



Underwater operations call for weapon systems able to address the specific constraints of this environment such as water pressure and resistance; able to defeat submarine and/or surface threats in all operational environments from brown to blue waters. This requires two different types of warhead system:

- Blast to deliver a bubble and shock effects able to break the double-hull of submarines or ships
- Shaped Charge to produce, in addition to a blast effect, a jet of metal aimed at penetrating the double-hull of submarines or ships

Nowadays, torpedo warhead systems modernization programs are mainly driven by the need of insensitive munitions (IM). The first objective of this new requirement is to enhance the safety of the weapon for the launch platform and for the users, which is particularly important in a submarine environment. Furthermore, this new specification enables the extension of the service life of a weapon system.

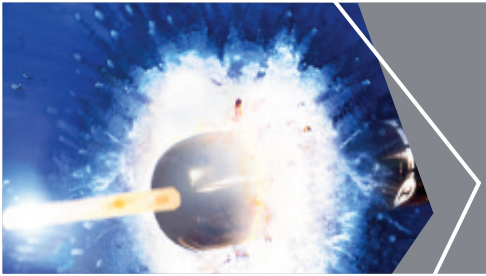
TDW is proud to have designed, tested and produced IM compliant warhead systems for light and heavyweight torpedoes thanks to a unique combination of four in-house capabilities:

- Development, testing and production of specific and IM compliant high explosives dedicated to underwater weapon systems
 - Full spectrum of test infrastructures allowing IM and environmental tests for various weight, form and size of warhead systems
 - Time saving with the advantage of having the design, simulation, manufacturing and testing capabilities located at one facility
 - Extended simulation knowledge applied to underwater environment
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- **Warhead systems comprising the warhead and Electronic Safety and Arming Device (ESAD)**
 - **IM compliant with current standards**
 - **Long service life and very low life cycle costs**
 - **Warhead for the next decades**

WARHEAD SYSTEMS FOR TORPEDOES

„the difference!“

TDW
an MBDA company



SEA

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Beyond its capabilities in the torpedo domain, TDW uses its expertise in system engineering and design concepts, simulation, assessment, mechanical design, prototype manufacturing, testing and evaluation to meet other operational challenges such as:

- Hard-kill defence solution against torpedo
- Depth charge
- Mines neutralisation system

About TDW:

Since the 1950's, TDW Gesellschaft für verteidigungstechnische Wirksysteme mbH has been developing, producing and maintaining all kinds of warheads and warhead systems as well as their associated components. With approximately 130 employees, TDW, which is a wholly owned subsidiary of MBDA Germany, operates as a full-service company at one integral site in Schrobenhausen, Germany.

UK Ministry of Defence - Minister (DEST) Acquisition Award 2013

"The Sting Ray Torpedoes Insensitive Munition Warhead Team delivered an innovative design, and implemented a warhead fuze modification and software update that increases shallow water performance, giving the Front Line greater operational flexibility and improved weapon safety". Award for "integrating an insensitive munition warhead onto the Sting Ray Torpedo, which they managed three months ahead of schedule, including extensive trials and qualification tests".



Products

- Sting Ray lightweight torpedo
- Spearfish heavyweight torpedo
- And more

