



DESALINATION

Seawater Intake Biofouling Control Case Study Chile

HydroFLOW® Custom i20" unit was used to controlled marine biofouling in a seawater intake line over 223 days, maintaining flow without cleaning or chemical dosing during the trial.

223d

No Cleaning or Chemicals

0

Zero mussels in treated line

4

Scheduled Inspections

>3 cm

Mussels in Control Line

BEFORE & AFTER

BEFORE

- Marine growth embedded in intake piping
- Flow restrictions increased cleaning needs
- Chemical reliance risked higher impact

AFTER

- ✓ No mussel proliferation in treated line
- ✓ Pipe surface visible and odour-free
- ✓ 223 days without cleaning or chemicals



BEFORE

Control line with mussel fouling



AFTER

Treated line after 223 days



OVERVIEW

A pilot at a desalination plant in Chile evaluated Hydropath technology for biofouling control in seawater suction lines. Line 4 was treated with a *HydroFLOW*® Custom i20" unit, while Line 6 was left untreated as a control. After 223 days of continuous operation, the treated line remained stable without cleaning or chemicals, while the control line showed active fouling, including larvae, small shells and mature mussels.



CHALLENGE

Persistent marine biofouling in seawater intake lines reduced flow, increased maintenance and created pressure to avoid chemical dosing.

- Mussels and marine organisms built up inside suction lines
- Blockages reduced flow and affected operational efficiency
- Frequent maintenance was needed due to fouling regrowth
- Chemical dosing risked higher cost and environmental impact



SOLUTION

A pilot compared a treated line and an untreated control. 1x *HydroFLOW*® Custom i20" unit was installed on Line 4, while Line 6 was left untreated for comparison over 223 days.

UNIT INSTALLED

1x *HydroFLOW*® Custom i20"

INSTALLATION POINT

Line 4 seawater suction line

INSTALL DATE

28 November 2024

MONITORING

4 inspections over 223 days



RESULTS

🕒 223 Days No Cleaning

Line 4 operated for 223 days without cleaning or chemical dosing.

🚫 No Mussel Growth

No mussel proliferation was observed in the treated line during the trial.

🔍 Pipe Surface Visible

The treated line remained visibly clear, with pipe colour and material exposed.

🛡️ Odour-Free Operation

No smell of marine life was detected in Line 4 at final inspection.

📏 Control Line Fouled

Line 6 showed larvae, small shells and mature mussels over 3 cm.

🚫 Lower Chemical Reliance

Operational benefits included reduced cleaning and lower chemical dependence.

KEY TAKEAWAY

Summary

Hydropath technology was trialled at a Chile desalination plant to control marine biofouling in seawater intake lines. Line 4 remained clear without cleaning or chemicals, while Line 6 developed significant fouling including mussel growth.

223d

NO CLEANING OR CHEMICALS

0

MUSSEL GROWTH IN LINE 4

>3 cm

MUSSELS IN CONTROL LINE

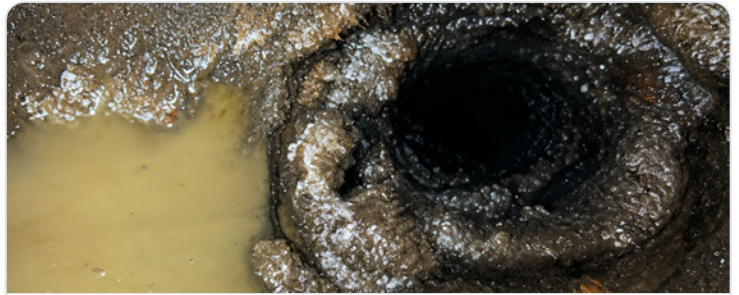


ADDITIONAL PHOTO EVIDENCE



INSPECTION

2nd opening test area scraped clean



INSPECTION

3rd opening scraped area remains clean

RELATED CASE STUDY

Reverse Osmosis Desalination Case Study

Israel

HydroFLOW® was installed on a reverse osmosis desalination system in Israel, reducing bacteria counts to zero and increasing recovery flux from 65-75% to 81%. Cartridge filter life was extended dramatically from 30-60 days to over 250 days.

Zero Bacteria

Bacteria count reduced to zero in the treated water system

81% Recovery Flux

Improved membrane recovery from 65-75% up to 81% efficiency

250-Day Filters

Cartridge filter life extended from 30-60 days to over 250 days

HYDROPATH 

Ready to control marine biofouling?

Get a free consultation for your facility.

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