Carbon Credits: A Marine Industry First

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Regional Marketing Manager
Carbon Credits : A Marine Industry First

International Paint have worked with The Gold Standard to develop the first approved methodology to generate carbon credits for the marine industry

• The methodology is both unique and pioneering.
  – First for the marine industry
  – First to consider moving articles (ships)
  – First to go beyond geographic boundaries

• Now recognised as the “Best Offsetting Project 2015*”

*Environmental Finance Awards 2015
Carbon Credits: A Marine Industry First

Generation of carbon credits means that emission savings from green technologies are independently verified

- Reductions in greenhouse gas emissions and therefore fuel savings from retrofitting efficiency improving technologies can be independently verified
- Ship operators are financially rewarded for emission reductions
- New source of finance in a difficult market

To qualify for carbon credits ship owners are required to upgrade their vessels from a biocide-containing traditional antifouling to Intersleek® technology

- The emission-saving of Intersleek® is determined and directly related to the amount of carbon credits generated
  - 1 tonne CO₂ saved = 1 carbon credit
Who Are The Gold Standard?

The Gold Standard Foundation is a UN-mandated organisation for validating and issuing carbon credits

- Created in 2003 by the Worldwide Fund for Nature and now used by over 80 NGOs to create carbon credit funding for green initiatives
- Remit is to develop and approve carbon reducing methodologies and issue verified carbon credits
- The governance of the Gold Standard is under the Kyoto Protocol United Nations Framework Convention on Climate Change (UNFCCC) Clean Development Mechanism (CDM)
Why The Gold Standard?

International Paint chose to develop a methodology with The Gold Standard due to their trusted status in the carbon markets

- The eligibility requirements for The Gold Standard perfectly matched the environmental credentials of Intersleek®, which have been validated through an externally audited Eco-Efficiency Analysis
  - **Environmental**: Protecting the environment through preventing the release of biocides
  - **Sustainable**: Long-term protection delivered using fewer resources
  - **Energy Reduction**: Proven fuel saving capabilities

- Carbon credits generated through an approved Gold Standard methodology command higher market prices
The Process of Claiming Carbon Credits

The outline process for generating carbon credits is

How does the Process work?

Ship converts to Intersleek® technology
The Process of Claiming Carbon Credits

The outline process for generating carbon credits is

**How does the Process work?**

- Ship converts to Intersleek® technology
- Ship owner/operator provides data for whole docking cycle prior to, and after the application of Intersleek®
The Process of Claiming Carbon Credits

The outline process for generating carbon credits is

**How does the Process work?**

- Ship converts to Intersleek® technology
- Ship owner/operator provides data for whole docking cycle prior to, and after the application of Intersleek®
- Data analysed and a claim submitted to The Gold Standard
The Process of Claiming Carbon Credits

The outline process for generating carbon credits is

*How does the Process work?*

Independent auditor verifies analysis
The Process of Claiming Carbon Credits

The outline process for generating carbon credits is

How does the Process work?

- Independent auditor verifies analysis
- The Gold Standard validates and issues carbon credits
The Process of Claiming Carbon Credits

The outline process for generating carbon credits is

**How does the Process work?**

1. Independent auditor verifies analysis
2. The Gold Standard validates and issues carbon credits
3. Credits available

All products supplied and technical advice or recommendations given are subject to our standard Conditions of Sale.
The Methodology

The methodology is based on data received from ships which is then translated into greenhouse gas emission savings.

- A baseline emission level is determined prior to the application of Intersleek®.
- The same data source is then used to determine the emission savings after the application of Intersleek®.
Vessel Eligibility

A vessel becomes eligible when it is converted from a biocidal antifouling to Intersleek®

- Carbon credits can be claimed until the vessel has been recoated
- Vessels with intermediate dockings (2 or 3 year dock cycles) can continue to claim for each dock cycle until they are recoated

Vessels become ineligible for claiming credits if

- The Intersleek® is recoated
- Any other energy-saving device is installed (e.g. PBCF, Mewis Duct)
Participation in the Carbon Credit Project

In order to participate in the project, the vessel operator simply has to agree to take part and share noon reports

- The methodology is based on noon reports so there is no requirement to install a monitoring system
- A standard contract will be agreed detailing data sharing and transfer of carbon credits
Example

Vessel data is analysed and statistically tested to give annual emission savings and hence amount of carbon credits for claim

- Example vessel taken from the first project submission (Tanker)
- Total claim ~29,000 carbon credits

Annual Emission Savings after Application of Intersleek®

<table>
<thead>
<tr>
<th>Year</th>
<th>Emission Savings (tonnes CO₂ per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>11,491</td>
</tr>
<tr>
<td>2011</td>
<td>12,000</td>
</tr>
<tr>
<td>2012</td>
<td>14,191</td>
</tr>
<tr>
<td>2013</td>
<td>14,286</td>
</tr>
</tbody>
</table>
Example

Vessel data is analysed and statistically tested to give annual emission savings and hence amount of carbon credits for claim

- Example vessel taken from the first project submission (Ro-Ro)
- Total claim ~13,000 carbon credits

![Annual Emission Savings graph](image)

**Annual Emission Savings after Application of Intersleek®**

<table>
<thead>
<tr>
<th>Year</th>
<th>Emission Savings (tonnes CO₂ per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>4,678</td>
</tr>
<tr>
<td>2012</td>
<td>5,542</td>
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<tr>
<td>2013</td>
<td>7,750</td>
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</tbody>
</table>

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Intersleek® 1100SR – Carbon Credits

<table>
<thead>
<tr>
<th>CASE STUDY</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Vessel</td>
<td>Spes</td>
</tr>
<tr>
<td>Owner</td>
<td>Grimaldi Lines</td>
</tr>
<tr>
<td>Type</td>
<td>Pure Car Carrier</td>
</tr>
<tr>
<td>Size</td>
<td>16,802 DWT</td>
</tr>
<tr>
<td></td>
<td>Intersleek 1100SR applied to the whole underwater area in August 2013</td>
</tr>
<tr>
<td>Fuel Savings</td>
<td>12% compared to Ultra SPC over the full docking cycle</td>
</tr>
<tr>
<td>Carbon Credits</td>
<td>4,230 awarded for Aug 2013 to June 2015</td>
</tr>
</tbody>
</table>
Use of Carbon Credits

Carbon credits generated from voluntary schemes are true carbon reductions and therefore reflect real environmental benefits

• Carbon credits can be:
  – **Retired** to offset greenhouse emissions (e.g. offices) to further enhance environmental profile
  – **Sold** to generate revenue
  – **Passed-on** to help offset the emissions of your customers

• Carbon credits generated will be shared with the ship operator
• Administration charges will be taken from the claim itself and the process will be cost neutral to the ship operator
Who Buys Carbon Credits?

Carbon credits from the voluntary market are purchased by companies wishing to offset their own or their customers’ emissions

- Examples of companies purchasing carbon credits are

<table>
<thead>
<tr>
<th>Company</th>
<th>Company</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>3i</td>
<td>ICAP</td>
<td>RSA Insurance</td>
</tr>
<tr>
<td>Aviva</td>
<td>Investec</td>
<td>Standard Chartered</td>
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<td>Barclays</td>
<td>Land Securities</td>
<td>BSkyB</td>
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<tr>
<td>British Land</td>
<td>Man Group</td>
<td>Pearson</td>
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<tr>
<td>Hammerson</td>
<td>Old Mutual</td>
<td>Tui Travel</td>
</tr>
<tr>
<td>HSBC</td>
<td>Royal Bank of Scotland</td>
<td>WPP</td>
</tr>
<tr>
<td>Imperial Tobacco</td>
<td>Reckitt Benckiser</td>
<td>Unilever</td>
</tr>
<tr>
<td>KLM</td>
<td>British Airways</td>
<td>UPS</td>
</tr>
<tr>
<td>DHL/Deutsche Post</td>
<td>Panasonic</td>
<td>Microsoft</td>
</tr>
<tr>
<td>Virgin Atlantic</td>
<td>Thai Airways</td>
<td>Qantas</td>
</tr>
<tr>
<td>Kuoni Worldwide</td>
<td>Brand-Rex</td>
<td></td>
</tr>
</tbody>
</table>

1 Sources – Carbon Retirement report “The State of the Voluntary Carbon Offsetting in the FTSE100” and Individual company disclosures
Project Status

The first carbon credit claim has successfully resulted in the issuance of over 126,000 credits

- Data from 16 vessels was analysed and emission savings of 126,000 tonnes of CO₂ have been quantified

- **126,000 carbon credits** have been issued to International Paint
- This represents 136,000 tonnes of **independently** validated and verified emission savings
- Or **40,000 tonnes** of independently validated and **verified** fuel savings
- This represents over **$8M** in fuel savings at today’s prices

  - Validation and verification by independent **UN-mandated organisations**
Project Status

Two customers have benefited from the first pilot project

- Greek Tanker operator has received \(~15,000\)
- Italian ferry and Ro-Ro operator has received \(~92,000\)
- Carbon credits are in the process of being sold through three brokerages with target price of $6 per credit
- Total claim value \(>750,000\)
Benefits to Marine Industry

The benefits of generating voluntary carbon credits to the Marine Industry are wide ranging

• Helps to remove technology investment barriers resulting from the owner/charterer relationship as the company which invests in the technology gets the benefit
• Externally validated fuel and emission savings
• Proven reduction in environmental impact
• Significant positive impact on the environmental image of shipping
• External source of revenue to help investment in green technologies
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