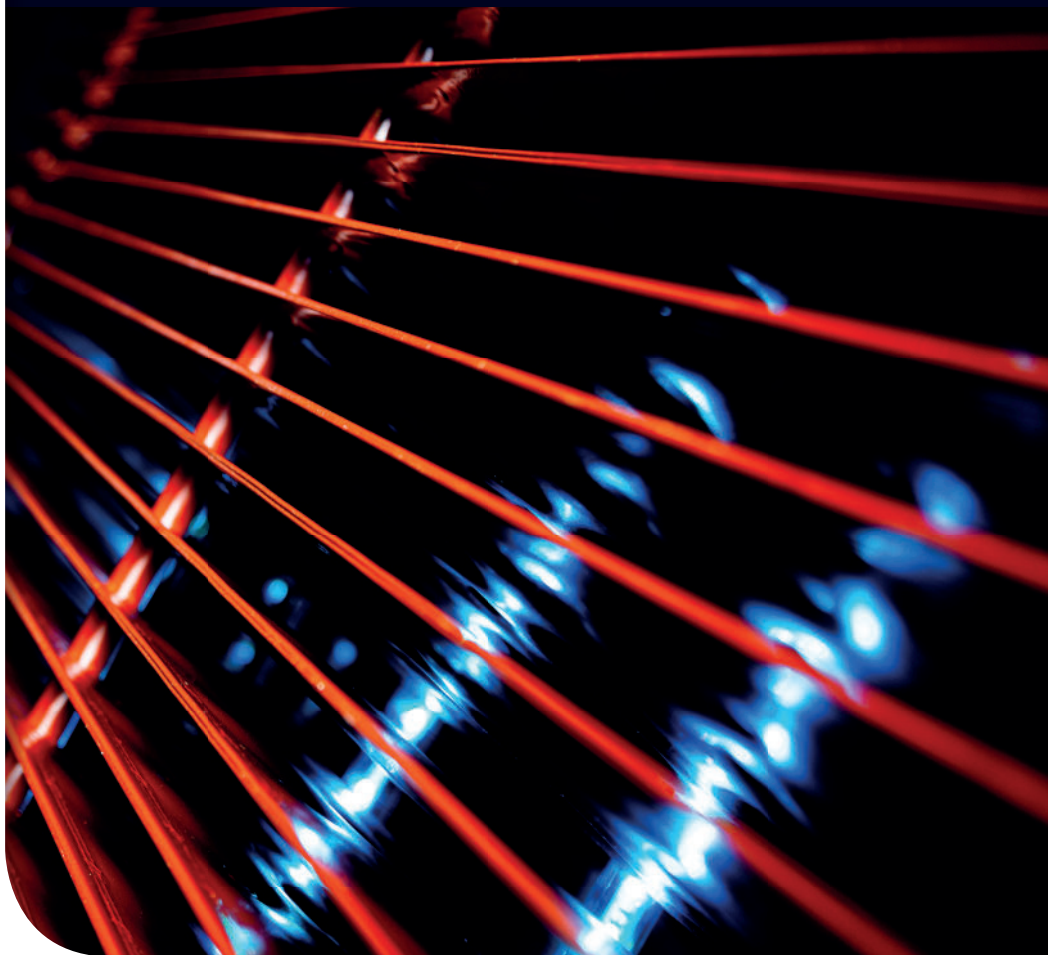


CORROSION

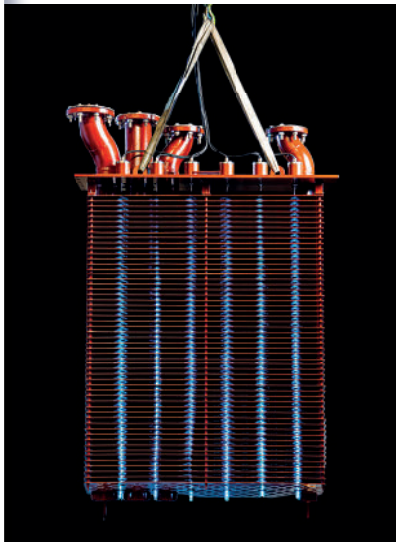


UV-C Cooler



UV-C Cooler

In an exclusive partnership with high-end partners including Philips, CORROSION has developed a non-chemical cooling and anti-fouling solution to meet the specific requirements of vessels. The cooling system, which features an integrated UV-C MGPS system, is both a highly efficient and environmentally friendly means to prevent marine growth thanks to the use of UV-C light.



CORROSION first began researching the use of UV light as a marine growth protection mechanism for traditional box coolers in 2015. As these tests revealed that such box coolers were not suitable for UV-C light protection, our research and technical teams started developing a revolutionary new type of cooler. The resulting solution has been a real gamechanger, combining two existing and proven technologies into one product: the UV-C technique, patented by Philips, to prevent fouling, and 'pillow plates' to provide optimal cooling.

Benefits

- State-of-the-art technology
- 24/7 protection for vessels
- Environmentally friendly
- Replacing lamps without dry docking
- Highly efficient heat transfer
- Extremely reliable and easy to maintain
- Meets future climate rules and regulations
- Retrofit to existing vessels



UV-C light

Ultraviolet light in its C spectrum is a green way of protecting the cooler against all types of marine growth. And what's more, it is highly effective in virtually all circumstances. The bulb itself is mounted in a quartz tube that can endure high pressure. This ensures that the risk of breakage is minimal.

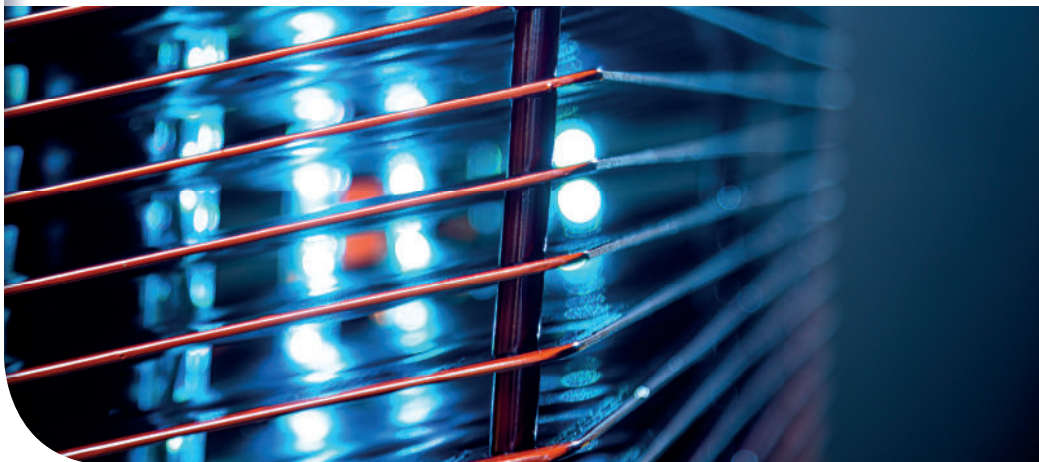
'An innovation that fits today's need for sustainable solutions'

Aldrich Tyto Manager Laboratory

The UV-C light used in this system breaks down the cell structure and DNA of all the different types of fouling which tend to settle on pillow plates or in the direct surroundings of pillow plates. But because the UV-C coolers are mounted inside the sea chests, the UV-C light does not damage organisms outside of the sea chest. In addition, the sea chest areas within the range of the UV-C light also remain free of fouling!

Pillow plate UV-C Cooler

The UV-C pillow plate cooler can endure rough circumstances at sea. The coolers are installed in the sea chests with an inlet and outlet grid. When the vessel is sailing, seawater enters through the inlet grid and passes through the pillow plates. Here the cooling takes place and the heated seawater then exits the sea chest through the outlet grids. When the vessel is stationary, cooling is achieved by a natural convection flow due to the sea water close to the pillow plates increasing in temperature. The heat transfer is achieved by a controlled flow of cooling liquid through the pillow shaped plates. The pillow plate heat transfer technique has a higher efficiency than the currently used tube technique. This pillow plate technology is a proven technique which has been used for decades in other industries.



UV-C Cooler construction materials

The cooler is made of carbon steel and coated with a UV-resistant epoxy phenolic coating. This combination, together with the use of sacrificial anodes, ensures that no galvanic corrosion will occur, even if the coating is damaged.

Retrofit

The UV-C Coolers are not only the best solution for new building vessels but are also interchangeable with traditional box coolers. Due to their higher efficiency, the dimensions of the UV-C Coolers will fit in the existing available space. The in- and outlets on top of the cooler are tailor-made to fit the original piping without needing major adjustments.

Finally, this UV-C Cooler also offers a solution against fouling for vessels that are laid up for extended periods of time.

Contact us

For further information, please visit our website corrosion.nl. You can also reach us by telephone at: +31 (0) 79 593 1295.

"We hope that this brochure has been of interest to you. We would be happy to answer any questions you may have or work with you to see whether UV-C meets your specific needs."



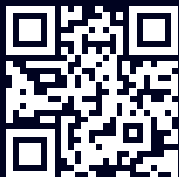
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