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Abstract Book

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INFLUENCE OF TEST DUSTS ON THE AGING BEHAVIOR OF DIFFERENT CLEANABLE DUST FILTER MEDIA

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ABSTRACT

In order to get information about the long time filtration behavior of cleanable dust filter media, they are aged in laboratory test rigs. Various influencing factors concerning the aging and clogging behavior are known (e.g. filter face velocity, raw gas concentration, filter medium). With a filtration apparatus, exclusively designed for aging, the influence of different particle size distributions on the aging behavior of commonly used filter media is investigated and discussed. Distinct depth filtration as a result of the low agglomeration tendency of the coarser-grained test dust led to a comparatively faster clogging in case of a needle-felt filter medium. At a membrane filter medium the relative faster growth in thickness of a secondary cake on the filter surface turned out to be responsible for the faster clogging of the coarser-grained test dust. Hence, the coarser-grained test dust led to faster clogging at both, a membrane and a needle-felt filter medium.

KEYWORDS

Aging, cleanable filter media, dust filtration, test dust