

Development and Study of Properties of Anhydrite Finishing Panels from Hydrofluoride Waste Products

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Abstract: The article considers the process of disposal of waste generated during the production of hydrogen fluoride during the chemical reaction between a natural inert material – calcium fluoride and concentrated sulfuric acid. Current disposal methods include neutralization of waste with alkali and its discharge into water systems, which has a negative impact on the environment due to the content of fluoride and sulfate anions. A process flow diagram of a laboratory installation is proposed that allows for the production of environmentally friendly building materials: anhydrite finishing panels, from neutralized hydrogen fluoride production waste – fluoroanhydrite. A description of the sequential production process is given, starting from loading the raw materials into mixers to the formation and storage of finished panels, parts of the designed laboratory installation, namely its component units and productivity.