

Project and contact details

Project Title: Sustainable manufacturing in harmony with Neighbourhood community

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Organisation: CEAT Ltd. (Mumbai Plant)

Project description

Introduction: CEAT Ltd. established in the MMR in 1958, is one of the oldest tyre manufacturing companies. In the last 63 years, this suburb has transformed from an industrial hub to a prime residential hub - having a population of 270096 within the radius of 7.95Km². We are the only largest manufacturing capacity amidst this residential suburb. Even though we were complying with all statutory norms, the residential community was not comfortable with our presence. This project highlights our efforts towards creating a balance between the neighbourhood community and the functioning of an old plant in a sustainable way.

Project Description: Pain area for the community was primarily smoke emitting (SPM levels) from the boiler chimneys. The pain areas for the plant were high operational costs of power, fuel and water. Moreover, our organization had embarked on a sustainability vision to reduce carbon footprint by 50% up to 2030. As a keystone towards this vision, we had planned to reduce our carbon footprint by 25% from FY18 to 21. Also, with an effort to contribute towards conservation of natural resources, we decided to reduce our water consumption (in Litres) per kg of production by 30% from FY18 to 21.

Methodology used: 7 Step Problem Solving (QIP), QC tools, Multiple PDCA, Agile methodology, Structured RCA. Our journey towards winning DEMING award had made us familiar with these tools, which were used effectively for this project.

Observation/Analysis: Statutory SPM levels defined for the industry are 150 mg/Nm³ and we were operating well below this limit. However, the expectations from the community were that there should be no soot settling in our house and there should be no smoke visible from chimneys. Towards this, we had taken up 5 major projects which have given us substantial improvements as shown in the results. Our manufacturing process needs high level of power and fuel and as a result of which the carbon footprint is becoming high (Refer Fig.1). Also, this adds to the high operational costs of the plant.

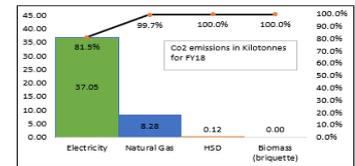


Figure 1

We had initiated 27 major projects on power and 44 major projects on fuel to effectively bring down their usage. This not only brought down the operational costs of the plant but also had a major impact on the carbon footprint reduction, thereby not only satisfying the neighborhood community but also achieving the sustainability vision.

On the water-front we had launched 35 projects, emphasizing on reduce, reuse, and recycle.

Along with these projects, initiatives were also undertaken to improve neighbourhood community engagement to help them develop and keep them engaged

Results: Details of the projects completed, and results achieved can be better understood from the model shown below (Refer Fig. 2).

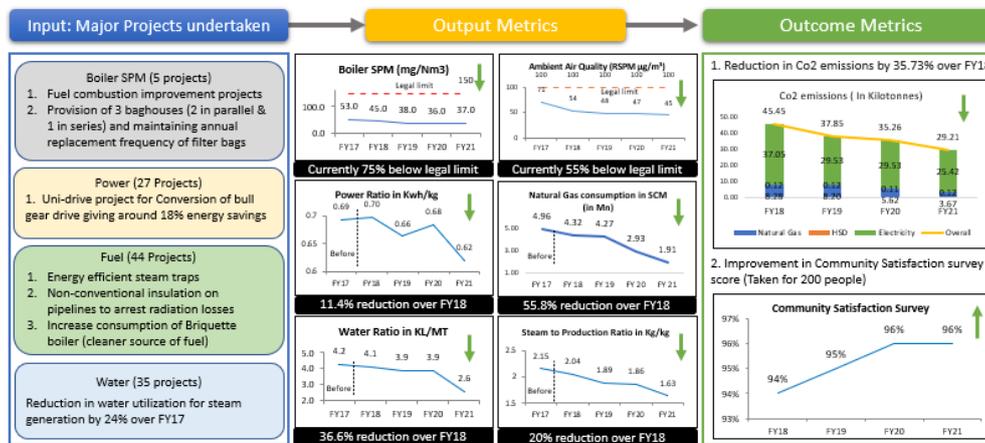


Figure 2

Linkage to 17 SGDs

Environment:

- Goal 12** – Responsible Production & Consumption
- Goal 13** – Climate Action

Social:

- Goal 3** – Good Health & Well being
- Goal 4** – Quality Education
- Goal 8** – Decent Work & Economic Growth

Learnings: A key takeaway from this Sustainability journey has been that using TQM methodology can be a powerful tool for the management in achieving the strategic growth of the organization.

Project leverage potential

As a part of horizontal deployment & best practice sharing in forums like CoE (centre of Excellence) has helped other CEAT plants as well as RPG group companies in adopting proactive sustainability initiatives. Further our journey will continue in a structured manner to achieve 25% reduction in tCO² in FY22 over FY21.

Achievements

- 16217.62 tCO² reduction in FY21 over FY18 (35.80%)
- 9095.4 GJ of energy saved (FY18 to 21)
- 5,950,437 Kwh of solar energy used (FY21)
- Natural resource (Water) conservation - 843 KLD in FY18 to 457 KLD in FY21 (45.8%)
- 37686 beneficiaries under CSR (FY18 to 21)

Way Forward (FY22 to FY23)

- Electrostatic precipitator (ESP) project
- Steam Turbine using LP pressure
- Nitrogen curing implementation
- Increase share of Renewable energy usage
- ISO 46001: 2019 (Water Efficiency Management System)