

BIO-SEA PREVENTS ACCESS TO CYBER HACKERS LOOKING FOR AN ENTRY POINT INTO SHIP SYSTEMS

French UV-based water treatment specialist BIO-UV Group has developed state-of-the-art cyber security software for its BIO-SEA ballast water treatment system ahead of two IACS Unified Requirements set to enter into force next year.

Like any networked system or control software onboard ship, the ballasting process, including the treatment system, can be susceptible to a cyber attack, with hackers looking for an entry point to a vessel's Operational Technology (OT) systems.

Concern is such that the International Association of Classification Societies (IACS) adopted in 2021 two new URs to increase the cyber resilience of ships. [UR E26](#) and [UR E27](#) will be applied to new ships contracted for construction on and after 1 January 2024.

The requirements are twofold: to ensure the secure integration of equipment into the vessel's network throughout its operational lifespan; and to make the interface between users and computer-based systems/equipment more resilient.

"This could be a problem for legacy systems," said Charlène Ceresola, Project manager, BIO-UV Group. "It's not the case with a [BIO-SEA](#) unit, but older ballast water treatment systems can be susceptible to a cyber-attack. If the ballasting system is hacked and pumps operated remotely, ship stability is at risk; a ship could sink, and lives lost. It's much more than simply an environmental threat,"

Ceresola said: "We are following these guidelines and have developed greater cyber secure functions to our software ahead of the requirement. In an increasingly connected and digitised world, every component onboard ship has to be cyber secure."

BIO-UV Group completed testing of the new cyber secure function in 2022, with full type approval expected later this year.

"Software development forms a key part of our commitment to going beyond compliance", said BIO-UV Group's Maritime Division, BIO-SEA Business Director, Maxime Dedeurwaerder.

"In terms of development, what is changing for the industry now is the need for more advanced solutions for remote maintenance; solutions for integrating BWTS with different cabling configurations; and solutions for different water conditions and UV dosage rates. The refinements we are making are not part of the Convention but will help operators better manage the ballasting process."

As the global BWTS market matures and moves from an acquisition and supply market to one of support and service, BIO-UV Group has seen increased focus on system integration and engineering.

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Pictures/Captions:



Legacy ballasting systems could be susceptible to cyber-attack, warns BIO-UV Group

About BIO-UV Group

For more than 20 years, BIO-UV Group has been designing, manufacturing and servicing ultraviolet light (UV-C), ozone, AOP and salt electrolysis water treatment systems for a multitude of industrial, residential and municipal applications. In 2011, it added the treatment of ships' ballast water to its range. The company's product range is designed and produced at its own purpose-built facilities across France and the UK, allowing the company to quickly respond to its customer's specific requirements.

A public-listed company since July 2018, BIO-UV Group has a consolidated turnover of €51.5 million and a current workforce of 160 employees. More than 55% of the group's sales are made in export markets with more than 30% in the ballast water treatment market.

<https://en.bio-uv.com/>

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