

Soil-intake appliance of soil-suction dredge has a beam with a crosstop at the end of the beam, this is installed in cross position and symmetrically with its axis. To the beam there is fixed a transportation-opening mechanism as a hollow shaft with two screwed surfaces turned towards each other in direction of the center of the shaft, and cutter elements at the perimeter of those; slime-rejecter shield and suction diffuser. Each cutting element has a holder fixed in radial position to the screw surfaces and cutting surface; part of the last one is bended with respect to the plane of the holder at angle 90° in direction of the middle part of the hollow shaft with formation of a shelf, with angle of bending of the last one with respect to the radial axis of the screw surface being 60°, and the length being determined by the formula:

$$l = \frac{L}{n - 1},$$

where l - length of the shelf;

L - height value for the screw surface;

n - number of cutter elements at one step of height.