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ARTIFICIAL NEURAL NETWORK MODEL FOR HEAT TRANSFER PROCESS IN A CEMENT KILN

ATHUL M & ASHOK S

Department of Electrical Engineering, National Institute of Technology Calicut, Kozhikode, Kerala, India

ABSTRACT

Cement kiln is a highly nonlinear heat transfer process consisting of various exothermic and endothermic reactions. To study the temperature profile for improving computer control of the process a simple but accurate model has been developed. In this paper a mathematical model relating the inner kiln temperature profiles of solid gaseous and wall temperature is solved and used to train and develop an Artificial Neural Network model of cement kiln which is further validated using wall temperature data from a typical cement industry.

KEYWORDS: Cement Kiln, Heat Transfer, Mathematical Model, Artificial Neural Network Model.

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