JSW Cement Limited

Improving Thermal Substitution Rate | Nandyal, Andhra Pradesh | PRACTICE

Description:

Under the UN Energy Compact signed in 2022, JSW Cement has set a target of reaching 30% thermal substitution rate by 2030.

As a part of decarbonisation endeavours, the organisation has adopted waste co-processing as an essential method to reduce fuel emissions. As a result of adopting the 'waste co-processing model' at its Nandyal (Andhra Pradesh) plant, the organisation had made significant progress of increasing the TSR from 4.2% in FY 2020/21 to 7.1% in FY 2021/22.

Over the past few years, JSW Cement has proactively engaged in co-processing liquid hazardous waste from pharmaceutical industries, plastic waste, and biomass waste such as rice husk. In FY 2021/22, ~35,000 tonnes, including ~9,000 tonnes of biomass waste were processed, resulting in ~70% increase in thermal substitution rate, amounting to a recorded and improved rate of 7.1%.

To increase its co-processing capabilities, the organisation has upgraded all the necessary installations related to alternative fuel (AF) preparation (shredder), transportation and the liquid/solid feeding system.

Further, JSW Cement has signed a memorandum of understanding (MoU) with Punjab Renewable Energy Systems Private Limited (PRESPL) in March 2022, to ensure long-term supply of biomass waste.

Apart from reducing net emissions, the co-waste processing model has helped conserve natural resources, and cut down overall environmental impact by reducing emissions. They are also providing an alternate source of livelihood/ income to farmers by procuring their biomass waste to meet our requirements.

Impact:

By improving the thermal substitution rate at their Nandyal unit, JSW Cement reduced ~40,000 tonnes of CO₂ emissions, and ~15,000 tonnes of coal consumption (as fuel).