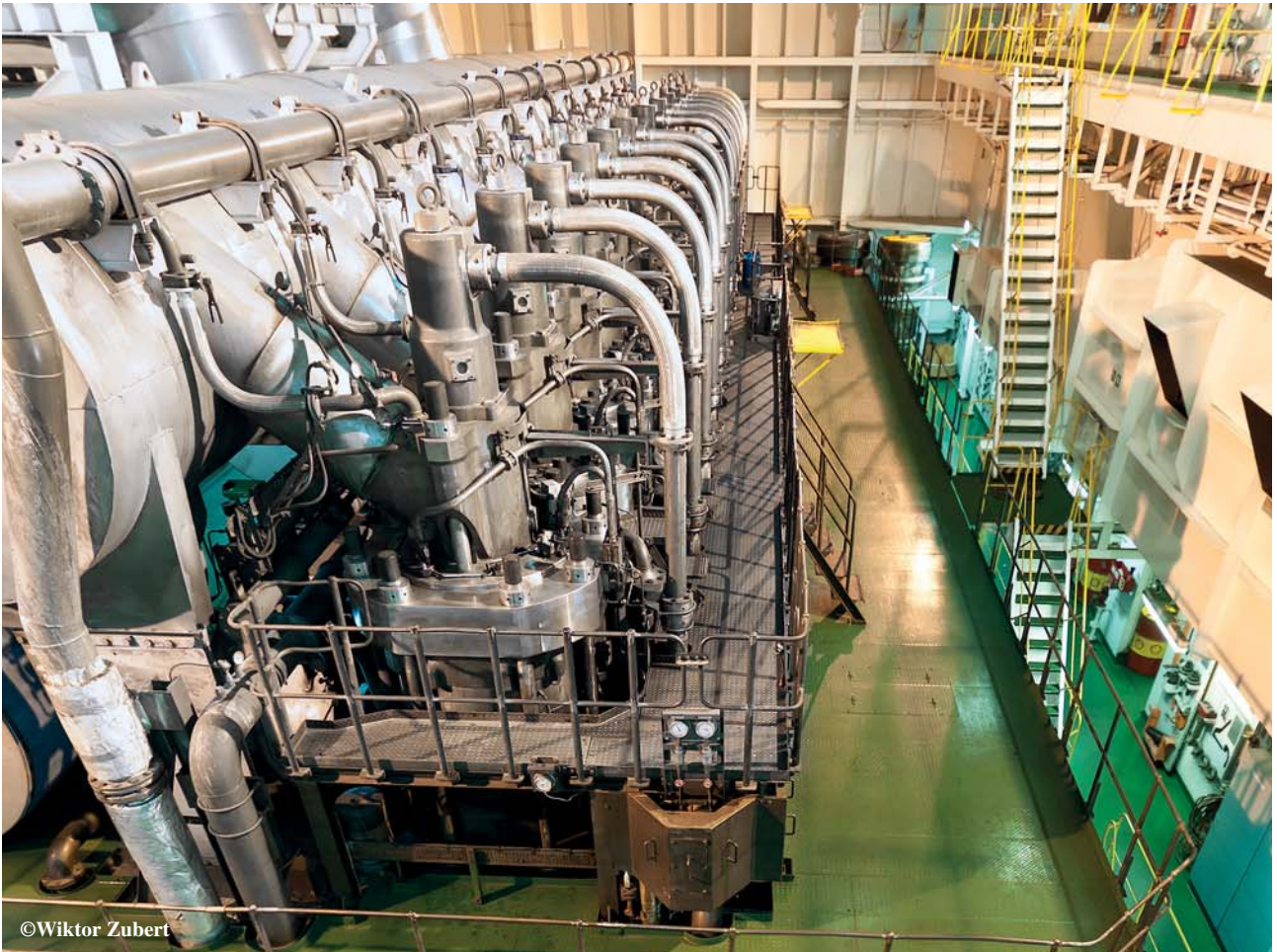




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# The only coating that gives your engine a break

**E**cospeed provides your vessel with long-term protection and dramatically improves the ship's performance.

An impermeable and extremely tough coating is combined with

an underwater cleaning system. This keeps the hull roughness at an optimum level and results in a major saving in fuel.

Ecospeed gives a very thorough and lasting defense against cavi-

tation and corrosion damage for a ship hull's entire service life. The coating comes with a ten year guarantee. No repaint will be needed during future drydockings.

**ecospeed**<sup>®</sup>  
HIGH PERFORMANCE HULL PROTECTION

Phone: +32 3 213 5318      info@ecospeed.be  
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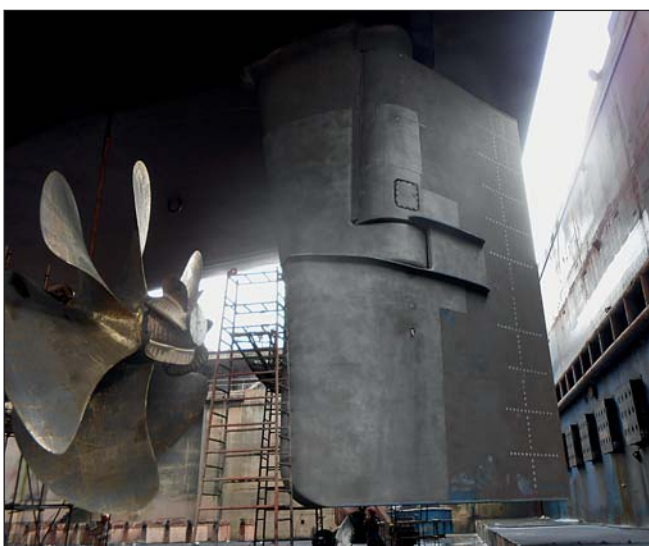
# Lasting rudder protection for wide range of vessels

**O**ver the last couple of months the rudders of fourteen ships were coated with Ecospeed special rudder coating at shipyards in China and the United Kingdom. Among the vessels treated were several container vessels, two ferries, a tanker, a bulker and a heavy lift vessel. More and more shipowners, operators and technical superintendents are finding that, when it comes to protecting a rudder from cavitation damage, Ecospeed rudder coating is the ultimate solution.

Most of these ships belong to different owners, but they all experienced the same problems. Cavitation corrosion damage had appeared on the rudders of their ships. Often a rudder is not given the proper protection against cavitation and the resulting erosion and corrosion damage. In those cases the financial consequences can be extensive for the owner. Ecospeed will prevent such damage from reoccurring on an



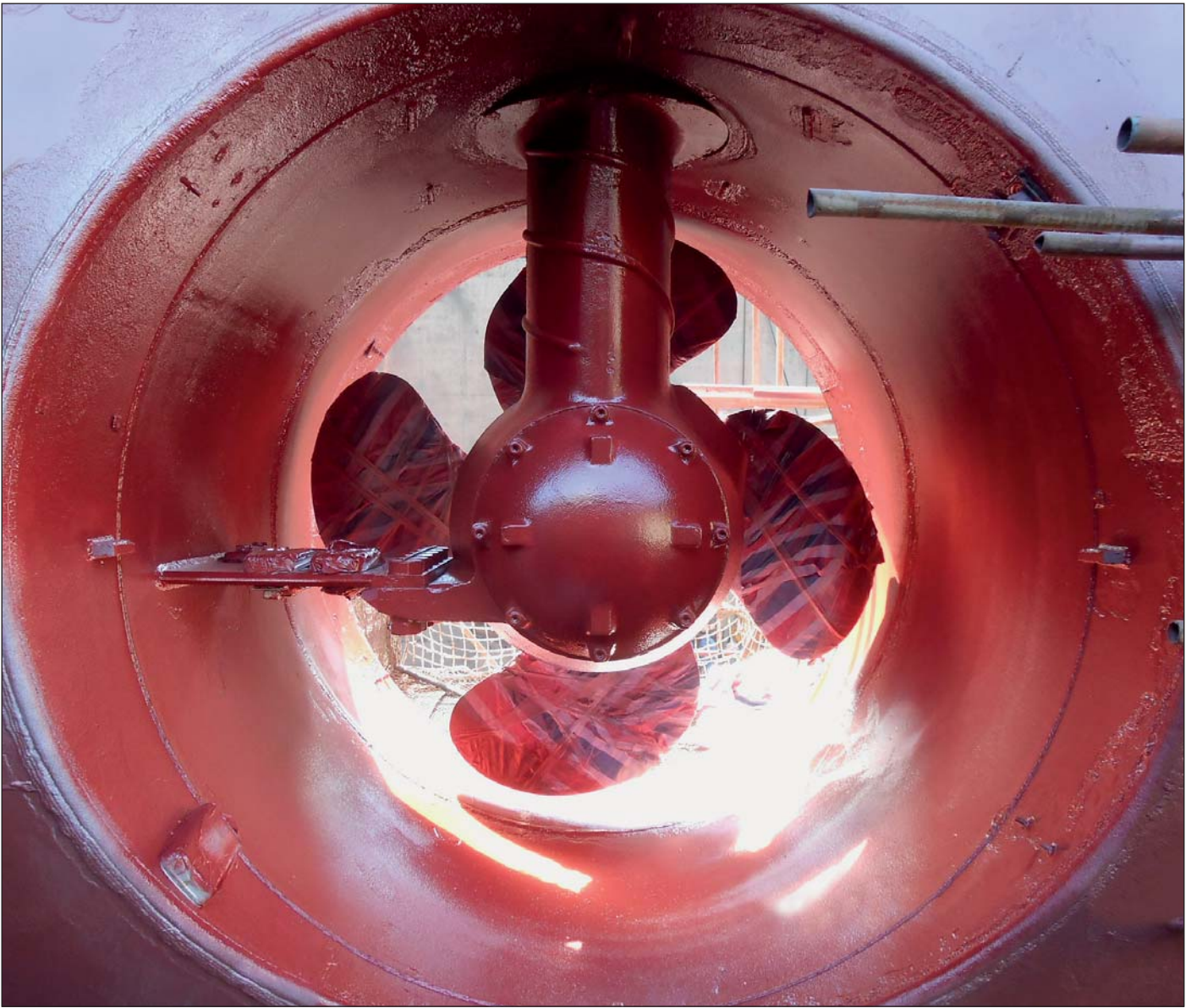
*Ecospeed is applied in two identical layers.*



*Rudder after surface preparation, ready for application.*



*Application of second layer.*



*The coating is also ideal for the protection of thruster tunnels.*

existing ship or can protect the rudder(s) of a newbuild vessel against cavitation and corrosion damage from the very start for the life of the vessel.

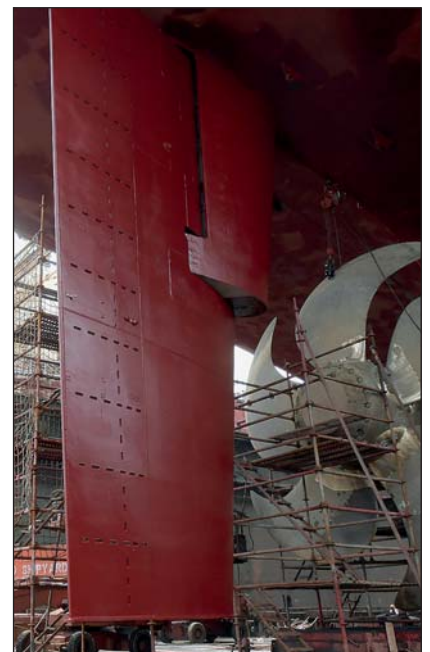
### **Lasting protection against cavitation damage**

The Ecospeed rudder coating can be applied to any type of rudder and will provide it with an impenetrable protective layer. At the same time its toughness and flexibility enable absorption of the forces that are produced by cavitation. This prevents the damage normally caused by this phenomenon.

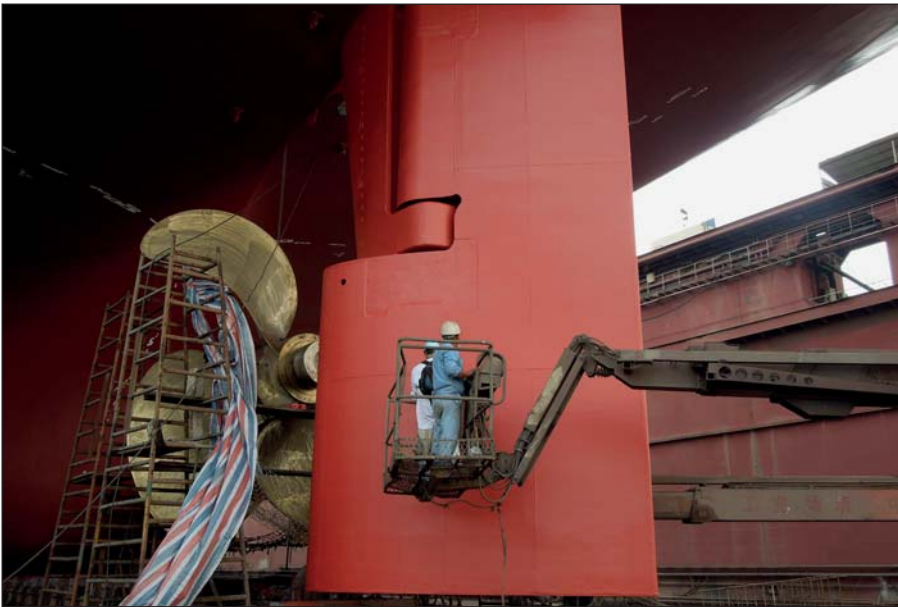
Tests in a flow channel, carried out in Grenoble, have confirmed that Ecospeed performs extremely well under severe cavitation. This has been backed up by many success stories. The rudder of the 195-meter container vessel, Marie Delmas, for instance, was still in excellent condition when the ship came into dry-dock after sailing for five years with Ecospeed.

### **Maximum performance for the entire service life**

With an Ecospeed application no repaint will be needed. Ecospeed is guaranteed for ten years. At most, minor touch-ups will be needed.



*The rudders of both newbuilds and existing vessels can be protected with Ecospeed.*



*No repaint will be needed during future drydockings.*



*Ecospeed will protect a rudder against cavitation and corrosion damage.*

Maintenance of the vessel's stern area can therefore be planned without having to take into account any coating or hot work on the rudder.

The smoothness attained by the coating also provides optimum hydrodynamic conditions. This allows rudders to operate at maximum efficiency. The ship's performance therefore remains stable at all times.

The investment in a coating system that offers full protection from day one is easily won back. This becomes very clear when one takes into account the costs of the temporary underwater repairs and the regular inspections required by a condition of class, not to mention the extra costs associated with rudder repair and recoating in drydock. For this reason a growing group of owners have Ecospeed rudder coating applied on the rudders of a large part of their fleet or have it included in the rudder specs of their newbuild vessels. These owners invest in the right coating system for protection because they know the long-term savings they will achieve.

More information on the effect of cavitation and some case studies can be found in Hydrex White Paper No. 6: Rudder cavitation damage solved, which is available for download for free at [www.shiphullperformance.org](http://www.shiphullperformance.org)

**KEEPING SHIPS  
IN BUSINESS**

# Canadian ice class ferry given lasting Ecospeed protection

Last June, the 88-meter ice class passenger ferry *Lomer-Gouin* was coated with Ecospeed on the Isle-aux-Coudres in Québec, Canada. The 4,233 gross tonnage vessel is owned by the Société des Traversiers du Québec and will be protected against damage from impact with ice while safely transporting passengers between the Canadian cities of Lévis and Québec.

Since 1971, the Société des Traversiers du Québec (STQ) has provided dependable and safe ferry services to the population of Québec and visitors. Today, the company's ferries oversee an extensive network that extends from Montreal to the Lower North Shore, to the islands-de-la-Madeleine.

*MV Lomer-Gouin* pays tribute to Québec's 13th premier, who later became lieutenant governor of the province. The vessel was built in the



*Application of second layer on ferry in Canada.*

inaugural year of STQ and like all other ships owned by the company undergoes a meticulous maintenance program. Regular and rigorous inspections give information to mechanics about the necessary tune-ups or repairs. Each ship also has systems designed to protect the environment, more specifically to treat liquid waste and oil.

While cutting across the St. Lawrence river, STQ ships hold out against the winds, the strength of the currents and the difficult conditions of ice. They adapt themselves to the tides. This allows the transport of thousands of passengers, vehicles and the distribution of tons of goods from one shore to the other, even in harsh winter conditions.

## Best possible protection against ice

The Ecospeed coating is the perfect way to offer a ship like this a lasting and full protection against the icy conditions it is faced with in the colder months of the year. For this reason the owners had Ecospeed applied on the underwater hull of the vessel, including the ice belt. This is the area on the underwater hull most prone to mechanical damage from sailing through and breaking ice. On the bow the ice belt can extend to about 1 meter above the waterline. Ecospeed has received the Lloyd's Register certificate that



*The ice class ferry in drydock during Ecospeed application.*



*MV Lomer-Gouin sailing the frozen St. Lawrence river.*

recognizes the coating as an abrasion resistant ice coating. This allows owners of newbuild vessels intending to navigate in ice conditions to reduce the thickness of the plating of the ice belt as long as this area is coated with Ecospeed.

### **Advantages of Ecospeed for ferries**

Under normal operation, ferries have to drydock once a year to comply with classification regulations. During the busy tourist season these ferries need to be sailing to make money so the best time for drydocking is the low season when there are fewer passengers. For this reason the majority of these ferries come into drydock for a short time during the winter months. This short drydocking times give ferry operators little opportunity to take all the hull maintenance steps needed to reduce fuel consumption.

The use of Ecospeed on the underwater hulls opens the door to looking deeper into how to optimize fuel efficiency in between dockings. Ferries sail on a fixed route, so the ports they visit and the turnaround time is known in advance. Knowing the exact schedule makes it possible to implement a stricter underwater maintenance program.

Ecospeed's performance-enhancing benefits, enable ferry owners to optimize the hulls and thus the fuel

efficiency of their vessels. The smoothness attained by the coating provides best hydrodynamic conditions for the vessel to operate at maximum efficiency.

Ecospeed is guaranteed for 10 years and has a life expectancy of 25 years and will therefore protect these vessels for the remainder of their service life without the need for a full repainting during future drydockings. This is another very important benefit for ferry owners. Ecospeed allows them to keep the yearly drydock visit as short as possible, without having to take the coating into consideration.

### **Environmentally safe**

Besides its durable resistance to mechanical damage, Ecospeed is also a non-toxic coating and offers a TBT-free, copper-free, biocide-free

and silicone oil-free solution for the protection of the underwater hull. In 2008 stringent tests were carried out within the framework of an EU-LIFE demonstration project to provide scientific data and to authenticate the non-toxicity of the Ecospeed hull performance technology. This research proved that the coating is 100% toxicant free and that it produces no negative effect on the water quality or the marine environment at any point.

By applying Ecospeed on their vessels, owners can drastically reduce their carbon footprint. This offers significant value to owners like the Société des Traversiers du Québec that take their corporate responsibility towards cleaner seas and environmentally safe ship hull husbandry very seriously.

### **Summary**

Due to its unique composition, when it comes to icebreakers and ice going vessels, Ecospeed is not only the best protection available for underwater hulls, but also for the rudder or any other part prone to cavitation damage. The coating can keep the underwater part of any vessel safe for the entire length of its sailing life.



*Ecospeed supervisor during inspection of the coating.*

# ecospeed®

HIGH PERFORMANCE HULL PROTECTION



**E**cospeed gives a very **thorough and lasting defense against cavitation and corrosion damage for a ship hull's entire service life.**

The coating equally provides the underwater hull with an impenetrable protective layer while its flexibi-

lity enables absorption of the forces that are produced by cavitation. This prevents the damage normally caused by this phenomenon.

By removing the existing paint layers and applying Ecospeed on the hull we can break the never ending cycle of painting, suffering

damage, having to perform extensive repairs in drydock followed by a full repainting, again and again.

With an Ecospeed application no full repaint will be needed during drydocking. Ecospeed is guaranteed for ten years. At the most, minor touch-ups will be required.

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