

CASE STUDY 6 : FIRING LOW SULPHUR HEAVY STOCK SLUDGE IN CEMENT KILN - THE INDIA CEMENTS LIMITED, DALAVOI

Project Implemented by : The India Cements Limited, Dalavoi

Project Implemented in : 2010

Company Details

The India Cements Ltd was established in 1946 and the first plant was setup at Sankarnagar in Tamilnadu in 1949. Since then it has grown in stature to seven plants spread across the states of Tamilnadu and Andhra Pradesh. The cement manufacturing capacity of ICL (as on March 2010) is about 14.05 MTPA. The Company is the largest producer of cement in South India

Project Details

ICL, Plant has 2 DG sets of capacity 12 MW. LSHS is used as fuel. Before supplying the fuel to engine, sludge is being separated by purifier and the sludge stored in sludge storage tank. This sludge is classified as hazardous waste and has a high heat value of more than 9000 kCal/kg. Hence, high calorific value sludge is used in kiln for firing.

For sludge, mobile tankers of 2 KL capacity are dedicated with electrical heater and tractor attachment provision in which sludge is transported from sludge storage tank to kiln firing. Before firing in the cement kilns, sludge is heated up to 80° C to transform the semisolid sludge to flow-able liquid. For attaining uniform flow of sludge, the sludge is initially re-circulated using the pump of 2500 LPM capacity. After ensuring that good flow of sludge is attained, this sludge is fired in pre-calciner inlet using the same pump.

Environmental benefits (tangible & intangible) achieved

1. Hazardous waste handling problems are minimized
2. Land Contamination and Water pollution may be avoided.
3. To avoid improper recycling method.
4. Hazardous waste utilized as fuel, hence conventional fuel is saved



Financing of the Project

The plant has invested about Rs. 75,000 for implementation of the project.

Results of the Project

Consumption of LSHS sludge is 29 T/ yearly, results savings of Rs 279,270/-

Replication Potential

Cement industries having diesel generator can adopt this system to utilize the sludge generated and the used oil for kiln firing.

Recommendation to other units

It is recommend to use the sludge generated and the used oil for kiln firing.

Contact Information of the plant

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