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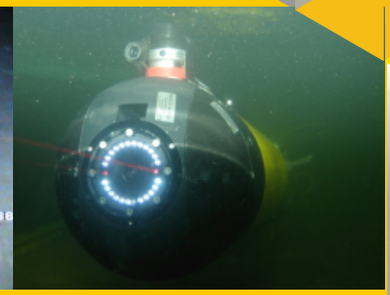
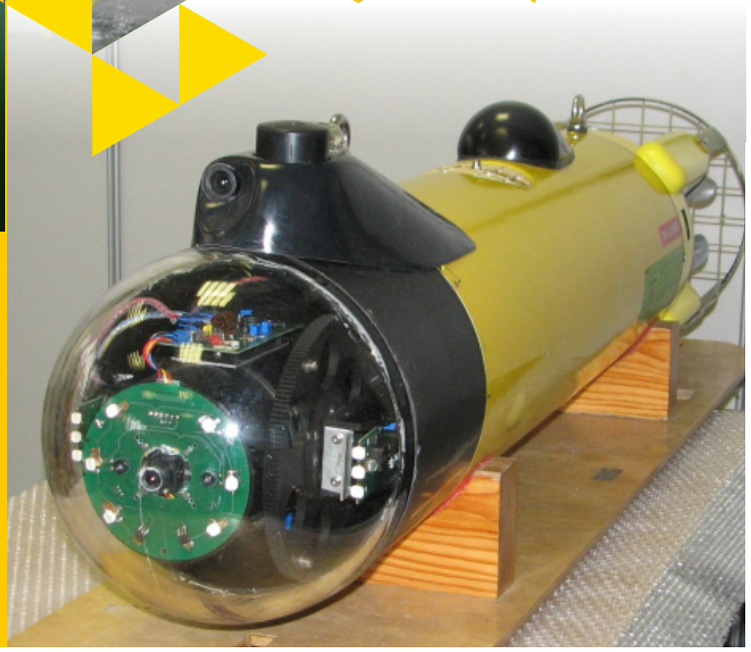
MINE DESTRUCTION DEVICE

Destruction device to be used in GLUPTAK DMDV system against sea mines is a shaped charge. The charge was developed specially for the application and working conditions. The design assures formation of several high velocity fragments of copper liner covering comparatively wide angle in spite of short distance available for their formation. The charge is composed of DPX-4 (LX-7) explosive material contained in a steel shell. Front part of the charge holder contains TV camera, LED illuminator, two laser pointers and LED safety/arming status indicator. The charge is detonated using an electric fuse and a small intermediate charge. The empty space in front of the liner assures formation of a wide explosion jet that carries energy into a mine explosive. Velocity of fragments of the lining, in excess of 3 km/s, assures detonation of most explosive material compounds except for TATB based compositions.



THE GLUPTAK DISPOSABLE MINE DESTRUCTION VEHICLE (DMDV)



THE GLUPTAK DISPOSABLE MINE DESTRUCTION VEHICLE (DMDV)

The GLUPTAK Disposable Mine Destruction Vehicle (DMDV) system is used to identify and destroy naval mines. Its target can be located up to 400m from a launch point. Typical mission profile calls for destruction of a target detected by other means. Normally the target will be detected by means of bow sonar of a mine hunting ship. Missions against targets indicated by other sources are also very likely.

The GŁUPTAK DMDV is propelled in horizontal surface by means of 4 water jet thrusters. This design was selected to reduce possible threat of mechanical damage to propellers and entanglement problem. A kind of a grill at the water intake of the jets protects against sucking in of dangerous solid objects and fibres. It is considered to be effective against sea weeds and ropes.

Maximum speed of the GŁUPTAK DMDV relative to water is 3 m/s. This assures bottom velocity of 1m/s in water current velocity of up to 2 m/s. A tunnelled vertical thruster is used for vertical movement in quiet water. It is built into the pressure hull at the centre of the vertical drag to minimise tilting during ascent and descent.

THE DISTINGUISHING FEATURES OF THE GŁUPTAK DMDV:

- Counter mine explosive device stored separately and installed before use.
- Ability to operate in currents up to 2 m/s.
- Ability to aim in the whole front hemisphere.
- High manoeuvrability is not essential due to aiming capability.
- Common vehicle design for disposal of mine and training.
- Water jet propellers reduce handling and entanglement problems.
- Vehicle is able to carry various mine counter devices if developed.

LAUNCHING

Launching equipment consists of a launcher and a winch suspended on a crane extending 3 m from the side if the ship. The winch is used to lower the launcher with suspended vehicle below The water surface (2 to 50 m depending on local weather and current conditions). The launcher is built around a heavy steel frame covered with glass reinforced epoxy resin shell. The launcher uses electrically operated catchers to firmly hold the vehicle