

Title (en)
METHOD FOR THE DRY BENEFICIATION OF WOLLASTONITE ORES

Title (de)
VERFAHREN ZUR TROCKENAUFBEREITUNG VON WOLLASTONITERZEN

Title (fr)
PROCÉDÉ D'ENRICHISSEMENT À SEC DE MINÉRAI DE WOLLASTONITE

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Application
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Abstract (en)
The invention relates to beneficiation of mineral deposits and can be used for beneficiation of wollastonite ores. According to the inventive method for dry beneficiation of wollastonite ore, which comprises primary and secondary crushing of the ore, drying of the material, X-ray fluorescent separation of the crushed material, classification of the material according to grain-size categories, magnetic separation on a belt conveyor, magnetic separation on a roll-type separator in order to remove impurities from wollastonite concentrate of various grain sizes, grinding, as well as extraction of flour particles of the material, the drying of the material is performed between the primary and secondary crushing stages, the X-ray fluorescent separation is performed after the secondary crushing, the classification according to grain-size categories is performed immediately after the X-ray fluorescent separation by sequentially carrying out impact grinding, magnetic separation on a belt conveyor and air sizing, followed by magnetic separation on a roll-type separator; the extraction of flour particles of the material is performed at the primary and secondary crushing stages and during the impact grinding of the ore, wherein all extracted flour particles are supplied to one of the rolls of the roll-type magnetic separator; the wollastonite concentrate of one or more grain sizes can be dried, which is followed by electrostatic separation of the dried concentrate in order to remove impurities therefrom, followed by air sizing of the product obtained after electrostatic separation in order to divide it into fractions with different grain size; one or more product fractions can be additionally ground, which is followed by removal of the electrostatic charge. The amount of wollastonite that goes into waste is reduced and the quality of the final product is improved.

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