

COVER STORY - ACC



“Co-processing is environmentally and ecologically a more sustainable technology for managing waste.”

R Nand Kumar

Vice-President, Corporate Communications, ACC

ACC is presently implementing an expansion project in Eastern India which will add a capacity of 5 million tonnes in a phased manner, at a cost of Rs 3300 crore. This will increase its capacity from 30 to 35 million tonnes per annum. The first phase, which is the clinkering line at Jamul, is expected in the middle of 2015. The growing capacity will create higher energy demand too. ACC, with some of the most energy efficient and environment conscious plants, has lot to share when it comes to captive power generation. In an interaction with ICR, R Nand Kumar, elaborates upon a few points. Excerpts from the interview.

What steps were taken by ACC to control its power costs?

ACC's Power and Fuel consumption cost was Rs 2,382.34 crore in the year 2013. Overall power and fuel cost was maintained at the previous year level with the improvement in efficiency and better fuel mix. ACC maximised the use of petcoke and alternative fuel. Overall petcoke consumption in current year has

increased. This helped in lowering the use of imported coal. The power consumption was 85 kwh/t as compared to 88.13 kwh/t in the previous year.

Please elaborate on ACC's Renewable Energy portfolio.

ACC's Renewable Energy portfolio consists of 19 MW in the form of wind farms across three states, viz., 9 MW in Tamil Nadu, 7.5 MW in Rajasthan and 2.5 MW in Maharashtra. Cumulatively, a total of 23.53 million units of wind power have been generated. These units helped ACC meet its non-solar renewable purchase obligation for Madukkarai and Lakheri Plants.

ACC also generates power by processing waste heat. The Waste Heat Recovery System at Galgal is expected to reduce 44,180 tonnes of CO₂ per annum. This is an important milestone in the ACC's sustainable development journey. Waste Heat Recovery Systems offer a reliable supplement to captive power generation in an energy-intensive industry like cement, particularly in an energy-deficient country such as India. ACC Limited recently launched its first Waste

Heat Recovery (WHR) system at the Galgal cement plant in the north Indian state of Himachal Pradesh. The WHR system harnesses waste heat discharged in the cement manufacturing process as exhaust gases, channelling them into a boiler that runs a steam turbine and converts it into useful electrical energy. The new WHR project generates electricity at a cost that is significantly lower than that of a captive power plant and only a fraction of the cost of grid power. ACC sees the project as an important step in energy conservation and is exploring the possibility of installing similar systems at a few of its other cement plants.

What is the major challenge faced by the industry in captive power generation?

Cement production is an energy-intensive process that requires large quantities of coal to meet its kiln and captive power generation requirements; hence, consistent supply of this fuel at reasonable and stable prices is a major concern for the ACC. Erratic supplies of coal due to domestic production constraints and price

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fluctuations adversely impact cement production.

How is ACC safeguarding itself from such fluctuations?

Under Holcim's Geocycle banner, ACC's initiatives in utilising Alternative Fuels and Raw Materials (AFR) in the cement manufacturing process

is gaining momentum in an effort to mitigate the rising cost of conventional fossil fuels and raw materials.

Forty six co-processing trials of different waste materials have so far been carried out after obtaining necessary clearances from the concerned authorities at the State and Centre levels. These trials have demonstrated

that co-processing is environmentally and ecologically a more sustainable technology for managing waste than other technologies that are in practice today, such as landfill and incineration. Our waste management services through cement kiln co-processing are gaining wider acceptance.

Based on the demonstrated success of the suitability of co-processing technology for waste streams, ACC has received clearances for co-processing 127 different waste streams generated by diverse industry segments such as automobiles, chemicals, engineering, power, steel, refineries and petrochemicals. During 2013, we have conducted seven co-processing trials of different waste materials. 23 new industries accepted the co-processing services offered by ACC as a result of which 32 new streams for co-processing have been added in various plants. Currently, different types of waste streams are being co-processed from industrial, agricultural and municipal sources as AFR.

During the year 2013, a quantum leap was achieved in the usage of AFR, thereby enabling a Thermal Substitution Rate (TSR) of 4.36% against a target of 4.12%. The focus on AFR enabled our company to reduce fuel consumption in kilns, captive power plants and in dryers.

ACC is also engaged in co-processing, segregating non-recyclable plastic waste from municipal solid waste, thereby assisting the society with the disposal of plastic waste. We are in an active engagement with municipalities and local bodies in this regard.

To increase the AFR utilisation substantially, three pre-processing platforms are being set up at our plants which will prepare AFR material of uniform quality from various kinds of wastes that have different types of physical and chemical characteristics. Two of these facilities are expected to be ready during the course of this year.

ICR



ACC Gagal Waste Heat Recovery System at one of the four boilers.