

"Device for collecting fluids escaping from an underwater source"

Description

This invention provides a method for cleaning of ocean bottoms from oil or chemicals leaking from sunken tankers.

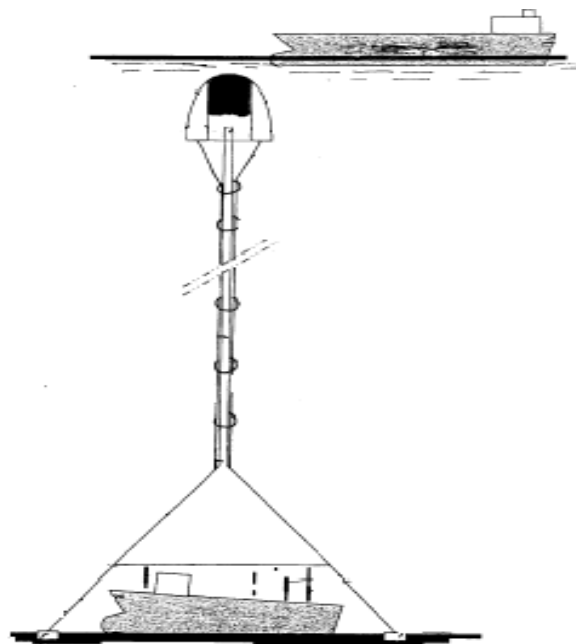
Several limitations have been observed in existing methods including the depth of the wreck, the weather and sea conditions, the need of an external energy source to pump out the collected fluids and the need of a permanent platform or ship on the surface vertical to the wreck.

This invention offers a solution to all of the above drawbacks. It consists of fairly simple and non-moving parts and has lower production costs. The invention uses a submerged buffer reservoir to store the collected fluids which then is emptied by a shuttle ship. Having the reservoir unit at any position under water overcomes the limiting factor of depth and allows the fluid flow to be independent of the weather conditions. One of the most remarkable features of this invention is that the collection process is only driven by gravity. This is achieved by having a domed-shape collecting unit with a hole on its apex where a tube connecting it to the reservoir is attached. This unit is placed in proximity to the wreck ensuring that no fluids are shifted by water currents. Suction anchors hold the collecting element to the bottom of the sea thus providing stability to the whole structure and also eliminating the effects of sea conditions. Furthermore the materials used and the dimensions of the structure ensure that clogging or sticking of the tube walls will not occur.

Innovative aspects and main advantages

- Independent of polluting source's depth
- Fluid flow independent of weather and sea conditions
- Constituent parts relatively simple and non-moving
- Anti-clogging and anti-sticking walls
- Collected fluid emptied by shuttle ship
- No need of permanent platform or ship on the surface
- Collected fluid transferred with no need of external energy source

Areas of application



Stages of development

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Industrial Prototype

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