



**AkzoNobel's marine coatings business, International®, has developed the first carbon credits methodology for international shipping, which recognises and financially rewards shipowners for investing in clean technology.**

### CONTEXT & OBJECTIVES

Whilst shipping is the most efficient mode of transportation, the world fleet still emits around 950 million tonnes of CO<sub>2</sub> annually, equating to around 2.7% of global CO<sub>2</sub> emissions. In an industry where pressures to improve sustainability are central to competitiveness, profitability and compliance, ship-owners need to look at ways to increase operational and environmental efficiencies. Clean technology is an effective way of delivering this, however, the tough global economic climate, and lack of liquidity often makes it hard for ship-owners to justify the investment.

AkzoNobel has developed the shipping industry's first carbon credits methodology, which incentivises and financially rewards ship-owners for investing in sustainability.

By rewarding ship-owners who use clean technology to improve their environmental performance, AkzoNobel's aim is to support the shipping industry in cutting its overall environmental impact and specifically its greenhouse gas emissions output. In doing so, ship-owners will get several benefits that include:

- Assistance with cash-flow through regular carbon/cash credits.
- Operational cost reduction for fleet.
- Voluntarily offset other sources of carbon emissions.
- Transferable, can be donated for example to charitable foundations.
- Sustainability leadership and visibility.

### SOLUTION

AkzoNobel's carbon credits methodology is based on ship-owners converting existing vessels from a biocidal anti-fouling system, to a premium, biocide-free advanced hull coating such as AkzoNobel's award



winning Intersleek® range. The company's latest product, Intersleek®1100SR, is the industry's first biocide-free, slime release coating featuring patented fluoropolymer technology. Its tailored surface chemistry influences settlement and adhesion of organisms that make up slime.

## MEMBER CASE STUDY:

# AkzoNobel



As a result, vessels benefit from reduced drag, improved fuel efficiency and reduced CO<sub>2</sub> emissions. In addition, Intersleek®1100SR generates a 40% reduction in paint volume and 60% reduction in emissions for first time application with further savings at future dockings.

The carbon credit methodology, has been developed in conjunction with the Gold Standard Foundation, and has been verified in accordance with the UNFCCC's Clean Development Mechanism by the Independent Designated Operating Entity (DOE).

Having this verification and association with respected and trusted organisations, ensures that ship-owners and operators that their eco-efficiency investments and subsequent CO<sub>2</sub> reduction is based on accurate and reliable fuel saving information. Furthermore, this addresses the long-standing scepticism around the tangible returns generated by eco efficient technologies.

The methodology enables ship-owners to generate carbon credits based on the amount of CO<sub>2</sub> that they reduce through the implementation of sustainable hull coatings such as Intersleek, International®'s eco-premium product range and holder of the largest track record for foul release coatings within shipping. The carbon credits are awarded annually based on the amount of CO<sub>2</sub> reduced. The earned credits can then be used in a number of ways:

1. Sold to generate cash.
2. Passed onto stakeholders to offset their emissions.
3. Credits can be used to voluntarily offset other sources of CO<sub>2</sub> emissions within an organisation.

The process to enrol and claim carbon credits is straight forward as illustrated in the flowchart.



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### OUTCOMES

The first carbon credits issued through AkzoNobel's scheme were awarded in February 2016 to two ship-owners including Neda Maritime Agency Co Ltd, a leading Greek tanker and bulker owner.

On average, each of the 16 vessels included in the first issue achieved savings of over 1,250 tons of fuel and 4,000 tons of CO<sub>2</sub> per year, resulting in the award of 126,785 credits by the Gold Standard Foundation equating to more than \$500,000. Each carbon credit awarded represents the removal of one tonne of CO<sub>2</sub> from the atmosphere.

Based on the average 10% CO<sub>2</sub> savings recorded in this first carbon credits issue, the full fleet of over 4,500 vessels currently using Intersleek and eligible for carbon credits have already achieved total annual CO<sub>2</sub> reductions of 17 million tons of CO<sub>2</sub>. That figure represents around 1.5% of the global emissions from shipping, as estimated by the 3<sup>rd</sup> IMO Greenhouse Gas Study.

**126,785 verified carbon credits represents avoidance of emitting**

**126,785**  
TONNES OF CO<sub>2</sub>

**2,400**  
TONNES OF SO<sub>2</sub>

**2,000**  
TONNES OF NO<sub>2</sub>

**400**  
TONNES OF BLACK CARBON

When combined with innovative finance models, such as the carbon credits methodology, AkzoNobel can offer not only an important tangible demonstration to ship-owners of the rate of return on investment from eco efficiency technologies, but also a means to turn energy efficiency into bottom line benefits. These benefits, in combination with the fuel savings, paint volumes reductions and emissions savings generated by hull coatings such as Intersleek®, will unlock previously unattainable savings and associated competitive advantage for ship-owners and operators.

### CONCLUSION

If all the world's 35,000 commercial ships were to retrofit eco-efficient technologies such as Intersleek®, the potential avoided CO<sub>2</sub> emissions could amount to over 100,000,000 tonnes per year. That's 10% of the annual global CO<sub>2</sub> emissions output from shipping.

To qualify for carbon credits, eligible ship-owners and operators should complete the following three steps:

1. A vessel needs to be converted from a traditional biocide-containing antifouling to a biocide free antifouling such as Intersleek during routine dry-docking.
2. Ship-owner/operator provides data for whole docking cycle prior to and after the application of Intersleek.
3. Data analysed and a claim submitted to the Gold Standard Foundation

### More information

[www.international-marine.com/CarbonCredits](http://www.international-marine.com/CarbonCredits)

[www.international-marine.com/Intersleek](http://www.international-marine.com/Intersleek)