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Tanker Aframax TCO Report

An assessment of the benefits, cost and savings of a hull coating upgrade.

Content of this report

1. Methodology and executive summary
2. Economical potential
3. Regulatory compliance

“We guide the maritime industry as a trusted advisor, enabling customers to achieve sustainability and operational excellence through responsible hull performance management”

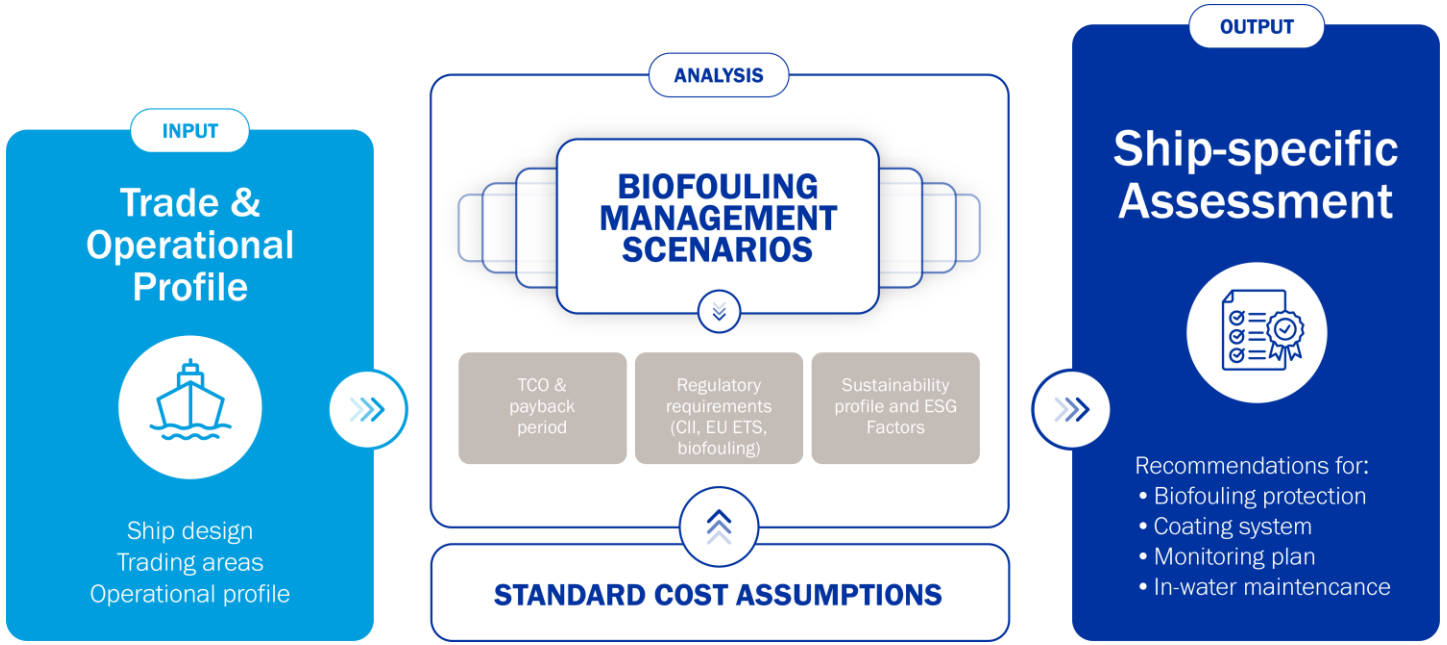
Alexander Enstrom
EVP Hempel Marine

Methodology and executive summary

Impact of a hull coating upgrade

Ship Specific Assessment

A fact-based approach for selecting the optimal solution for your vessel



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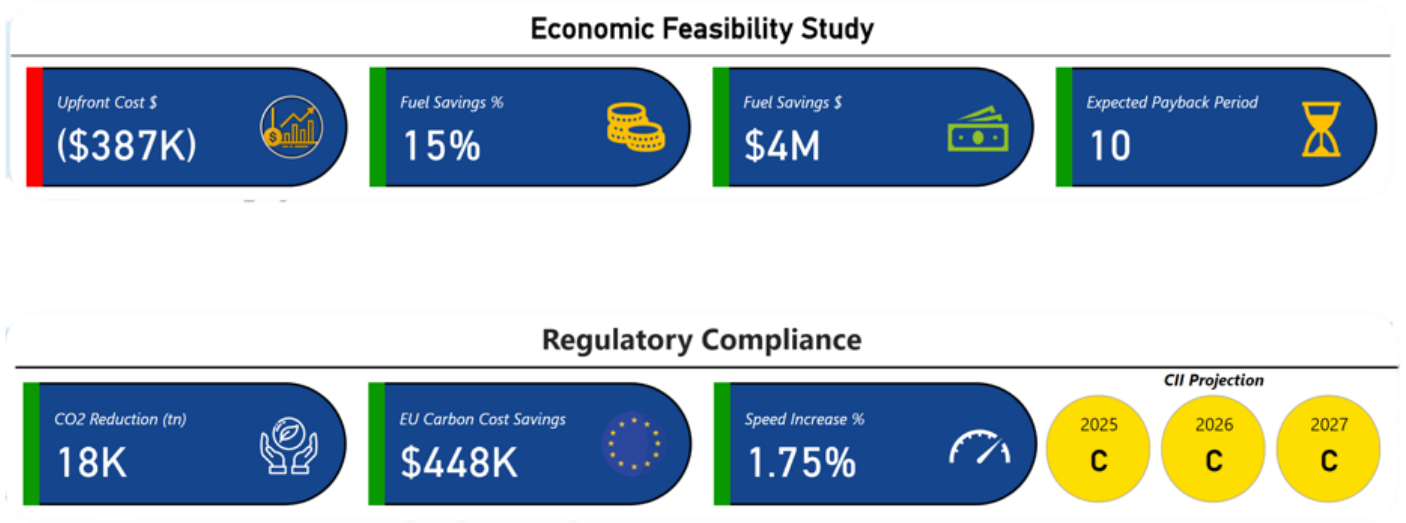
Comparison of three scenarios

Hull performance scenarios are based on 3 coating solutions

(Premium Silicone, Silicone, SPCs)

Executive summary

Economical benefits and regulatory compliance with premium silicone hull coating

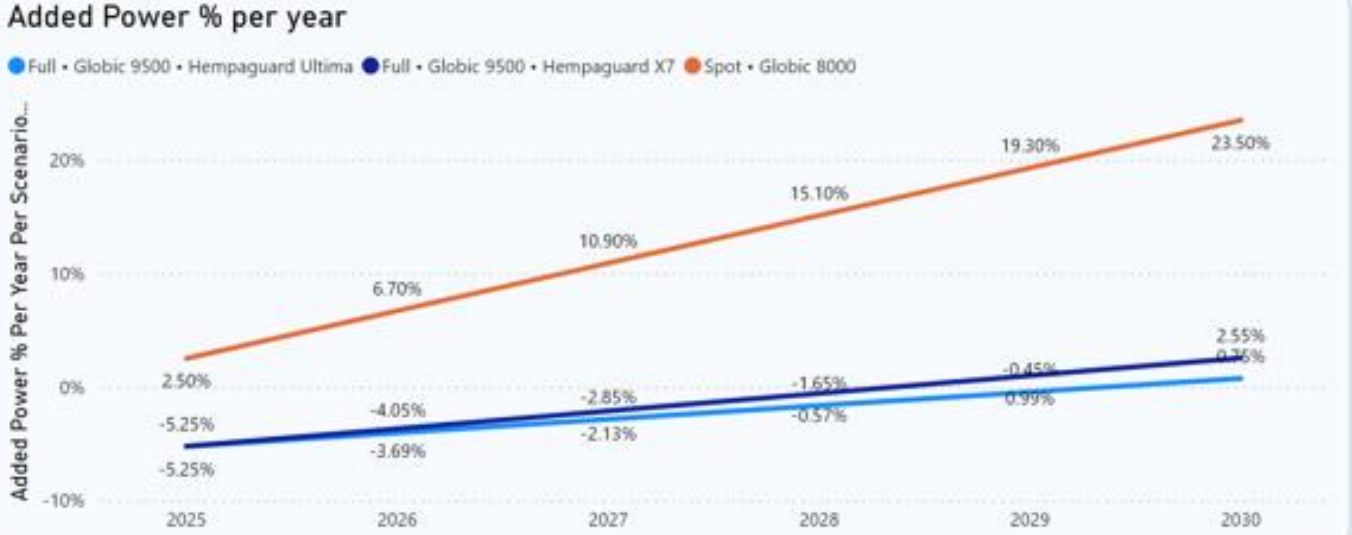


Economical potential

Impact of a hull coating upgrade

Impact of a hull coating upgrade

Expected efficiency improvements



Assumptions

Out of dock savings are based on the absolute power gain from the smoothness of silicone compared to self-polishing antifouling.

Savings over time is based on speed loss difference of silicone compared to self-polishing antifouling translated to power saving.

3:1 relationship between power increase and speed loss is assumed.

Paint System Description	Out of Dock Power Gain %	Surface Preparation %	Speed Loss %	Out of dock & Surface Preparation Diff%	Overtime Power Savings %	Total Fuel Savings %
Full • Globic 9500 • Hempaguard Ultima	5.25	0.00	1.00	7.75	7.50	15.25
Full • Globic 9500 • Hempaguard X7	5.25	0.00	1.30	7.75	6.60	14.35
Spot • Globic 8000	0.00	-2.50	3.50	0.00	0.00	0.00

Expected paypack period

10

Months

Impact of a hull coating upgrade

TCO and expected payback period

	Elements of Cost	Full Globic 9500, Hempaguard Ultima	Full Globic 9500, Hempaguard X7	Spot Globic 8000	Top Upgrade VS Baseline System
Paint	Paint purchasing cost	$450,000	$400,000	$230,000	$220,000
Repair Yard	Surface preparation cost	$129,000	$129,000	$50,000	$79,000
	Washing cost	$8,000	$8,000	$8,000	$0
	Paint application	$93,000	$93,000	$40,000	$53,000
	Shipyard Rent	$40,000	$40,000	$30,000	$10,000
	Off Hire cost	$105,000	$105,000	$80,000	$25,000
Cleanings	Diver cost	$0	$0	$20,000	-$20,000
	Extra costs for next DD	$0	$0	$27,000	-$27,000
	Additional fuel consumption	$0	$0	$185,000	-$185,000
	Off Hire cost - Cleaning	$0	$0	$20,000	-$20,000
Fuel	Total Cost of Fuel	$21,100,000	$21,300,000	$25,000,000	-$3,900,000
TCO	Total Cost of Ownership	**$21,925,000**	**$22,075,000**	**$25,690,000**	**-$3,765,000**
				Total Savings	**-$3,765,000**
				Expected Payback Period (Months)	**10**

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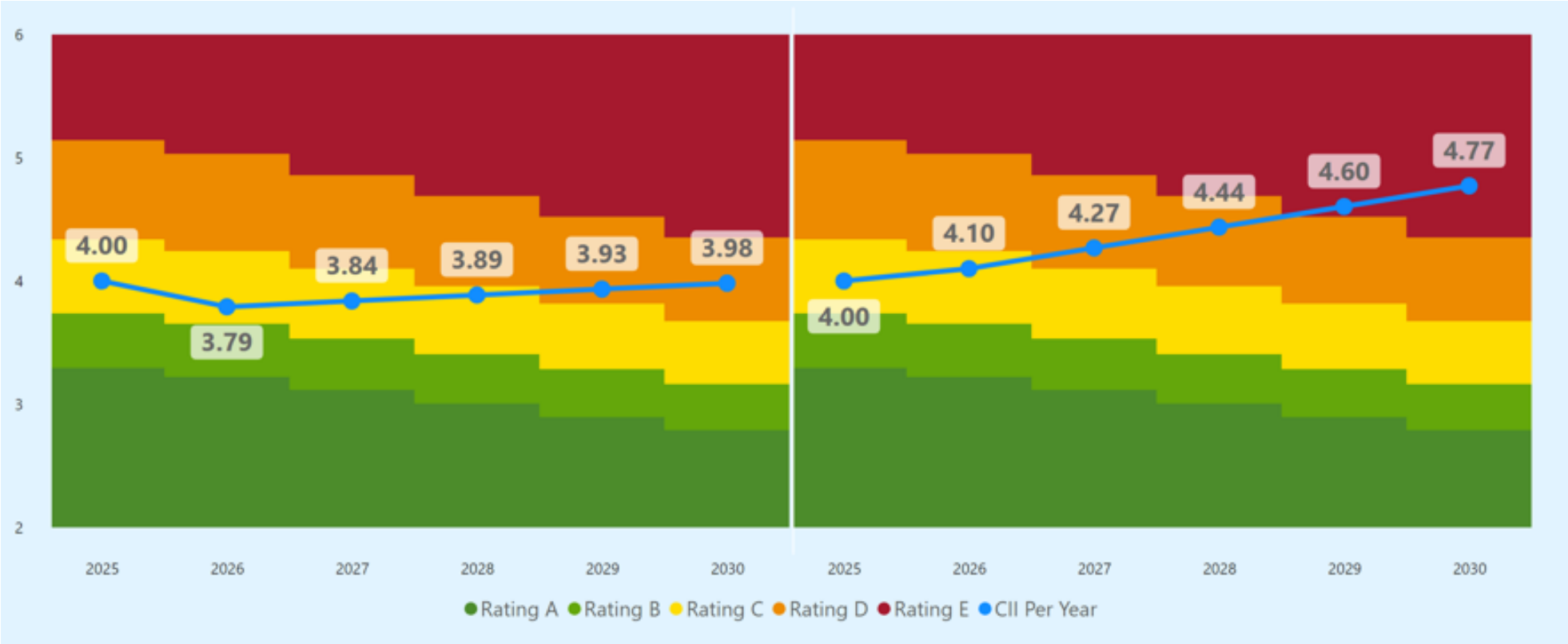
Regulatory compliance

Impact of a hull coating upgrade

Impact of a hull coating upgrade

Impact on CII rating vs. existing coating system

New system *Existing system*



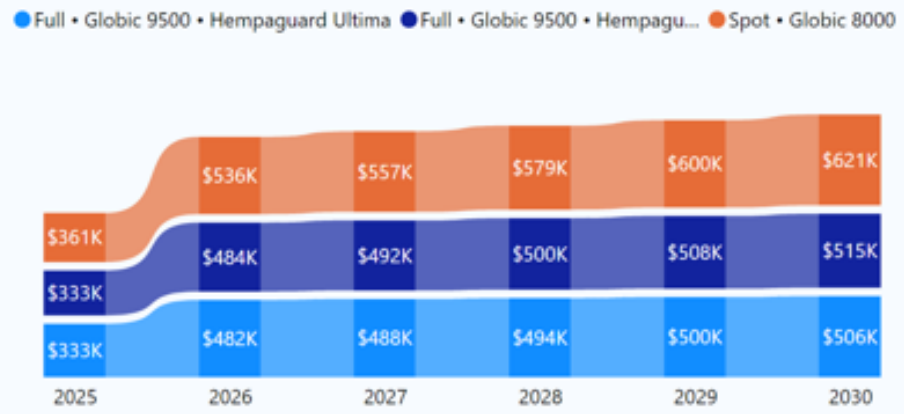
Impact of a hull coating upgrade

EU ETS carbon cost and savings

Added Power % and CO2 emissions

% eligible emissions to be taxed	70%	100%				
Project Paint System Description	2025	2026	2027	2028	2029	2030
Spot • Globic 8000						
Added Power %	2.50%	6.70%	10.90%	15.10%	19.30%	23.50%
CO2 Emissions (tn)	24692	25704	26716	27728	28739	29751
Full • Globic 9500 • Hempaguard X7						
Added Power %	-5.25%	-3.69%	-2.13%	-0.57%	0.99%	2.55%
CO2 Emissions (tn)	22824	23200	23576	23952	24328	24703
Full • Globic 9500 • Hempaguard Ultima						
Added Power %	-5.25%	-4.05%	-2.85%	-1.65%	-0.45%	0.75%
CO2 Emissions (tn)	22824	23113	23403	23692	23981	24270

Carbon Cost ($)



Top Performance VS Baseline System

	2025	2026	2027	2028	2029	2030
Added Power Difference %	0.00%	9.25%	10.75%	12.25%	13.75%	15.25%
CO2 Emissions Reduction (Tn)	1868	2591	3313	4036	4759	5481
Carbon Cost Savings ($)	$27,284	$54,058	$69,138	$84,219	$99,300	$114,380

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Get an impact assessment of a coating upgrade for your vessel

Book a vessel specific assessment today >>

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