Environmental Engineering and Management Journal xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
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A STUDY ON CONTROLLING POLLUTION IN IRON FOUNDRIES LOCATED IN COIMBATORE DISTRICT OF INDIA

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Abstract

This paper reports a research which was begun by conducting a literature survey. This literature survey was conducted to survey the researches examining the efficiencies of Pollution Control Devices (PCDs) in controlling pollution from the iron foundries situated in various parts of the world. A result of this literature survey indicated that, the effectiveness of PCDs installed in iron foundries situated in Coimbatore district of India (where the authors reside) in controlling pollution is yet to be examined by the researchers. This is a surprising research and practice gap, as Coimbatore is known for its foundry cluster. In order to overcome this research and practice gap, a survey covering 21 iron foundries functioning in Coimbatore district was carried out. The data gathered from this survey indicated that, the iron foundries in Coimbatore district have installed six PCDs namely dry cap collector, wet cap collectors, cyclone, wet scrubber and cassette filter. The pollution controlled by installing these PCDs has been pinpointed in this paper using the data gathered from this survey. The final result of this survey has indicated that, cassette filter incorporated in induction furnace enables to achieve the best efficiency in controlling the pollution that arise from iron foundries. Subsequently, the construction, working and performance of cassette filter and its capability in achieving pollution control in foundries have been described in this paper. This paper is concluded by pointing out the need to conduct surveys in iron foundries, in which cassette filter is installed.

Key words: cassette filter, cyclone, cupola furnace, induction furnace, pollution control, wet scrubber

Received: June, 2012; Revised final: August, 2014; Accepted: August, 2014

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