Round the year, Tata Sponge organizes various programmes on "Swachh Bharat Abhiyan", School enrolment, Anti Child Labour day, Child rights based on UNCRC, etc. to ensure overall development of the students. Besides, the company organizes an annual Science Fair where students from various nearby schools participate and exhibit their science models. Best models are suitably rewarded and publicized through newspaper columns. Through these programmes efforts have been made to bring the students, teachers, parents and elected

"Rights to Education" An initiative for Tribal Children in Munda sahi of Lahanda village:

Munda sahi is a hamlet of Lahanda revenue village, which is inhabited by Munda tribes, surrounded by hills and forests, which get separated from the main revenue village by the busy National Highway and Railway line. This aspect of inaccessibility is the primary factor to debar the children from pursuing education in the school situated in the main village. In the absence of education, coupled with lack of awareness among the parents, the innocent children used to loiter around the village and forest earlier.



With an objective to promote education among such children, few volunteers were mobilized and a Non-Formal Education centre was started during 2008 with an enrolment of 26 tribal students. Same time, regular interface was made with the education department to set up a school to address the issue permanently. As a result of efforts of villagers and Tata Sponge, a primary school came into existence in the year 2009. Over the years the enrolment of children have increase to 153. Two students from this school have appeared in scholarship examinations, there was no dropout so far.

Govt. has provided four teachers, two class rooms, kitchen and toilet, whereas, the company has provided dining hall, toilets, an activity hall and constructed an approach road to the school. Also, Vidya Shakti Niyas - VSN has

supported a teacher and motivated the parents to ensure regular attendance of their children in the school. All these concentrated efforts enabled this school to come up as a model school in the region.

PREVENTIVE HEALTHCARE & SANITATION

In spite of several schemes & efforts being made by both Central and State governments, the health conditions in the tribal region of Odisha have still not improved to the desired level, due to the ignorance and superstition among the people. In order to overcome this situation, Tata Sponge has initiated some important programs which, over the time, have started making positive influence into the life of people around the company periphery. These are as follows:

SWABHIMAN : Amidst various programs intended under Government's "Swachh Bharat Abhiyan", prominent is the construction of toilets in order to ensure sanitation facilities in rural areas, with the broader goal to eradicate the practice of open defecation. The baseline study revealed that many of the villages in the vicinity did not have toilet facilities and in fact, only 2% population in this region used toilets.

This study further identified the cause of absence of toilets not as poverty but the mindset and ignorance of the people towards water and sanitation aspects. These findings and a response to the call by the PM of India set the foundation stone for the formulation of "**Swabhiman**" project.



Swabhiman projects aims at covering the immediate five surrounding villages of Tata Sponge and reaching out over twelve hundred families, **of which 87% belong to ST/ SC communities**; and make them open defecation free(ODF) villages by 2020. The project model includes a household toilet, bathroom and community water supply facilities. To facilitate in this mega project, Tata Sponge has forged partnership with a credible NGO named Gram Vikas and District RWSS wing.

As developed under the project Jal Dhara, the "Jala O Parimala Samiti" of respective villages have been given the additional responsibilities of maintaining these toilets. Each impacted family has contributed Rs. 1000/- towards building corpus fund for future maintenance of the project.

Exposure visit and series of awareness camps are being organized for the villagers in order to bring about an attitudinal change towards health and sanitation.

Besides, several other programs are currently being carried out for better health & sanitation in the surrounding area, as given below:

Target: 1209 Toilets, Bathroom & Water facilities by 2020

Implementation plans:

2016-17: 158 units

(53 Lahanda + 105 Kaliabeda)

2017-18: 238 units

(150 Bhagalpur + 88 Lahanda)

2018-19: 421 units at Bileipada

2019-20: 392 units

Project Cost : Rs.711 Lakh of which Tata Sponge will contribute Rs.251 Lakh

- Health checkup camps were held on regular basis focusing on both curative and preventive measures.
- In collaboration with Health and ICDS departments various programs i.e. immunization, pulse polio drops, mother & childcare, nutrition supplements initiatives were conducted in regular intervals.
- Orientation of adolescent girls on reproductive healthcare were organized in the Anganwadi centers with the support of Anganwadi worker, ANM and volunteers from Tata Sponge.
- Aligning to “Swachh Bharat Abhiyan” appealed by



Honorable Prime Minister Shri. Narendra Modi, Tata Sponge had organized series of cleanliness and awareness drives covering more than 6000 students in periphery schools along with their parents, teachers and elected representatives. Also, the drive has expanded to more than five villages and Company Township and nearby market areas.

- To address Malaria one of the major issue in the region, 15,000 mosquito nets were provided in the operational villages and fogging activities were undertaken along with awareness building among the villages on both preventive and curative aspects.
- Cancer and Tumor operation cases were supported in case of poor and marginalized families.

- Periodic health checkup camps and awareness initiatives were undertaken in the schools for early detection of disabilities.
- Promoted voluntary family planning with emphasis on “Small Family is Happy Family”. The men and women in the reproductive age group were encouraged to adopt safe contraceptive methods.
- World AIDS Day observed annually within the plant, in periphery villages, market areas, railway sidings and brick kilns through employees CSR volunteering initiatives. In this process the awareness made to demonstrate responsible behavior and addressed the myths and misconceptions related to HIV & AIDS.

DRINKING WATER PROGRAM

Traditionally water supply in India was limited to the major cities & villages, with the quality of water often being a matter of concern. Declining health standards in the rural areas, primarily caused by consumption of stagnant & open source of water has been a perennial problem. Despite several governmental schemes, availability of clean rural drinking water and sanitation are still a critical subject matter. This was one of the issues that came up for management’s appraisal through the baseline study conducted by KISS, especially in the village of Bilaipada, which is located in the closest proximity of Tata Sponge. Around 70% of total population belongs to ST and SC communities who live in scattered hamlets on undulated village topography, where non-availability of drinking water is major issue, especially during pick summer. Keeping in view this acute



crisis in this region, 45 number of open wells, 105 hand pumps and 18 bore wells were made. Moreover, company maintains these hand-pumps to ensure round the year water availability in these villages.

JALDHARA : In the past, Tata sponge had installed four hand-pumps, one bore-well, one dug-well and also supplied piped water in two of the hamlets of Bilaipada through fitting of pumps & pipelines. However, these arrangements also could not endure the Summer months. Over the years it was observed that the level of water table was going alarmingly down in this zone, during the months, which compounded the magnitude of water crisis.

Perceiving the plights of the Bilaipada villagers, where over 66% of people are from ST/ SC communities, Tata Sponge decided to settle for a sustainable solution to overcome the water shortage, during 2015-16 - this was the genesis of the Project Jal Dhara. Plans & budget for the project were drawn and technical assistance of Rural Development Dept of Govt. of Odisha was sought to ensure fulfillment of governmental norms and technicalities. This also required working in tandem with its RWSS wing at the district level.

The project was implemented at an investment of Rs.125 lakh, which included construction of percolation tank, widening & deepening of check dam, construction of water supply tank of 50,000-liter capacity, installation of water pump & water purifier system and laying pipelines to the households.

In order to empower the community, the entire project was completed with the involvement of the village youth and opinion leaders. To sustain the project post completion, a "Bilaipada Jala-O-Parimala Samiti" was formed and registered with the local BDO/ Tahasil office to oversee the maintenance. Further, to promote ownership, each family has willingly contributed Rs. 1000/- towards this project to develop a corpus maintained by this Samiti, which is solely used for maintenance.

Thus, the long cherished dream of every villager at Bilaipada to secure a perennial clean water connection stands accomplished.



LIVELIHOOD PROMOTION

Joda & its vicinity is predominantly a mining area, where agriculture receives least priority. Company has made conscious effort to promote agriculture as major source of livelihood. In four Gram-panchayats, four Farmers SHGs were formed who were provided Power Tillers with financial support from bank, Tata Sponge and people's contribution. These groups were imparted training for the operation and maintenance of power tillers. Now these groups not only cultivate their own land, but also support other farmers and encourage higher farming in the locality.



With an objective to encourage the housewives in engaging themselves in productive work and earn livelihood, women SHGs were formed, who were imparted training programs on Incense stick preparation, soap making, Phenyl making, Duckery and Paper packet preparation. These groups were trained on procuring raw materials, marketing the products and maintaining the bank accounts. Now these groups have been able to make satisfactory savings in their bank accounts. Also, these empowered women have been playing active role in their village development process.

Other efforts that were promoted for promoting livelihood are as follows :

- Girls from underprivileged families were sent for Nursing / Tailoring trainings.
- Vegetable seeds and saplings were provided to encourage vegetable farming. Most evidently in many villages the women groups have been providing vegetables to the MDM (Mid-Day-Meal) schemes in the schools to add nutritional value to the food consumed by the students.



PROMOTION OF SPORTS & CULTURE AND ENVIRONMENT CONSERVATION

In order to ensure overall growth of the village community, the company involves in promoting various co-curricular activities which not only provide the residents a much desired revelry, but also give them a platform to showcase their talent, in sports, art, craft and other cultural activities. A few such activities organized by the company in the recent past are given below :

- Village youth groups were provided Valley ball & Net, football, Cricket sets and other sports materials along with coaching facility. Also, support extended to organize inter panchayats tournaments within Joda block.

- More than 69% percent population belongs to Scheduled Tribe in the region, therefore various local tribal festivals and cultural activities were supported during this period to promote rich tribal culture in the region.



- In a village Sankarpur with the participation of the villagers two thousand mango saplings were planted, with two pronged objectives i.e. environment sustainability and livelihood generation for the villagers.



- Series of plantation programmes were organized on the community land, school campuses and colonies, involving the school children, youths and TSIL staff.



- During this period awareness programmes were organized for the school children, rural youths and PRI members on plantation of trees, use of biodegradable and recyclable products
- Solar lights handed over to respective village communities at 42 locations, which are used as street lights, lighting at Panchayat bhawan and other community locations, these solar lights were managed by the community representatives and respective institutions

RESPONSES TO THE 10 PRINCIPLES OF UNGC

| Principles | Company's Policy | Key Results & Measurement |
|---|--|---|
| Human Rights | | |
| Principle – 1 Business should support and respect the | We review our HR policies periodically to ensure that human rights are not violated. | ✓ We have standard operating procedures which require the contractors to produce list of persons with their age/identity proof, with photograph. After verification from HR department issues gate passes to enter work premises. An IT enabled system (Face Identification for |

| | | |
|--|--|---|
| <p>protection of internationally proclaimed human rights</p> <p>(HR 1,2,3,4)</p> | <ul style="list-style-type: none"> ✓ We ensure that contractors do not employ child labourers in our premises and it is part of our TCoC. ✓ Factories Act & Rules, Contractor Labour (R&A) Act & Rules are strictly adhered in terms of working hours and welfare & benefits. ✓ TATA Code of Conduct ✓ Human rights issues ✓ We ensure that all contract labourers get minimum wages. | <p>attendance) has been put into place to ensure preventing of unauthorized entry. Besides, security personnel physically check all the labourers, at the gate and also in the plant sites, to ensure that no child labour ever gets to work inside the factory.</p> <ul style="list-style-type: none"> ✓ In terms of working hour, the company strictly abides by Factories Act & Rules, Contractor Labour (R&A) Act & Rules. Each shift runs for eight hours. In terms of welfare amenities, we have provided subsidized canteen facility to company employees and free canteen facility to contract workers. These canteens are maintained as per factories act and ISO norms & conditions. All the employees are provided restrooms inside the work premises. Contractor workers are provided with rest male and female rest shed and male and female bath house inside the plant premises. To take care of health and hygiene of the employee and contractor labourers regular health check-up is conducted by the Management. A first Aid facility is available inside the work premises. For the female employees, crèche facility has been made available. ✓ All employees of the company have signed Tata Code of Conduct. A copy of the Code book has been given to each employee working in the company. To create awareness, sessions are organised at regular intervals to reinforce its clauses. <p>Every department discusses the clauses of TCoC in their monthly departmental meeting.</p> <ul style="list-style-type: none"> ✓ The HR committee reviews all human right issues on regular basis. In every coordination meeting human rights issues are taken care. A Prevention of Sexual Harassment (POSH) Committee has been formed for the protection of female employees. All employees, both regular & temporary, have the right to approach the HR Dept for filing their reservations of any kind, which are resolved with utmost urgency & importance. ✓ To ensure that all contract labourers get their minimum wages, we verify monthly wages register duly signed by their contractor and workers. Monthly wages to the labourers are disbursed in the presence of company's authorised representatives to ensure that there is no violation. As an improvement, the salaries are not being sent to the bank accounts of these employees. A survey is being conducted every year to know that the contract workers are getting right wages in right time. |
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| <p>Principle – 2 Make sure they are not complacent to human rights abuses (HR 2,3)</p> | <p>We emphasize on bipartite / collaborative / consultative decision making to address HR issues proactively to avoid conflict with the union and Associates.</p> <ul style="list-style-type: none"> ✓ Company's business relations. ✓ Various bipartite fora representing Management & Associates ✓ Statutory Committees ✓ Due diligence on human rights like safe working condition and on the job safety | <ul style="list-style-type: none"> ✓ Before engaging any agencies in our business we thoroughly verify their ethical practices, including compliance to all statutory regulations. Specific importance has been laid on all safety related aspects, as any violation on safety can lead to expulsion of the party from the company. ✓ We have various Bipartite Committee representing Management and Associates to resolve various issues and mutually focus on developmental issues. These include committees like JCCM, JDCs, Welfare committee, safety committee, canteen management committee. Town development committee, grievance redressal committee, Prevention of Sexual Harassment Committee, house allotment committee, medical committee and provident fund committee. ✓ We have statutory committees like safety, canteen and health that review and resolves various grievances related to statutory. ✓ The company is an OHSAS 18001 certified unit. Besides, the company practice all DuPont safety system. To ensure safe working condition, all the operational processes have been critically examined to identify any hazards. The HIRA study is conducted in all the processes and any possibility of hazard is addressed through corrective and preventive action (CAPA) method. All employees & contract workforce regularly undergo safety training. Mock drill, safety audit, periodical inspection of workplace, etc. are some of the practices in vogue to ensure that safety is never compromised in the workplace. Besides, there are various R&R forums to encourage employees & contractual workers to keep themselves engaged in safety practices. There are stern rules for safety violators. |
| <p>Labour Standards</p> | | |
| <p>Principle – 3 Businesses should uphold the freedom of association and the effective recognition of the right to</p> | <p>All statutory labour laws are implemented and we have a process to review the statutory compliance by a core committee constituted by the Management.</p> | <ul style="list-style-type: none"> ✓ Focus is given to resolve common issues of unionized employees through collective bargaining forum. The company has encouraged formation of a Union, which is represented the elected group of existing employees. Several bipartite agreements, policies, rules & procedures have been finalized in consultation with the union. |

| | | |
|---|---|---|
| collective bargaining. | | ✓ In the process of participative management council, equal participation of Management & Trade union representatives are ensured by the management. |
| Principle – 4 The elimination of all forms of forced and compulsory labour (HR 5, 7LA 3, 4) | No forced & compulsory / under aged labour are deployed. This is being ensured through various check post like Security/Safety/HR. | ✓ As mentioned earlier, engagement of contract labourer / indirect employment is in line with contract labour regulation & abolition Act. There is no violation or any forced / compulsory entry of labour force inside the factory premises. ✓ Inter State migrant labours are given equal opportunity on human rights, including remuneration. |
| Principle – 5 The effective abolition of child labour (HR 6) | All contractors / suppliers are informed not to deploy child labour / under aged personnel. Our standing order and TCoC also restricts engagement of child labour / under aged labour. | ✓ Our hiring policy reflects transparency and focus on equal opportunity by Employer. Like safety, there are strict rules against employment of child labour, and can lead to even termination of contract. ✓ Company ensures that only labour over 18 years of age are engaged in the company, including in its township. ✓ In process of abolition of child labour in plant and township, we ensure school drop out for readmission in the school through CSR activity. |
| Principle – 6 Eliminate discrimination in respect of employment and occupation. (HR 4, LA 10,11) | We honestly follow TATA Code of Conduct, also practice role of equal opportunity employer. | ✓ Company's hiring process evidences that no discrimination prevails on account of age, sex, locality, caste, creed, religion. ✓ Company doesn't discourage for employment of physically challenged people. |

BUSINESS AT TATA SPONGE – AN ENVIRONMENT FRIENDLY APPROACH

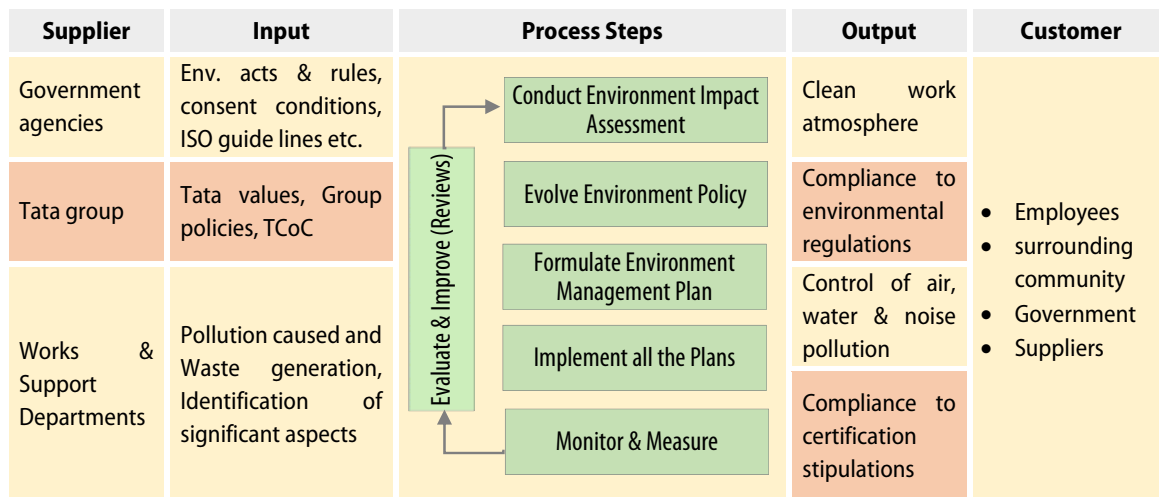
TSIL's approach towards preservation of ecosystem has been meticulous, systematic and uncompromising and it is arguably the cleanest and best managed coal based sponge iron plant which has gone beyond statutory norms in setting a yardstick for the coal based DR industry for the installation & maintenance of environmental protection equipment. In fact, Central Pollution Control Board (Eastern Region), West Bengal haD considered Tata Sponge as a model plant to set pollution standards for DRI units. TSIL has incurred huge investments in installing various pollution control devices to ensure that it remains well within the limits stipulated by pollution control authorities, besides taking many other proactive measures, some of which include stringent online monitoring, state of the art dedusting systems, dust suppression system,



comprehensive waste management system, extensive green management that includes development of parks & gardens inside the factory, fly ash management system, sustainable sourcing, energy management, etc. Despite the water table sufficiently high, the company has invested money in setting up a rain water harvesting system, as a mark of its concern to conserve water. Similarly, despite generating surplus power, the company has established a 235 KW solar power station to underscore the importance of adopting renewable sources of energy. Difference facets of environment management practiced at Tata Sponge are shown in the figure given alongside.

Tata Sponge addresses its productivity in harmony with nature. Manufacturing of sponge iron leads to creating dust pollution, due to handling and processing of bulk dry solids such as iron ore, coal and sponge iron, that generates particulate matter is generated. To overcome dust pollution, Tata Sponge has taken several measures to surpass all the regulatory norms and conditions laid by SPCB, CPCB and MoEF. Environment is identified as major Key Business Process at the company and is formally documented in SHEQ apex manual. With defined Roles & Objectives and Operational Control Procedures, entire process has been mapped in detail. The key performance indices (KPI) and key activity indices (KAI) are reviewed periodically at different levels for effectiveness and efficiency of the process. The best industry practices for environment protections are deployed during plant operations and also during project activity.

Overall Process of Environment Management at Tata Sponge is given below.



Tata Sponge Iron Ltd. is the **first coal based Sponge Iron plant** in the country to have achieved ISO-14001:1996 version certification on 28th March 2003. Subsequently the company achieved certification of ISO-14001:2004 version in the year 2006 and has been continuing with this version. The company has been recognized with a number of rewards & accolades by the State & Central regulatory authorities and business bodies across the country, for its novel environmental practices.

Environmental Policy of Tata Sponge iron Limited is as produced below:

ENVIRONMENTAL POLICY

Tata Sponge Iron Limited is committed to sustainable and continual improvement in its activities pertaining to the handling of raw materials, production & marketing of sponge iron

and power; so as to achieve ever improving legal, environmental and all other compliance standard and provide clean environment to its employees and the society.

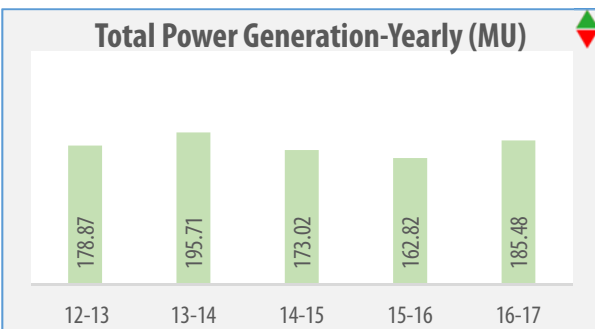
To this end, it will

- Identify the impact of its activities upon the environment.
- Prepare an annual environmental improvement plan and implement.
- Communicate the policy, plan and performance to persons working for or on behalf of the organization and also make it available to public as and what is applicable.

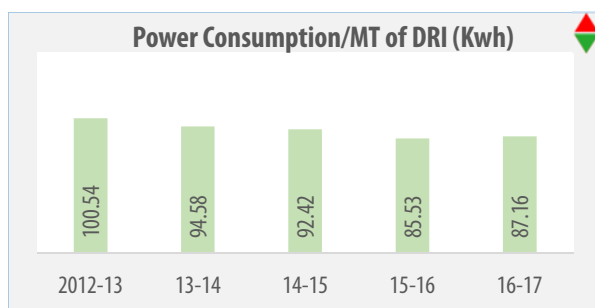
(Sanjay Kumar Pattnaik)
Managing Director

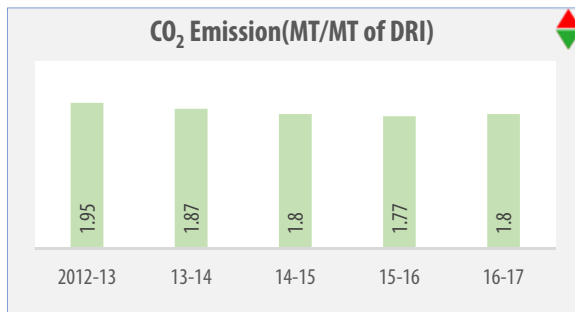
HIGHLIGHTS OF ENVIRONMENTAL PERFORMANCE AS A SUPPORT TO BUSINESS BY 'GOING GREEN'

Power generation from waste heat: Tata Sponge is generating 26 MW power from waste heat, which gets generated during the production of Sponge Iron. After utilizing this power for its captive use (about 7MW), the excess power (19 MW) is exported. This power generation replaces fossil fuel based power generation and thereby reduces the emission of GHG, SOx, NOx etc.. Power generation from waste heat during last several years is shown here.



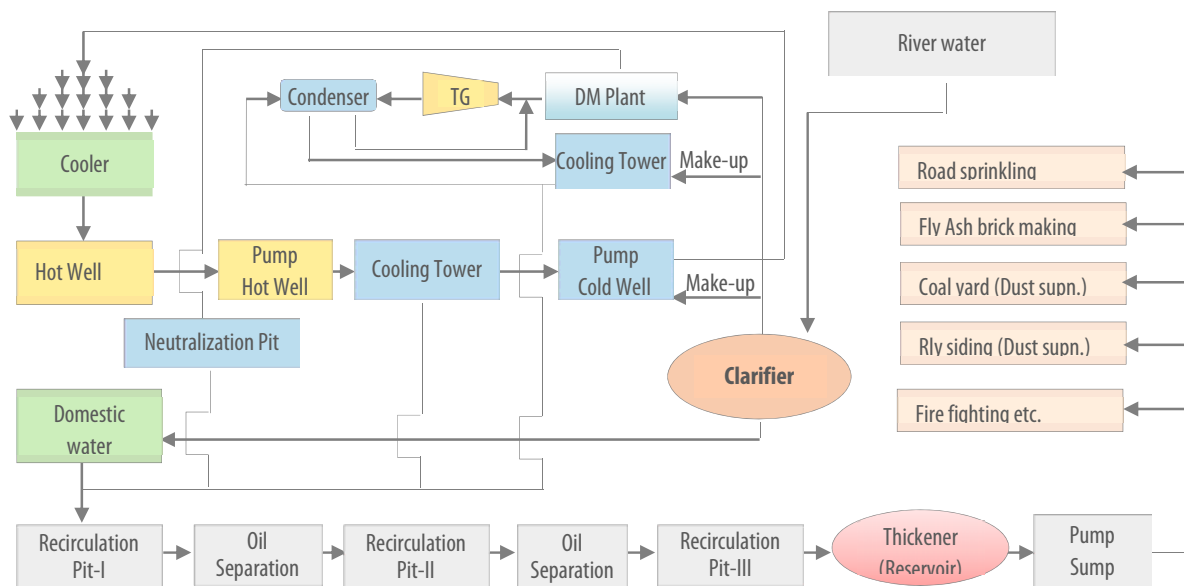
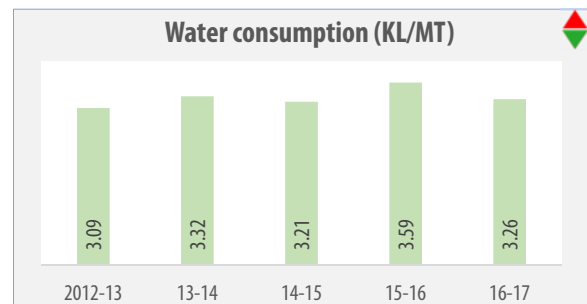
Reduction in Energy Consumption: TSIL's drive to reduce energy consumption through various initiatives such as introduction of VVVF drives, improvement in power factor, replacing high capacity drives by low capacity ones, replacing higher watt incandescent electric bulbs with low watt energy efficient CFL bulbs, bringing awareness among users to consume less power and the overall focus on conserving power has resulted in a decreasing trend in specific consumption of power in DRI produced. Specific power consumption per ton of sponge iron production for last several years is shown alongside.





Assessment of Carbon Foot Print: Towards the perspective of Climate change, every year Tata Sponge assess its Carbon Foot Print for taking necessary actions to reduce its GHG emission. The standard followed the GHG protocol convened by the World Resource Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). TSIL is in the process of implementing various abatement levers on the basis of assessment for reduction of CO₂ emission.

Water Conservation: Tata Sponge does not discharge any water outside its premises. The entire process water is collected, process in the cooling water system inside the plant and re-circulated in the system. The entire waste water generated is used for dust suppression on the roads, raw material yard as well as solid waste dump yards and for gardening purpose, after primary treatment. Given below is a schematic of waste water treatment system at Tata Sponge.



The main facilities used for control Water Pollution & Water Discharge are:

- Cooling towers and recirculation pumps
- Neutralization pit and pumps for recirculation
- Settling pit and pumps for recirculation with electronic float system for auto recirculation.

- Oil separation pits at recirculation pond



Rain Water Harvesting Pond

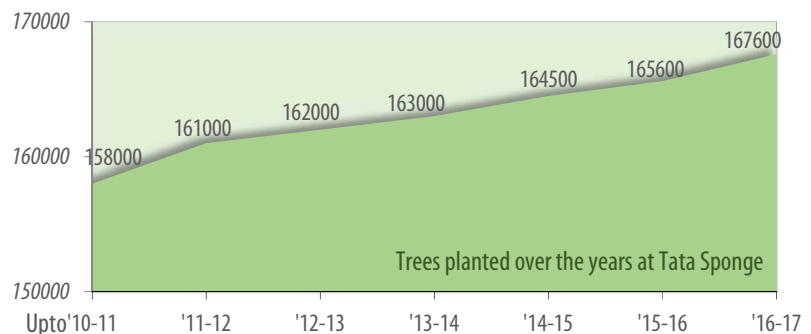


Water Circulation System

As shown in the picture above, Company has invested in water harvesting system for ground water percolation as well as water utilization. In addition to the previous water harvesting arrangements, the company has added one more huge water harvesting facility within its premises during 2012-13 at an expense of INR Rs.7 million, after conducting the resistivity survey and feasibility study of the area. As shown in the graph in the earlier page, the water consumption (in KL/MT of DRI produced) has been kept under control.

Initiatives undertaken to promote greater environmental responsibility

Afforestation / Tree Plantation: During the past several years Tata Sponge has transformed a completely barren land into a green patch and eco zone. The company has planted more than 1,67,000 trees since its inception with survival rate of about 94%. Plantation of trees remained as one of the major priorities of Tata Sponge since its inception. Given below is a graphical representation of the year-wise plantation (Cumulative) taken up by Tata Sponge over the years.



When Tata Sponge took over the land from its original owners, a major portion of it was barren while some areas were being used for occasional agriculture. The company began planting trees on a yearly basis since then and has planted about 168,000 trees, most of which have grown up big and turned these tracts into a mini forest. To ensure their survival and to monitor the growth of the tree saplings round the year, a contract has been given for watering and safeguarding plants till maturity. Initially, in order to quicken the green belt area around the plant, fast growing species like acacia, bakain, chakindi, etc. were planted which after the development of a thick foliage, the plantation work has been changed to fruit bearing plants & hard wood trees like sandalwood, rosewood, mahogany, teak & bamboo. The following few pictures establish the greening drive continued by the company over the years, to convert an arid land into a verdant green tract.

LAND AT THE TIME OF ACQUISITION



THE TRANSFORMED GREEN AREA NOW



TATA SPONGE TOWNSHIP IN 1986



20 YEARS LATER – TATA SPONGE TOWNSHIP



One of the satellite views shown alongside further validates the green belt that the company has planted over the years. At Tata Sponge Works, environmental consciousness of our ecosystem is all-pervasive through a number of lush lawns, gardens & parks which camouflage the otherwise stark surroundings of an ordinary factory.



To bring in the feel of environment friendliness and to expand verdant cover, all the vacant areas inside the plant have been covered with lush green lawns & flower gardens. These not only develop the soil quality but also help in recharging the ground water. More than 2500 sq. meter area inside the plant comprise of picturesque gardens & parks.



Waste utilization

Use of Waste heat : Tata Sponge generates 26 MW of electrical power from waste heat that is produced by the burning of coal inside the kilns, during the manufacturing process of sponge iron. After utilizing this power for captive use, the excess power is exported. By generation of power through waste heat, lot of coal (Non-renewable natural resource) is saved, as shown in the table alongside.

Use of ESP dust: The ESP waste generated from the WHRB power plants is used for manufacturing bricks and paver blocks through cold press technology. No heat is required for manufacturing of these bricks, thus conserving natural resources such as coal and soil. ESP dust is also used during concreting of roads, platforms and filling of low lying areas.

| Year | Total power generation (KWH) | Coal saved (MT) KWH x 0.9 /1000 |
|---------|------------------------------|------------------------------------|
| 2009-10 | 181392700 | 163254 |
| 2010-10 | 191370600 | 172233 |
| 2011-12 | 134395300 | 120956 |
| 2012-13 | 178868700 | 160982 |
| 2013-14 | 195711800 | 176140 |
| 2014-15 | 173015900 | 155714 |
| 2015-16 | 162818900 | 146537 |
| 2016-17 | 185472100 | 166924 |

Use of Char: The non-magnetic char generated as a solid waste from the DRI plants at TSIL is sold to the private entrepreneurs for their industrial use (Cement, AFBC, sponge iron etc.). As an improvement for further value addition to this waste product, the company has been able to back charge the char into its manufacturing process, thus reducing the consumption of coal to this extent. During the successful trials conducted in 2016-17, a total of 3269 tonnes of char was consumed in the process. Encouraged by the success of the trials, the company plans to increase this quantity to approx 7000 MT during the current financial year (FY18).

Used Oil & Batteries: Tata Sponge does not produce any hazardous waste except used oil and batteries. All the used oil is collected from different user points and sold to authorized dealers (approved by Central Pollution Control Board-CPCB) for further processing at their end. The old batteries are sold to authorized dealers through buy back system.

Use of Canteen wastes: Food and vegetable wastes collected from canteens are used for generation of Biogas, which is used as fuel for cooking purpose.

Development and diffusion of environmentally friendly technology - Use of cleaner & greener processes

Development and diffusion of environmentally friendly technology - Use of cleaner & greener processes:

- **Ensure 'Zero' discharge of waste water, 100 % waste water is recirculated :** As mentioned earlier, company has made elaborate arrangements to ensure that no process water is ever released outside its premises. Cooling water is recirculated in the system. Other wastewater is used for road cleaning, coal yard dust suppression etc., after primary treatment.
- **Water Harvesting for ground water percolation and utilization :** Company has made arrangements for water harvesting that captures rain water and the same is utilized while facilitates ground water recharge. In addition to the existing water harvesting, the company has added another facility for rainwater harvesting within its premises. Also roof rain water is collected in a big tank and water is utilized for cooling purpose.



- **High capacity semi-automatic brick manufacturing machine capable to convert 100 % ESP dust (Waste) for making bricks :**

Company initially installed 4 brick manufacturing machines with a capacity of 8000 bricks/shift/machine to convert its ESP generated Fly ash into useful bricks. Afterwards, it has installed another semi-automatic brick manufacturing machine which has a capacity to produce 4500 bricks/hour of operation. Bricks are made through cold pressing process where no heat/fire is required, thus conserving natural resource (coal) and soil. Company is capable to convert 100 % fly ash generation to manufacture Fly ash bricks. During 2016-17, total production was over 9.40 million bricks



- **Online AAQ & Stack monitoring:** Company has three online AAQ monitoring stations and another three online stack monitoring stations. Out of the three AAQ stations, one station is mounted on mobile van. The parameters are displayed at the main gate on a giant display board for the information of the public.
- **Generating Biogas from canteen Wastes and utilizing for energy utilization at canteen:** Company has installed 2 nos of Biogas units within its premises. Food and vegetable wastes of Canteen and guest houses are utilized to generate gas and subsequently for generation of heat during the preparation of food. By adopting this process, waste as well as its foul smell at the dump area has been completely eliminated, also the waste of biogas plant is used as good fertilizer to maintain gardens and lawns
- **Use of heavy duty fogging Canon for suppression of Fugitive dust:** Company has procured one water cannon for suppression of fugitive dust of localized area. The canon is movable as well as truck mountable for its quick movement. The waste water is used though this cannon to suppress air borne dust up to distance of 50 mts.
 - **Telescopic unloading spouts** have been provided with pressurized water jacketing system at the discharge point of bunkers to control fugitive dust during unloading of char. This has in turn helped the company to keep the surrounding area free from dust and provide a better working atmosphere to the people deployed around the area which was always a problem earlier.
 - **Chemical dust suppression system** is used to reduce the dust in running circuits. Viscous chemical is sprayed over the running belt to entrap the flying dust and bring it back on the belt. A significant reduction in the fugitive dust is achieved by this process.