

INNOVATIVE SOLUTION FOR FOULING PREVENTION

EXUS
Fouling prevention
by ultrasound guided waves



- Easy to install
- Less fuel costs
- Reduce maintenance costs
- Reduce CO2-emission
- Eco-friendly (not toxic)

IN THE SHIPPING INDUSTRY THEY FACE MANY BIOFOULING ISSUES



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FOULING WILL IMPACT **PROFIT** AND **ENVIRONMENT**



FOULING WILL IMPACT:

- ↘ **FUEL COST**
- ↘ **MAINTENANCE COST**
- ↘ **DOWNTIME COSTS**
- ↘ **ANTI-FOULING PAINT COSTS**
- ↘ **CO2 EMISSION**



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NEW ANTIFOULING SOLUTION:

**ULTRASONIC
GUIDED WAVE TECHNOLOGY**

EXUS
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EUROPEAN
RESEARCH AND DEVELOPMENT



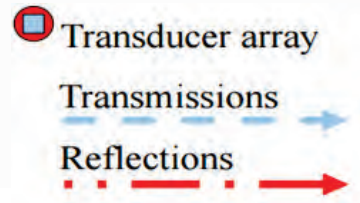
Brunel
University
London



Lloyd's
Register

CleanShip - European Research Project - funded by EU FP7

SOUNDWAVES WILL REACH ENTIRE HULL



Ultrasonics With guided waves

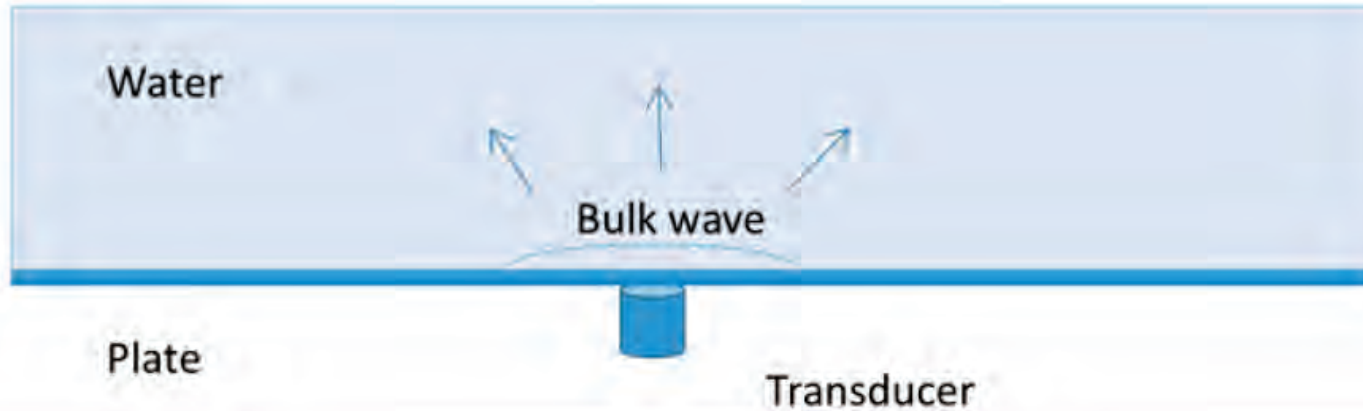


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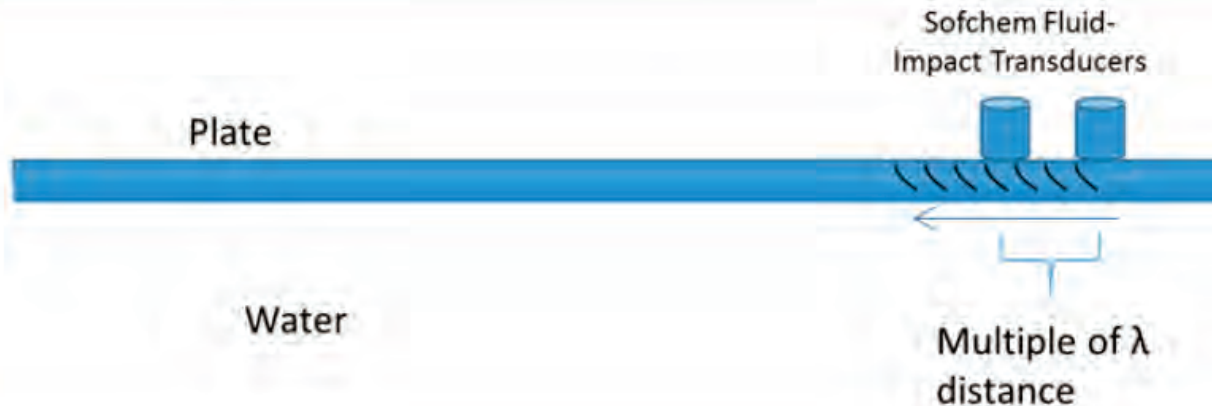
Guided Waves Technology: What is it?

Common Ultrasonic Anti-fouling



- ❖ High energy dispersion into the water
- ❖ Low efficiency
- ❖ Wasted energy

Ultrasonics With guided waves



- ✓ The ultrasound waves travel along the metallic structure
- ✓ Fully-activated hull
- ✓ No blind spots
- ✓ High efficiency
- ✓ Limited energy dispersion

The ExUS-GW product



Dual-frequency transducers



Patent Pending: CH 2561-122-61230

Double-hull transducer tensors



Patent pending (CH)

Waterproof IP-69 transducer housing for hull and tanks



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SAVE MONEY

REDUCED MAINTENANCE COSTS

- LESS MAINTENANCE AND OPERATING COSTS
- DECREASE DRY-DOCK VISITS (NO SCRAPING / REPAINT)
- NO EXPENSIVE ANTIFOULING PAINT
- NO PAINTING MANPOWER



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EXUS

Fouling prevention
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SAVE MONEY

REDUCED FUEL COSTS

➤ MORE SPEED DUE TO LESS FOULING



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SAVE THE ENVIRONMENT

ECO FRIENDLY

- CHEMICAL-FREE TECHNOLOGY
- COMPLETELY HARMLESS
TO HUMAN AND MARINE LIFE
- FUEL CONSUMPTION REDUCTION
- LESS CO2 EMISSIONS



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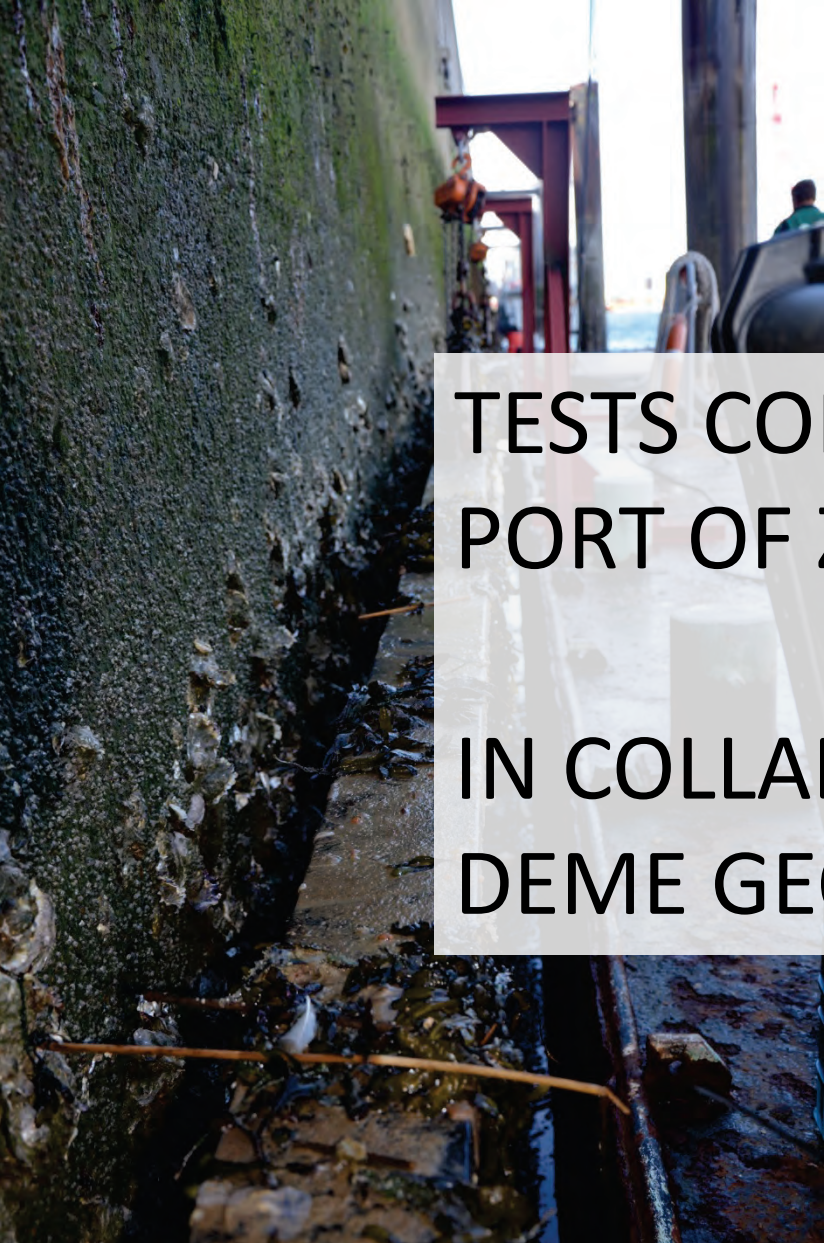
NEW ANTI-FOULING SYSTEM =ADDED VALUE

- NO/LESS FOULING - BY ONLY USING NORMAL PAINT AND ULTRASONIC AF SYSTEM
- EASY TO CLEAN THE HULL

AMAZING TEST RESULTS

NORTH SEA TEST PLATE 24 MTRS





TESTS CONDUCTED IN JULY 2016 AT THE PORT OF ZEEBRUGGE, BELGIUM

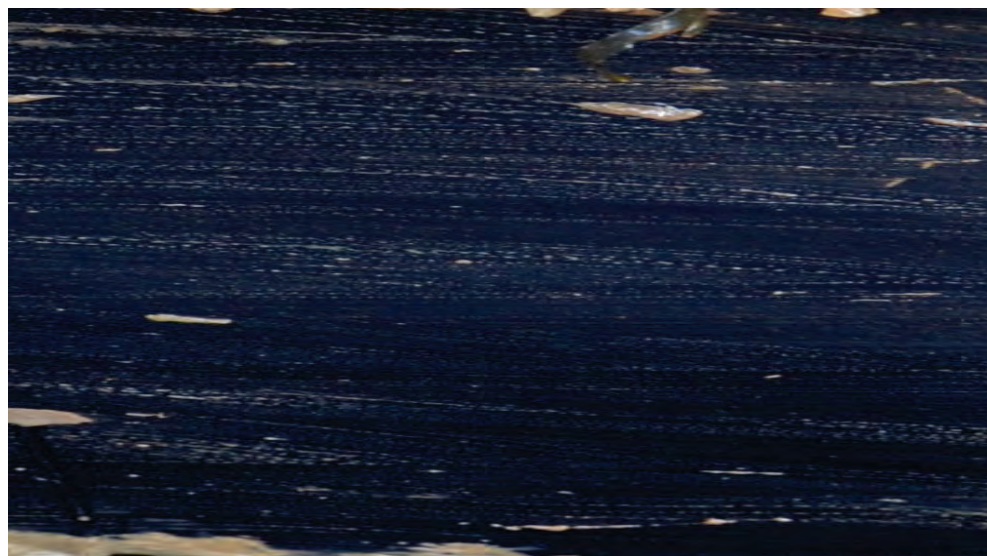
IN COLLABORATION WITH DEME GEOSEA GROUP



TEST PLATE **WITHOUT** NEW
ANTIFOULING SYSTEM



TEST PLATE WITH NEW
ANTIFOULING SYSTEM





EXUS

Fouling prevention
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AMAZING TEST RESULTS

NO FOULING AFTER 1 MONTH!



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International Network



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Contact us for more information

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