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Environmental Protection Improvement of Fabric-Filter Cleaning of Process and Ventilation Gases at the Kazzinc LLC Ust-Kamenogorsk Metallurgical Complex(Article)

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Краткое описание

The Ust-Kamenogorsk Metallurgical Complex (UKMC) is an independent division of Kazzinc LLC with a closed-loop manufacturing process. The company is primarily engaged in production of rare nonferrous metals and alloys. RFG and URFM bag filter models are the most commonly used at UKMC. Bag regeneration is by blowback and shaking; the filters have been in operation for over 50 years, and the residual dust content is 10–15 mg/m³ of gas. The company is actively working to upgrade these filters through introduction of a pulsed bag regeneration system to increase gas throughput by 50% and reduce the residual dust content to a maximum of 1 mg/m³ of gas. The authors' proposed upgrade of the URFM-1 filter to FRKI-3800 filters will reduce fugitive intake of ambient air by 15% and lower atmospheric emissions of lead-containing dust by 4 metric tons/yr. The annual cost savings from the upgrade will exceed 40 million tenge (approximately 116,000 U.S. dollars), in the form of reduced emission fees and lower electric power consumption for handling process gases. © 2018, Springer Science+Business Media, LLC, part of Springer Nature.