

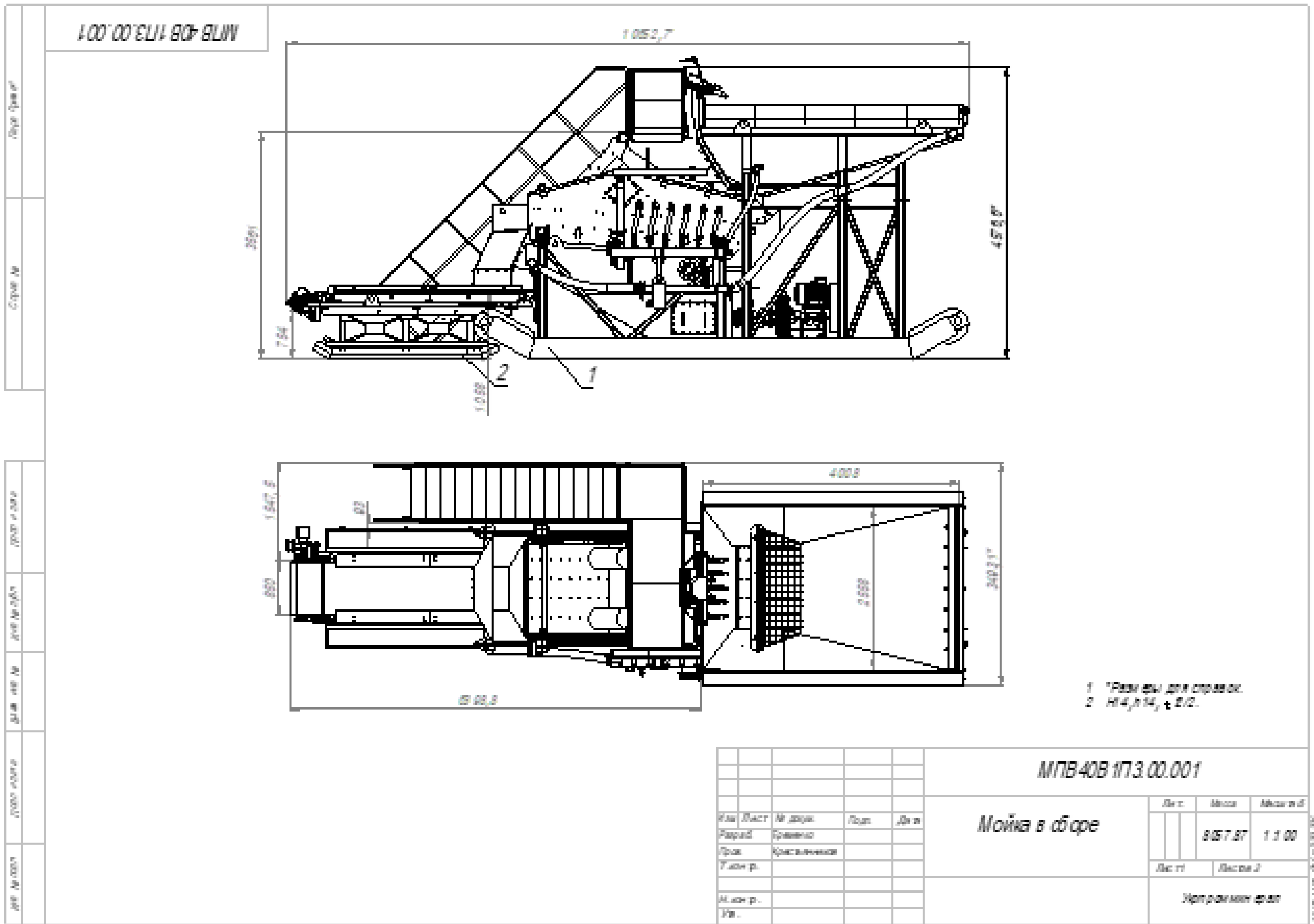
**DNIPRO UNIVERSITY  
of TECHNOLOGY**  
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# AMBER MINING TECHNOLOGY WITH FURTHER SEND ENRICHMENT

РОЗРОБКА ПРОЙШЛА  
ПРОМИСЛОВУ АПРОБАЦІЮ

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## SEMI-MOBILE MODULE OF DEEP ENRICHMENT AMBERKING



## MAIN TECHNICAL AND ECONOMIC PARAMETERS

Productivity, t/h	150-200
Extraction of amber size +5 mm,	95
Extraction of sand size -5+0.08 mm, %	45
Energy consumprion, kW	120
Overall dimensions, not more than, mm	
- length – 10700	
- width – 3120	
- height – 7500	

## INFORMATION FOR INVESTOR

Cost of the semi-mobile module for the deep enrichment Amberking is 180.0-200.0 thousand Euro. Design work period – 2 months. Manufacturing time – 4 months. Pay-back period – 8 - 10 months.

## ESSENCE

The technology involves the gentle extraction of amber with a grain size of +5 mm, enrichment of the associated mined sand to EN (ASTM) specifications, and forced accelerated settling of clay particles of used water, which will reduce the consumption of process water and reduce the amount of construction work on the sludge pond. Due to the high productivity (up to 200 tons per hour of solid) and the reduced water cycle, the processing speed of the amber-bearing area will increase several times.

## APPLICATION AREA

Use of the deep beneficiation module as a "green recycling" to accelerate the settling of solids from recycled water, which produces a short cycle of its circulation and reduces the use of quarry transport to move the artificial sludge pond, as well as the extraction of enriched sand as a separate co-product.

## END PRODUCTS

Amber with a grain size of +5 mm with a recovery of up to 95%, enriched sand with a grain size of -5+0.08 mm, process water of accelerated rotation due to the use of peptizes (relevant in the summer or in areas with reduced water inflow). The technology is based on the adhesive-chemical processes of interaction between quartz grains and clay particles, using the author's installation.

## APPLICATION FEATURES

Improved hydraulic monitor with remote control with a capacity of 400 cubic meters per hour. Convenient access to the slurry pump sump. A slurry pump with reduced power consumption and rubber lining for uninterrupted year-round operation. Amber is recovered in the discharge of the high-frequency screen (this reduces amber losses due to the pressure washing system). The peptizer feeding system into the recycled water does not require long mixing. The length of the pulp movement by gravity reaches 300 meters. Possibility of filling the used quarry space with enriched sand using a belt conveyor. The use of peptizers speeds up the recycled water cycle and reduces the time for clarification (reduces the length and volume of the sludge storage facility).

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