Solid Waste Management rules

The Environment Ministry has revised Solid Waste Management Rules in 2016 after 8 years. The HWM Rules 2016, notified on April 4, 2016 rules have been made with regard to hazardous waste and facilitate proper management of hazardous waste.

Hazardous Waste Management rules

The Environment Ministry has revised Hazardous Waste Management Rules in 2016 after 16 years. The SWM Rules 2016, notified on April 8, 2016 rules have been made with regard to hazardous waste and facilitate proper management of hazardous waste.

Waste availability for achieving 25% TSR by 2025 in Indian Cement Industry

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Status Paper on Alternate Fuel Utilisation in Indian Cement Industry

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CII Database

References

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Introduction

The Indian cement industry, the 2nd largest in the world, has set voluntary & ambitious emission reduction targets to reduce 45% of its carbon emissions intensity by 2030 from 2005 level. Cement industry has been steadily progressing in AFR substitution over the years. The use of alternate fuels and raw materials reduces carbon emissions helping substantially in conserving precious natural resources and in reducing GHG emissions. The use of alternate fuels and raw materials reuses the waste that result from using fossil fuels and, therefore, the overall environmental impact of cement manufacturing is significantly reduced. Specialized fuels and raw materials can be co-processed without the need of undertaking co-processing trials.

Dynamics of RDF plants

One of the major wastes that has excellent potential to be utilised in cement plants is RDF. The use of RDF is not only helping in solving the waste management problem but is also having a great impact on the environment. It has been proven beyond any doubt that, in a cement kiln, the organic components of RDF can be converted to alternative fuel, namely RDF.

Economics of RDF plants

The cost of fuel is continuously increasing, which severely affects the operating margins of the cement manufacturers. With increasing demand for cement, AFR usage becomes unavoidable to reduce fuel & raw material consumption.

The Government of India has committed to reduce emissions intensity of its GDP by 33 to 35 per cent by 2030 from 2005 level. Cement industry, being one of the major contributors to the Indian economy, can play a vital role in supporting the nation in its low carbon pathway.

Key findings

- AFR Thermal Substitution Rate increased from 0.6% in 2010 to 4% in 2016
- Number of cement plants using AFR has increased from 12 plants in 2010 to 59 plants in 2016
- 4% Thermal Substitution Rate accounts to 1.6 million tons of Alternate Fuel usage in Indian Cement Industry
- Current level of AF substitution saves 1.1 million tons of coal per annum which is equivalent to 0.5 million toe
- Top 4 AFR Thermal Substitution Rate of Indian cement plants are 26%, 22% and 21%
- Carbon emissions declining at 4% TR will be 3420 million toe

Guidelines for Pre-Processing & Co-Processing of Hazardous and Other Wastes in Cement Plant, released by Central Pollution Control Board (CPCB) on July 7, 2017

- Substantial fractions of industrial, commercial, domestic and other wastes contain materials that have the potential for use as an alternative raw material or as a supplementary fuel for energy recovery.
- CPCB has laid down guidelines for waste management practices & their disposal.
- The guidelines are structured to help streamline the entire supply chain from the generator to the user.
- Operational efficiency and safety.
- Reduction in emissions.
- Recycling and reusing materials.
- There is a need for stringent regulations to ensure proper processing and disposal of hazardous wastes.
- The guidelines are aimed at ensuring that the waste is processed in a safe and environmentally friendly manner.