



• MARINE

Main Cooling System Case Study Car Carrier

HydroFLOW® installed on Main Cooling System prevented barnacles and salt accumulation with only a thin, easily removable slime layer observed at inspection.

🔒 Client details have been anonymised at their request.

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Barnacles on Plates

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Chemicals Used



Biofouling reduction



Easy Washdown Cleaning

⇒ BEFORE & AFTER

● BEFORE

- ✗ Large amount of barnacles on plates
- ✗ Water flow reduction affected cooling
- ✗ Filter needed manual scrubbing

● AFTER

- ✓ No barnacles on plates
- ✓ Thin slime layer washed away easily
- ✓ Filter cleaned without manual scrubbing



BEFORE

Cooling system before July 2011



AFTER

Cooling system after Aug 2012

OVERVIEW

Hydropath Marine Custom 12" unit was installed on the sea water feeding pipe of Main Cooling System #2. When the system was opened in July 2011, the plates contained a large amount of barnacles, causing water flow reduction that affected cooling efficiency. When opened again in August 2012, the plates were clean of scale and barnacles, with only a thin slime layer that was easily washed away.

CHALLENGE

Barnacle build up on the cooling plates was reducing water flow and affecting cooling efficiency.

- Large amount of barnacles on Main Cooling System #2 plates
- Reduced water flow lowered cooling efficiency
- Particle filter was usually covered with attached barnacles
- Removing barnacles needed manual scrubbing that damaged the filter

SOLUTION

Hydropath Marine Custom 12" unit was installed on the sea water feeding pipe of Main Cooling System #2 to control and reduce barnacle and biofouling on the cooling plates.

UNIT INSTALLED

1x Hydropath Marine Custom 12"

INSTALLATION POINT

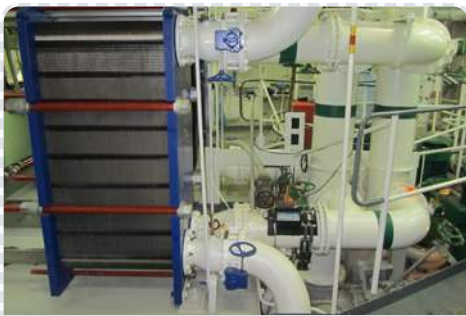
Sea water feeding pipe

INITIAL INSPECTION

July 2011

FINAL INSPECTION

August 2012



INSTALLATION

On Sea water feeding pipe

RESULTS

✓ No barnacles on plates

In August 2012 the plates were found clean of barnacles.

✓ Reduction of biofouling on plates

During the inspection there was significant reduction of biofouling on plates.

✓ Only thin slime remained

A thin slime layer covered the plates and was easily washed away.

✓ Filter free of barnacles

The particles filter was clean of barnacles and easy to wash.

✓ No chemicals used

No chemicals were used either regularly or during cleaning in the test period.

✓ Cooling performance improved

Removing barnacle blockage helped avoid the flow reduction seen before treatment.

KEY TAKEAWAY**Summary**

Hydropath Marine Custom 12" unit was installed on the sea water feed to Main Cooling System #2. Before treatment, heavy barnacle buildup on the cooling plates reduced water flow and affected efficiency. At inspection in August 2012, the plates were free of barnacles reduction in biofouling, with only a thin slime layer that was easily washed away. The particles filter was also clean and easy to maintain, with no chemicals used during the test period.

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BARNACLES ON PLATES

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CHEMICALS USED



REDUCTION IN BIOFOULING

**ADDITIONAL PHOTO EVIDENCE****AFTER***Filter free of barnacles after inspection***AFTER***Clean particles filter after treatment*

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UNITS INSTALLED

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