

Complex for granular materials washing GRAVITATIONAL SAND WASHING MPG-1600

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ASSIGNMENT

Classification of particulate materials (sand and gravel, natural and artificial) in pulp stream with producing of commercial product of given size. Efficient removal of clay and fine particles. Dewatering and warehousing of commercial product.

ESSENCE OF TECHNOLOGY

Mineral resources are extracted by pump dredge, hydrotransportation on the pad processing pressure slurry pipeline, classified with application inclined screen (Fig. 1) selected gravel and ball clay warehoused in the stock, pulp, containing of trademarks of granular material, is drained by drain coupler on the map in washing for cleansing from finely dispersed silty clay inclusions, dewatering and storage, waste water was poured into the system a slime pit, the clarified water is poured into the pit of pump dredge. Processing of minerals from not watered benches accomplished by delivery to the hopper feeder and conveyor belt to the node preparation pulp, mixing with the flow pulp, which fed to pump dredge and processing. Patent № 92830 Ukraine.

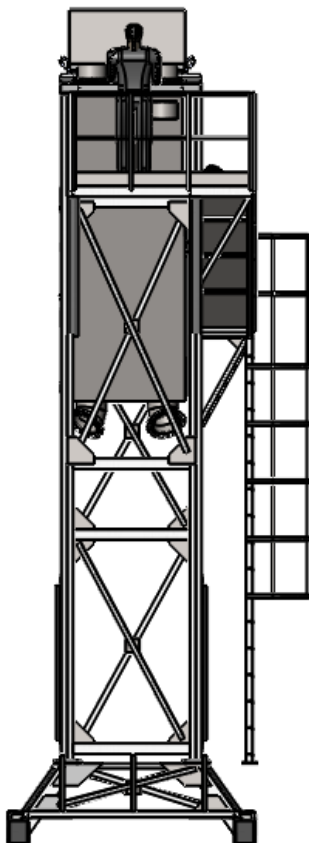


Fig. 1. Model of inclined screen GNC-1600

INDUSTRIAL TESTS

In the summer 2013 on the industrial base "Antares" company (Voznesensk, Mykolaiv region.) executed pilot testing of installation for washing particulate materials and washing of sand by gravity sand washing MPG-1600 (Fig. 2). The design of a processing complex MPG-1600 made in accordance with NIR № 110033 "Substantiation of parameters for processing complex building sand East-Bugskiy-2 deposits".

The main element of the reprocessing facility MPG-1600 is inclined screen GNC-1600 (Fig. 1). Designing GNC-1600 and development of design documentation made with application SolidWorks software.



Fig. 2. Complex for granular materials washing MPG-1600 on the industrial site of the quarry East-Bugskiy-2 deposits of sand

ADVANTAGES AND DISADVANTAGES

In the pilot testing of innovative technologies of granular materials processing with the use MPG-1600 revealed these advantages and disadvantages:

Advantages:

- the possibility of plant operation under conditions of open areas of processing;
- high efficiency of cleaning process of granular material from clay, silt and fine impurities;
- the possibility of exploitation in the complex recycling water supply;
- high reliability of equipment due to lack of drive, including rotating and rubbing parts;
- ease of operation and maintenance due to lack of lubrication nodes;
- low requirements to professional qualification of people.

Disadvantages:

- application for dewatering and disposal of marketable products cards of reclamation;

- the dependence of the quality of commodity products from raw material quality.

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