

Modern reservoirs with dam heights of tens and hundreds of meters above the river coastline with flooding of cities, villages, territories – this is a crime against humanity and nature. It is quite possible to eliminate floods.

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Introduction

Destructive floods on rivers of all continents require an analysis of the contents of river bottoms. The coastline or water level of a river in relation to the terrain varies over a fairly wide range. In places where the edge or water level connects with the plain, during floods the water overflows the banks and the flood destroys and kills. In other places, the water level sinks to the bottom of a canyon or river valley. The difference between the levels of the valley bank and the river surface can reach tens and hundreds of meters. It is in such places that it is necessary to maintain water for consumption during low water - summer time - and install hydroelectric power stations. The dam must be built in such places up to the coastline of a canyon or river valley. We need to fill these valleys and canyons. It can be raised from natural materials at minimal cost. The silt lying at the bottom may be just such a material. It easily rises, moves and can lie still for a long time.

Considering modern dredging technology, we can conclude that bulky, metal-intensive, powerful equipment with a solid staff of maintenance personnel and the consumption of many tons of fuel is often unaffordable for the budget of coastal enterprises in many countries. It is necessary to radically reconsider the technology of modern dredging.

If you look at the movement of water in the riverbed and beyond, during floods, you will notice that water has its own considerable energy, which erodes dams, roads, demolishes houses, roads, bridges. Using such energy for construction is an interesting task. This requires a new concept for dredging, which must be based on a new design.

The search for devices that use current forces is found in the form of technical solutions in the patent literature. Consideration and analysis of the means of the method for implementing structures leads to the conclusion that the most important drawback in design and implementation is the stabilization of the device in a given place and its movement at a given speed and in a given direction. A technical solution in the form of an invention was developed and created. The anchoring mechanism is especially important here. which solves this problem. Moreover, the means that make up the main components are known and used in agricultural machines. The implementation of the process of deepening the river bottom by the natural flow of the river becomes realistically feasible for any coastal farm.

Small and inexpensive to manufacture and operate, underwater devices will provide deepening without the involvement of third-party energy and continuous maintenance. Actuation of small devices that, under the influence of the current, can cut off a layer of bottom sediments, mix them with the main flow of the river and themselves follow the moving clouds of suspended silt.

The speed of suspension transfer, or the productivity of the device's deepening, depends solely on the strength and power of the river flow and the quality of bottom sediments. Each river in its longitudinal section has a saw-tooth profile with teeth upward - made up of riffles and reaches. These combinations must be preserved, but the depths of both should be increased for the movement of ships and the required water storage capacity.

To construct a dam, the raised silt is distilled and concentrated in one given place, then in this place the

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bottom can be raised to any height, up to the middle of the edge of the canyon or even higher - to the edge of the canyon or plain. Of course, provide locks, pipes and other possibilities for regulating water flow for ships and fish

Such work can be performed by deepeners using a new technical solution, which is made in the form of Know-How. A clear example of how just one element can give rise to a completely new direction in underwater technology.

Can act without human intervention. A dozen or hundreds of such devices, made from waste mechanisms of decommissioned machines from other industries, will be able to deepen rivers along their entire length and relieve coastal settlements from floods. Let's call this device: "TRITON".

The idea shown needs investment and specialists who can take on the implementation, who would undertake this work and become legal licensees and co-authors of the new technology.

You can create a variety of autonomous device options based on the size and parameters of the rivers.

The machine is a simple machine with a single setting. Automatically selects and sets the speed of movement, the layer of sludge to be removed, and the direction of movement. Control by video cameras and simple sensors is possible.

Modifications can vary. Remotely controlled – with monitoring and control devices. For rivers with a complicated profile and bottom clogging with sunken objects. Equipped with any known attachments, pumps, grab buckets, mowers.

It could also be a device with software. Adopts an action strategy depending on the conditions of water movement, obstacles, and tasks.

The addition of a motor, propeller and float mechanism can result in a versatile underwater vessel that can increase productivity and move in any direction and even against the current.

Life support in a special cabin with a lead screw will allow for bottom research and any underwater work at any point of the river.

Each type can be the basis for many other works, for example, the extraction of sapropel, minerals, for example, zort, sunken objects.

The theoretical basis for creating a new device is presented in some publications:

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