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## Bundeswehr successfully concludes laser weapon trials at sea

After integration of the laser weapon demonstrator (LWD) onboard the German frigate "SACHSEN" in June 2022, the trials of the LWD at sea have successfully been completed. Responsible for development and construction as well as the support during the trials that have been planned and organised by the Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw), is the High-Energy Laser Naval Demonstrator Working Group, or ARGE, consisting of MBDA Deutschland GmbH and Rheinmetall.

During the trials with overall six campaigns lasting nearly a year, the combat effectiveness of the laser weapon demonstrator, or LWD, has been proven in increasingly complex scenarios under realistic operating conditions against different target types. This included all aspects from detection and tracking (including highly agile targets); the interplay of sensors, command and weapon engagement systems and effectors; possible rules of engagement; and of course the successful engagement of targets with a high-energy laser beam.

The LWD has performed more than a hundred test firings onboard the Sachsen and proved that a laser is capable of successfully engaging targets in a maritime environment. At the end of the trials, the LWD's capabilities were successfully demonstrated at two VIP days in front of high-ranking representatives of the Federal Office for Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw), the Germany Navy and Army as well as the Bundeswehr Office for Defence Planning (PlgABw), which among other things including shooting down a drone. Also, representatives of the British, Netherlands and Norwegian Navy participated during the demonstration. The huge success of the test campaign was the outcome of an excellent cooperation between BAAINBw incl. its subordinate detachments, the German Navy and especially the crew of the frigate "SACHSEN" and the ARGE.



Following nearly a year of tests, BAAINBw and the defence industry have gained valuable knowledge into the operational possibilities, performance capabilities and development potential of high-energy laser effectors. The demonstrator is currently undergoing detailed examination, after which it will be transferred to Bundeswehr Technical Centre 91 in Meppen. The test results and subsequent analysis will be used for minimizing risks in a possible next phase, i.e., the development of an operational laser weapon system.

## ► Key facts

- Integration and testing of laser weapon demonstrator onboard the German frigate SACHSEN successfully completed
- More than 100 test firings
- Various scenarios staged under realistic conditions
- Effective cooperation between BAAINBw, the German Navy, MBDA Deutschland GmbH and Rheinmetall

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The prerequisites for the development of a first laser weapon have generally been set. Both companies have launched internal preparations for the development phase within their own field of responsibility.

Complementing gun-based systems and guided missiles, an operational laser weapon system lends itself particularly to countering the threat from drones, drone swarms, speedboats and possibly missiles at close to very close range. In future, moreover, it could undergo a performance upgrade for destroying supersonic missiles, rockets as well as mortar and artillery rounds.

**About MBDA:** MBDA is a unique multi-national European group, a world-leader in the field of complex weapon systems, playing a key role in keeping nations safe. Created in the spirit of international co-operation, MBDA and its 14,000+ employees work together to support the national sovereignty of France, Germany, Italy, Spain and the UK, and their allies worldwide. As an accelerator for innovation, MBDA is the only European group capable of designing and manufacturing complex weapons to meet the full range of current and future operational requirements of the three armed forces (land, sea and air). Airbus (37.5%), BAE Systems (37.5%) and Leonardo (25%) jointly own MBDA.

**About Rheinmetall:** A publicly traded company headquartered in Düsseldorf, Germany, Rheinmetall AG is an integrated technology group. Today it is leading exponent of the international defence industry as well as a driver of forward-looking technological and industrial innovation in the civil sector. Rheinmetall AG consists of five divisions: Vehicle Systems, Weapon and Ammunition, Electronic Solutions, Sensors and Actuators, and Materials and Trade. Based at 131 locations worldwide, the Group's 28,000 employees generated sales in 2022 of around €6.4 billion. Rheinmetall AG has been listed on Germany's DAX index of forty blue chip companies since March 2023. Rheinmetall Waffe Munition GmbH, a component of the Group's Weapon and Ammunition division, oversees Rheinmetall's high-energy laser activities.