Anti-torpedo countermeasure

CANTO® represents a breakthrough in the field of anti-torpedo defence. Based on dilution/confusion concept, it is the only solution capable of protecting surface vessels against both the most advanced and the previous generation torpedoes.

Unlike the seduction based decoy, CANTO® acts completely independently of the attacking torpedo(es). Its principle consists in saturating the torpedo sonar and data processing by generating a permanently renewed tactical picture resulting in exhausting the torpedo(es) energy.

Thanks to the small number of CANTO® needed by salvo and its compatibility with most of the anti-missile decoy launchers, CANTO® can be easily installed on board any surface vessel.
**CANTO® for Vessel**

**Confusion/dilution**
CANTO® has been developed to protect efficiently a vessel against single or multiple torpedo attacks. It is capable of defeating previous and new generations torpedoes combining complex signal processing and high endurance, against which the seduction based decoys are no longer efficient. CANTO® is an all-in-one broadband active acoustic emitter acting both as a jammer for dilution effect and as a false targets generator for confusion effect. It creates and constantly renews hundreds of fake echoes on a 360° coverage area aiming at saturating the torpedo sonar and data processing. The extremely confused tactical picture forces the attacking torpedo(es) to waste time finding the real target, thereby exhausting its energy.

**CANTO® functioning**
- 360° immediate effect upon entering water,
- transmitting process independent of attacking torpedo(es),
- acoustic signals covering the whole torpedo(es) frequency band in active and passive modes.

**CANTO® operational advantages**
- Capable of countering any torpedo,
- capable of countering simultaneous torpedo attacks,
- efficient even in case of short notice torpedo alert,
- number of CANTO® by salvo drastically limited.

**CANTO® installation on surface vessel**
CANTO® for vessel is compatible with any decoy launchers at 123.8 mm (pneumatic) and 130 mm (mortar) standards. Such compatibility together with the small quantity of CANTO® required by salvo ease the use of dual launchers (AAW and ASW). The footprint occupied for anti-torpedo purpose is then considerably reduced. CANTO® is an anti-torpedo countermeasure that is easy to integrate on any surface vessel.

**CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acoustic</td>
<td>High-level active transmitter</td>
</tr>
<tr>
<td>Frequency</td>
<td>Wideband</td>
</tr>
<tr>
<td>Diameter / length / weight</td>
<td>123.8 &amp; 130 mm / &lt; 1150 mm / &lt; 20 kg</td>
</tr>
<tr>
<td>Shelf life</td>
<td>20 years</td>
</tr>
</tbody>
</table>

**ONE SALVO = 2 CANTO® IMMEDIATE PROTECTION**
CONTRALTO® is the reaction module associated with CANTO®. It has to be installed in the Decoy Launching System (DLS). The moment a torpedo alert is declared, CONTRALTO® reaction module suggests an optimised evasive manoeuvre along with CANTO® deployment.

CONTRALTO® takes in consideration the surface ship’s capabilities such as speed, manoeuvrability... and the environment data. Depending on the DLS modes available, CONTRALTO® can be configured in manual, semi-automatic or automatic modes.

**CONTRALTO® integration**
The level of CONTRALTO® integration on board depends on the level of integration of the DLS which can be:
- stand-alone,
- partially integrated,
- CMS integrated.
Background

DCNS has a wide experience in developing and integrating anti-torpedo countermeasures, the first solution being implemented in the 1970s. CANTO® has been developed based on this background to protect both submarines and surface vessels against all generation of torpedoes.

Equipped navies

✅ France ✅ Brazil ✅ Iraq ✅ Japan