

RO

Coatings Factory RO Membrane Case Study Eindhoven, Netherlands

*Hydro*FLOW® helped stabilise permeate flow in a high-recovery RO system, with flow remaining at 4,400 L/h after four weeks of the initial trial.

4,400 L/h	~70%	85%	2 units
Flow Maintained After 4 Weeks	Slower Flow Decline	High-Recovery Configuration	Purchased After Early Trial

BEFORE & AFTER

BEFORE

- Rapid permeate-flow decline
- Flow dropped to 3,500 L/h
- Frequent membrane scaling

AFTER

- ✓ ~70% Slower flow decline
- ✓ 4,400 L/h maintained after four weeks
- ✓ Both trial units purchased

OVERVIEW

A coatings factory in Eindhoven uses reverse osmosis to produce demineralised water for manufacturing. RO system 1 experienced rapid permeate-flow decline after membrane cleaning, while operating at high recovery with concentrate recirculation.

CHALLENGE

Rapid membrane scaling caused significant permeate-flow loss between cleaning cycles.

- Permeate flow fell to 3,500 L/h in about three months
- RO operated at 85% system recovery
- 2.0 m^3/h concentrate was recirculated

SOLUTION

*Hydro*FLOW® units were fitted to RO system 1 and performance was monitored following membrane cleaning.

UNITS INSTALLED	CONCENTRATE RECIRCULATION
*Hydro*FLOW® P100 & HS40	2.0 m^3/h



INSTALLATION

P100 on RO 1 feed line



SYSTEM

RO system pipework

RESULTS

Flow Decline Slowed ~70%

Slower permeate-flow decline during the initial trial.

4,400 L/h Maintained

Permeate flow remained at 4,400 L/h after four weeks.

Early Flow Stability Improved

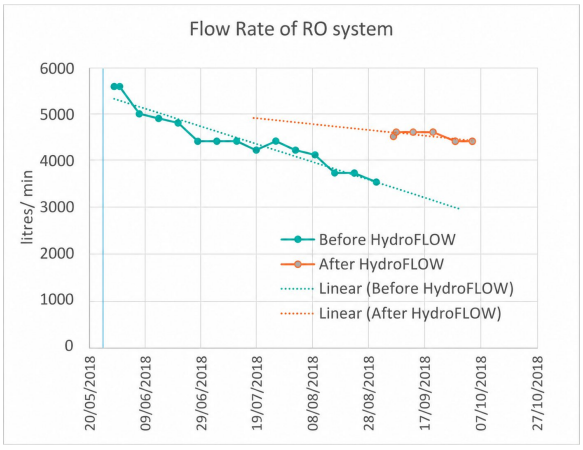
The initial trial showed a substantially flatter permeate-flow trend.

Trial Units Purchased

The customer purchased both *Hydro*FLOW® units following the early evaluation.

GRAPHS

RO Permeate Flow Before & After HydroFLOW®



Permeate-flow decline was around 70% slower with HydroFLOW® based on linear trend analysis.

KEY TAKEAWAY

Summary

*Hydro*FLOW® helped stabilise RO performance, with trend analysis showing an approximately 70% slower decline in permeate flow during the initial trial. The positive early results led the customer to purchase both units.

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Hydropath Technology is a world leader in sustainable water treatment solutions, providing chemical-free alternatives for industrial and commercial applications across more than 50 countries.

50+	30+	1M+
COUNTRIES	YEARS EXPERIENCE	UNITS INSTALLED

RELATED CASE STUDY

Potabilization Plant Scale Protection Case Study

Poggibonsi, Italy

A HydroFLOW® iCustom 16" unit was installed at a Poggibonsi potabilization plant treating water at 840 ppm hardness. The system protected RO membranes and infrastructure from scale, reduced chemical and maintenance requirements, improved efficiency and supported longer system life.

840 ppm Hardness Treated

The HydroFLOW® unit operated effectively with extremely hard water at around 840 ppm $CaCO_3$.

Reduced Chemical Use

Lower use of flocculants and antiscalants reduced reliance on chemical treatment.

No Additional Softening

The plant operated without additional water softening while protecting RO membranes and equipment.

HYDROPATH

Need more stable RO membrane performance?

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