

HULL PERFORMANCE STARTS AT NEWBUILD



Hull Management

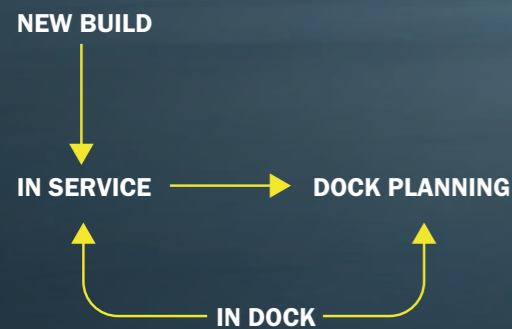
Full Picture

DRIVING PERFORMANCE ACROSS THE ENTIRE VESSEL'S LIFECYCLE

In the everchanging maritime industry, shipowners and shipyards demand hull performance that delivers consistent fuel savings, emissions reductions and operational flexibility across a vessel's entire life.

This is exactly the ambition behind Hempel's Full Picture Hull Management, a holistic, data-driven approach to managing hull performance at every stage: new build, in-service, idle periods and dry-dock decisions.

FULL PICTURE HULL MANAGEMENT



PEAK EFFICIENCY FROM DAY ONE

Full Picture Hull Management begins long before a vessel leaves the shipyard. The foundation for long-term efficiency is laid during construction of a new build vessel, where the right hull coating can determine fuel performance and fouling resistance for the years to come.

Hempaguard NB, Hempel's next-generation silicone coating for newbuilds, allows shipyards to apply advanced fouling defence technology during construction, eliminating the need for early dry-docking. This not only saves time and costs but also means vessels enter operation fully optimised from day one.

By introducing a high performing silicone coating technology into the newbuild process, Hempel enables shipyards and owners to deliver vessels that are ready to perform efficiently across harsh and diverse trading routes. The result is a smoother transition from delivery to operation—where every voyage begins with minimal biofouling, lower fuel consumption, and reduced CO₂ emissions.

IN-SERVICE OPTIMISATION

Once in operation, SHAPE - Hempel's System for Hull and Propeller Efficiency - places data at the centre of hull performance. By analysing vessel speed, fuel use, idle time, and environmental conditions, SHAPE provides real-time insight into how fouling and operating patterns impact efficiency.

Its AI models combine performance and visual data for fast, objective analysis - enhanced by Hempel's century of fouling prevention expertise. The result: smarter decisions, faster interventions, and measurable gains in fuel efficiency and reliability.



TAKE THE MOST EFFICIENT ROUTE TO HEMPAGUARD ON YOUR NEWBUILD

Estimated extra days needed to apply a silicone solution compared to SPC

	1	2	3	4	5	6	7	8	9	10	11	12
HG X7 Pre-Delivery Docking	Pre-delivery dry docking, surface preparation and Hempaguard system application								8 days			
HG X7 Post-Delivery Docking	Sailing and preparation for DD				Post-Delivery dry docking, surface preparation and Hempaguard system application							11 days
HG-NB at Erection Stage	0 days*											



Time in dock



Sailing and preparation

*When preparation and application are planned well in advance, the vessel's launch schedule is typically unaffected.



LONG-TERM VALUE FOR THE INDUSTRY AND THE PLANET

Ultimately, Full Picture Hull Management is about more than coatings, it is about partnership and performance. By combining technical expertise with predictive insights, Hempel enables its customers to reduce fuel consumption, cut CO₂ emissions, and extend asset lifetime, while maintaining flexibility across varying trading conditions.

Through this lifecycle approach, Hempel empowers the marine industry to move confidently toward a more sustainable and efficient future. For both shipowners, operators and shipyards.

“Hempaguard NB, shipyards gain a competitive advantage by delivering high-efficiency vessels and driving sustainable shipbuilding - enabling immediate impact for shipowners and operators.”

MINIMISING CARBON FOOTPRINT AND ENVIRONMENTAL IMPACT FROM DESIGN TO OPERATION



COMPARING HEMPAGUARD TO TRADITIONAL SPCS



Silicone paints identified as the best option to reduce energy consumption and support the **Decarbonisation of maritime industry**

Reducing CO₂e emissions from fuel consumption by **12%**
(=11,727 t of fuel over 5 years)

36,517 T CO₂e EMISSIONS AVOIDED OVER 5 YEARS



Superior protection against biofouling while minimising the release of substances into **Marine ecosystems**

Reduction of hazardous substances in the sea:
no copper oxide and minimal use of co-biocides

12.8 TONNES OF BIOCIDES NOT LEACHED INTO SEA WATER



Hempel innovates in paint and paint application technologies that enable **Efficient use of materials**

Paint savings up to **14%**, avoiding the supply of 6,444 liters of coating

40 T CO₂e NOT EMITTED IN THE MANUFACTURING AND APPLICATION OF COATINGS

Assumptions:
Vessel ID: Container 14KTEU
Flat bottom m2: 10,000 / Vertical bottom m2: 15,000

As a world-leading supplier of trusted coating solutions, Hempel is a global company with strong values, working with customers in the decorative, marine, infrastructure and energy industries. Hempel factories, R&D centres and stock points are established in every region.

Across the globe, Hempel's paints and coatings can be found in almost every country of the world. They protect and beautify buildings, infrastructure and other assets, and play an essential role in our customers' businesses. They help minimise maintenance costs, improve aesthetics and increase energy efficiency.

At Hempel, our purpose is to shape a brighter future with sustainable coating solutions. We firmly believe that we will succeed as a business only if we place sustainability at our heart. Not only is it the right thing to do, it will strengthen our competitive position, make ourselves more resilient and reduce our risk.

Hempel was founded in Copenhagen, Denmark in 1915. It is majority owned by the Hempel Foundation, which ensures a solid economic base for the Hempel Group and supports cultural, social, humanitarian and scientific purposes around the world.

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