

## **Automation of Process Waste-Free Air Filtration in Production of Concrete, Reinforced with Basalt Fiber**

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**Abstract :** Industrial companies - one of the major sources of harmful substances to the atmosphere. The main cause of pollution on the concrete plants are cement dust emissions. All the cement silos, pneumatic transport, and ventilation systems equipped with filters, to avoid this. Today, many Russian companies have to decide on replacement morally and physically outdated filters and guided back to the electrostatic filters as usual equipment. The offered way of a cleaning of waste-free filtering of air differs in the fact that a filtering medium of the filter is used in concrete manufacture. Basalt is widespread and pollution-free material. In the course of cleaning, one part of basalt fiber and cement immediately goes to the mixer through flow-control units of initial basalt fiber and cement. Another part of basalt fiber goes to filters for purification of the air used in systems of an air lift, and ventilating emissions passes through them, and with trapped particles also goes to the mixer through flow-control units of the basalt fiber fulfilled in filters. At the same time, regulators are adjusted in such a way that total supply of basalt fiber and cement into the mixer remains invariable and corresponds to a given technological mode.

**Keywords :** waste-free air filtration, concrete, basalt fiber, building automation

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