Biofouling Prevention on Ship Hulls

- Prevent biofouling formation
- Lower fuel costs
- Safe for the marine ecosystem

LG SONIC
Leading in ultrasonic algae control

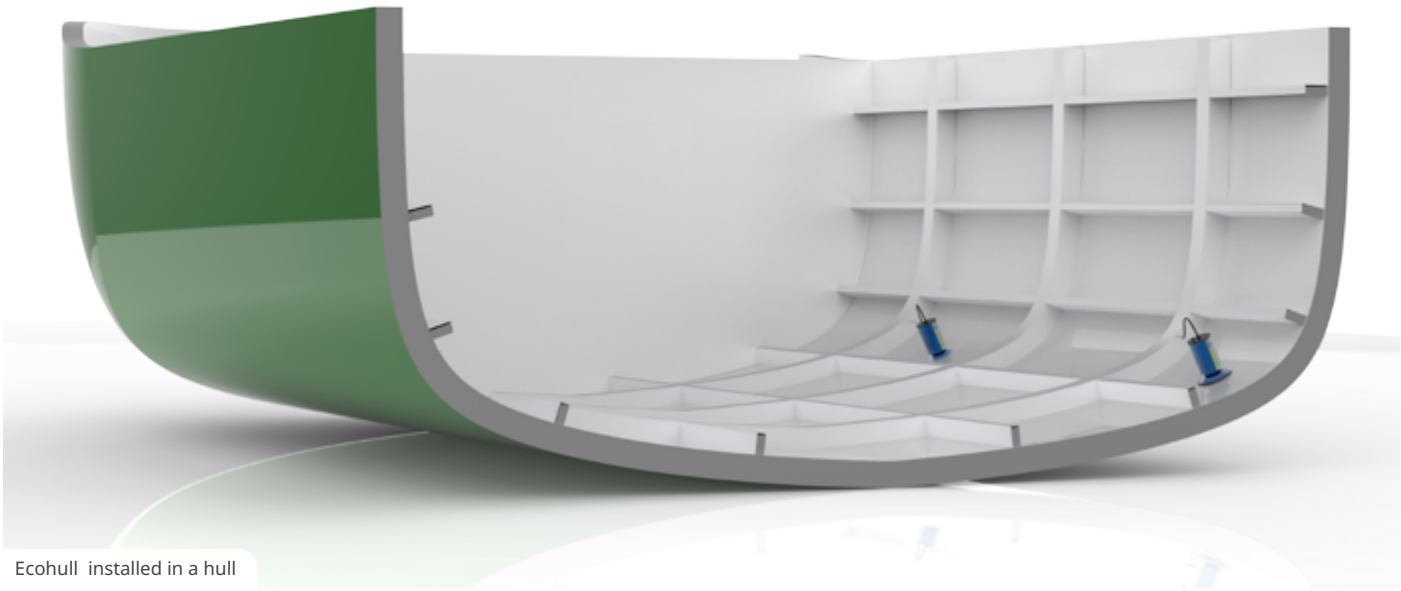
Biofouling Prevention on Ship Hulls

The Ecohull is a cost-effective solution to prevent the growth of biofilm on ship hulls through the use of ultrasonic sound waves.

- **Prevent biofouling formation**
- **Lower fuel costs**
- **Safe for the marine ecosystem**

Biofouling Prevention with Ultrasound

Continuous ultrasonic sound waves prevent the accumulation of fouling by driving biomolecules away.



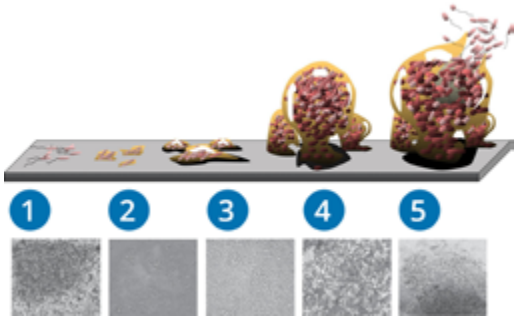
Ecohull installed in a hull

Each Ecohull system has a 10m diameter ultrasonic treatment range

How Ultrasound can Prevent Biofouling Formation

Specific ultrasonic frequencies, waveforms and amplitudes can be utilised to directly target biofilms. Benefits of the ultrasonic treatment:

1. Prevent bacteria from settling on a surface in the primary stages of biofilm formation
2. Alter the structure of an existing biofilm, eventually breaking it down
3. Control potential algae attaching to a biofilm



Five stages of biofilm formation

Learn more about ultrasound

LG Sonic Biofouling Prevention Products

Ecohull

The Ecohull prevents the growth of biofouling on ship hulls. The solution is to install one or multiple systems that transmit specific ultrasound effectively through the material.

- Multiple ultrasonic programs for effective biofouling prevention
- Ultrasonic treatment allows for the reduction of chemical consumption
- No use of cavitation for a longer product lifetime

Learn more about the Ecohull

No use of Cavitation

Some ultrasonic biofouling control solutions use cavitation to prevent biofouling, in which high-power ultrasound causes the formation of micro-bubbles that implode, causing intense heat pressure and the formation of hydrogen radicals. These radicals may kill bacteria and other organisms but they also cause oxidation reactions and may degrade anticorrosion layers. LG Sonic products are not based on cavitation.

Benefits of LG Sonic versus cavitation based products

- **Not harmful to marine life**
- **Adaptable ultrasonic frequencies for effective treatment**
- **No side effects on the anti-corrosion layer**
- **Longer product lifetime**
- **Longer treatment distance**

The Ecohull allows for effective biofouling prevention without using cavitation

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