**Press Release January 2024**

**Collaboration Between Academia and Industry Earns Blue Homeland a Critical Local System**

*STM and the Bahçeşehir University have collaborated in the development of Türkiye’s first “CTD Probe" system using wholly local and national resources. The probe will be used to collect data on the physical properties of seawater onboard oceanographic research and naval platforms. The CTD Probe System, which has succeeded all necessary environmental, factory acceptance and field tests, can now be used for national and international underwater military and scientific projects.*

STM Savunma Teknolojileri Mühendislik ve Ticaret A.Ş., which develops advanced and national solutions as a key player in the Turkish defence industry, has successfully concluded another important project involving the development of a critical system, previously not designed and manufactured in Türkiye, as an output of a collaboration between academia and industry.

Based on its experience acquired through in naval projects as part of an academia-industry collaboration in R&D since 2012 with Bahçeşehir University (BAU) &BAU İnovasyon ve Danışmanlık A.Ş.(BAUMIND) – a subsidiary of Bahçeşehir University – STM has designed the CTD Probe System to operate in the most challenging conditions in all marine environments, with a robust structure, reliable and accurate sensors.

The environmental, factory acceptance and field tests of Türkiye’s first Conductivity, Temperature, and Depth (CTD) Measurement System, which is one of the most widely used systems onboard military surface/underwater platforms and unmanned marine vehicles engaged in oceanographic scientific research activities in the field, have been successfully completed under the R&D project that was carried out using domestic resources. The product has now been into service in the market.

**Critical Importance for Submarines**

"Conductivity", "Temperature" and "Water Pressure" within the water column are the basic physical properties of seawater and are measured by precise sensors on the CTD System as real-time, while "Salinity", "Specific Gravity of Water" and "Sound Speed" at a specific depth is calculated by the built-in processor unit. The CTD data is used to establish underwater sound propagation patterns, used in performance modeling of sonar systems.

Unlike similar systems in the world, the CTD Probe System provides real-time orientation information about both the system itself and the platform to which it is integrated by means of its 3-axis inertial measurement unit.

**Manufactured Using Domestic and National Resources**

Stressing the importance of a qualified workforce and R&D for the defence sector, STM General Manager Özgür Güleryüz said: “At STM, we attribute great importance to collaboration between academia and industry for the training of qualified human resources and the design and production of critical technologies. The CTD Probe System, which we have developed jointly with Bahçeşehir University, is a valuable result of such a collaboration. We take pride in having developed such a critical system, which has not been designed and manufactured in Türkiye before, using national resources and in cooperation with academia."

Stating that the CTD Probe had passed through a series of major tests, Güleryüz said:

“The Hydrostatic External Pressure Test, which is one of the most decisive environmental tests for products such as ours, was completed at the facilities of Gölcük Shipyard Command under the General Directorate of Shipyards, which is an accredited institution. It has now passed the field tests successfully and secured a place among the licensed products developed by STM. Before the culmination of this initiative of STM, CTD probes had to be imported from abroad in connection with various domestic and international projects, and there was an additional dependence on foreign suppliers for the periodic calibration of sensitive sensors. It is our aim to see our domestically developed CTD Probe system in use in numerous domestic and international projects, including scientific research activities, but especially in projects carried out by Naval Forces Command in the near future. I congratulate the talented STM and BAU teams who have contributed to the project.”

**STM CTD Probe System Movie:** <https://we.tl/t-D8FJihZt7P>

**About STM**

STM has been serving the Turkish defence sector for over a quarter of a century in such areas as engineering, technology and consultancy, working in fields that are critical for Türkiye and its allies. It applies its advanced capabilities and technologies to a broad range of strategic fields, ranging from naval platforms to tactical mini UAV systems, from satellite works to cybersecurity, and from big data analytics to artificial intelligence applications.

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