
USE OF PET COKE AS AN ALTERNATE FUEL IN CEMENT PRODUCTION

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ABSTRACT

Use of pet coke is increasing as a cost effective fuel in cement production. A major component of the cost of manufacture of cement is the cost of fuel, which usually in India is coal. Pet coke is a by-product of the oil refining process. The specific energy cost of pet coke is appreciably less than that of other fuels like coal or oil. Hence, it is advantageous to use it for cement clinker production. Already, many cement plants in India and abroad are using successfully pet coke as a fuel.

Pet coke is characterised as a fuel having high calorific value, low volatile matter, low ash and high sulphur content. Besides these advantages there are some limitations, which have to be considered to avoid the operational problems.

A very high sulphur content is the major limitation for the use of pet coke as an alternative fuel. Due to sulphur circuits between sintering zone and preheater heavy build – ups in inlet chamber, riser duct, calciner and bottom most cyclones as well as ring formation in kiln can create operational problems. Effective use of pet coke calls for design changes in some of the equipment like Grinding system, Precalciner, Burner pipe etc. These aspects have been discussed in this paper.

This paper covers details of various aspects of use of Pet coke including its properties, extent of use, fuel preparation, combustion characteristics, limitations of use, equipment modifications and precautions that are necessary to use petcoke.

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