



• MARINE

Fresh Water Generator Case Study Japan

HydroFLOW® treatment enabled chemical dosing to be stopped while maintaining stable fresh water production and improving scale behaviour within the system.

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Chemical Dosing

~15 t/da

Water production maintained

5+

Months Stable Operation



Easy cleaning

⇒ BEFORE & AFTER

• BEFORE

- ✗ Chemical dosing required for operation
- ✗ Scale build-up on plates
- ✗ Frequent cleaning needed

• AFTER

- ✓ Chemical dosing fully stopped
- ✓ Scale softened and removable
- ✓ Stable water production maintained

OVERVIEW

RKK Line vessel Churashima installed Hydropath marine treatment on its fresh water generator system in January 2016. The system produces approximately 15 tonnes per day. A follow-up inspection in April 2017 reviewed performance over several months, focusing on chemical usage, water production, and scale behaviour inside the FWG plates.

CHALLENGE

The vessel relied on chemical dosing to maintain FWG performance and manage scale formation.

- Ongoing chemical dosing required for operation
- Scale build-up on FWG plates
- Cleaning intervals affected operation
- Need to maintain stable water production



SOLUTION

A HM unit was installed on the fresh water generator system to treat scaling behaviour and eliminate the need for chemical dosing.

UNIT INSTALLED

1x HM

INSTALLATION POINT

Fresh water generator system

INSTALL DATE

January 2016

INSPECTION DATE

April 2017



INSTALLATION

HM unit



SITE

Chemical tank unused



RESULTS

⊘ Chemical dosing stopped

Chemical dosing stopped after installation with no further use recorded.

📈 Stable water production

Water production remained consistent over several months.

🕒 Long-term performance

Performance monitored over 5 months showing stable FWG operation.

🔑 Scale easily removed

Scale deposits were soft and could be removed by hand.

🔍 Observed scale movement

Detached scale particles moved and accumulated at outlet areas of the system.

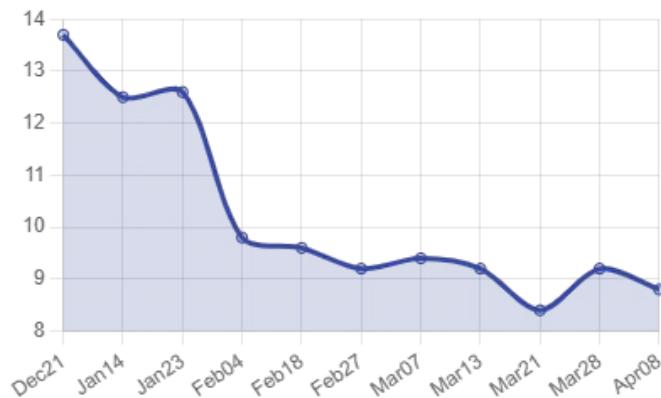
✅ Engineer satisfaction

Chief Engineer confirmed satisfaction with scale control performance of the system.



GRAPHS

Water Production Trend (Dec 2016 – Apr 2017)



Recorded FWG output after Hydropath installation (ton/day)

HydroFLOW® was installed on the Churashima vessel to treat scaling in the fresh water generator system. Following installation, chemical dosing was stopped while water production remained stable at around 15 tonnes per day. Over several months of operation, scale remained present but became soft and easier to remove, with performance maintained during the test period.

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CHEMICAL DOSING

~15 T/da

TON/DAY OUTPUT

5+

MONTHS STABLE

RELATED CASE STUDY

Fresh Water Generator Marine Case Study

MV Hoegh America

A HydroFLOW® unit was installed on a vessel FWG to treat scale buildup on titanium plates. The system maintained full water production, eliminated chemical dosing, and allowed fast, damage-free cleaning with minimal manual effort.

Stable 25 MT/Day Output

No drop in water production over 6 months despite typical scaling issues

<2 Hour Cleaning Time

Cleaning reduced from 24-48 hours to under 2 hours without chemicals

Zero Chemical Usage

Chemical dosing fully stopped during the entire test period