CASCADE JIGGING PLANT

Description
The coincidence of the process of jigging and sand classification is underlying principle of the plant. The method of cascade jigging suggests that unclassified material is jigged using cascade cameras (stages) with small perforated holes. At each stage the jigging is run by frequency and amplitude corresponding to optimal conditions of division of fractions of determined size and with easy tail fraction. The material fed from jigging riddle of the previous stage, is dressed at each stage of the under riddle jigging, and the number of stages depends on required number of classes of grain size. The most productive sizes in processing of diamond sands are, for example, –16+8; -8+4; -4+2 mm.

![General view of cascade jigging plant with moving riddle]

1 – box; 2 – threshold; 3 – moving riddle frame; 4 – fixed member; 5 – vibrator; 6 – hatch; 7 – tail tray.

Technical appraisal and economic advantages
Cascade jigging can combine jigging and classification in one operation, which makes it possible to design a unique compact machine that can replace a few tens of dressing units and, thus, reduce the capital and operational charges.

Application areas
The construction of cascade jigging machine is recommended for processing of geological samples and bulk sampling of the products of dressing of preparation plants.

Development stage
Operating capacity of the new method of dressing of diamond sands is proved by testing of a prototype model in bulk sampling of tails of preparation plant of Limited Liability Company “Almazy Anabara” at Mayat deposit.

Patent situation
Protected by the patent of the Russian Federation.

Commercial offers
- Joint creation of the prototype model and introduction of the plant;
- licenced production of the separate units of the treatment plant.

Estimated cost
The price does not exceed that of jigging plant MOD-3 – 60-70 thousand rubles.

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