INJECTION MOULDING

Injection Moulding Cooling System Case Study Philippines

*Hydro*FLOW® treatment controlled scale in an injection moulding cooling system, reducing chemical use, extending maintenance intervals, and preventing overheating-related downtime.

↓	1 yr	↓	11 mo
Reduced chemical use	Maintenance Interval	No overheating stoppages	Stable operation achieved

⇄ BEFORE & AFTER

BEFORE

- ✕ Frequent scaling in heat exchangers
- ✕ Cleaning required every 3–6 months
- ✕ Overheating caused machine stoppages

AFTER

- ✓ Scale controlled across system
- ✓ Maintenance extended to yearly
- ✓ No overheating-related stoppages

OVERVIEW

Plastmann Corporation in the Philippines operates four cooling towers supplying water to 40 injection moulding machines and three chillers. Hard deep well water required chemical treatment, yet scaling still caused overheating, downtime, and frequent maintenance. *Hydro*FLOW® units were installed to improve system performance and reduce maintenance demands.

⚠ CHALLENGE

Scaling persisted despite chemical treatment, impacting reliability and increasing maintenance.

- Hard deep well water contributing to scale formation
- Scaling continued despite chemical dosing
- Acid cleaning required every 3–6 months
- Machine stoppages caused by overheating

SOLUTION

Three *Hydro*FLOW® units were installed across heat exchangers and chillers, with a side stream filter, to treat the system and reduce reliance on chemical dosing.

UNIT INSTALLED	INSTALLATION POINT
3x *Hydro*FLOW® units	Heat exchangers and chillers
INSTALL DATE	**SYSTEM SIZE**
Feb 2015	40 machines, 4 towers

INSTALLATION

HydroFLOW® units installed on cooling system

SITE

Cooling towers and system layout at site

SITE

Cooling water flow in tower system

RESULTS

Reduced Chemical Use
Chemical dosing reduced, with only minimal chlorine used for algae control.

Maintenance Extended
Cleaning interval extended from 3–6 months to once per year

No Overheating
Injection machines operated without overheating after installation

Stable Operation
No stoppages reported during 11 months of operation

Scale Controlled
Scaling reduced across heat exchangers and cooling system

Eco Friendly
Lower chemical discharge into the cooling system and environment

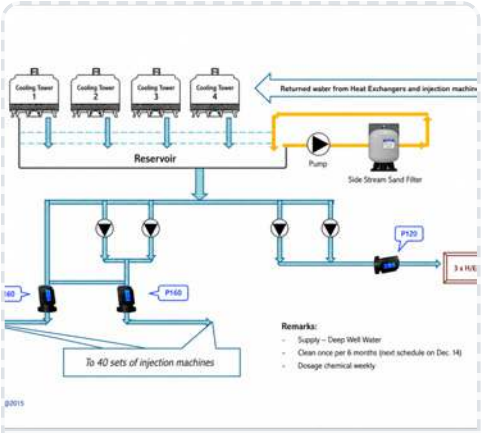
KEY TAKEAWAY

Summary

At Plastmann Corporation, scaling in the cooling system caused downtime and frequent maintenance. Following installation of *Hydro*FLOW® units, chemical use was reduced and maintenance extended to yearly intervals. Over an 11-month period, machines operated without overheating or stoppages, improving reliability and system performance.

11 mo	1 yr	↓
STABLE OPERATION	MAINTENANCE INTERVAL	REDUCED CHEMICAL USE

ADDITIONAL PHOTO EVIDENCE



SITE

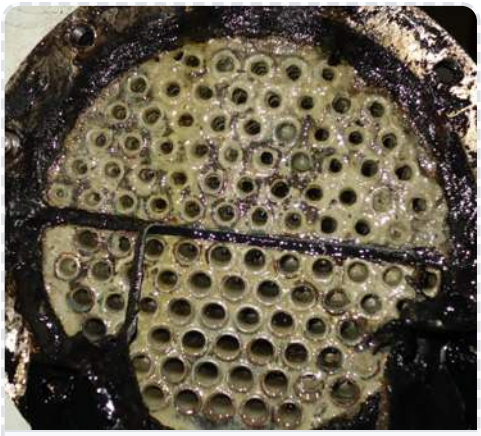
Cooling system layout and flow diagram

BEFORE

Injection machine affected by overheating before treatment

BEFORE

Machine maintenance due to overheating and scaling



BEFORE

Heat exchanger plate fouled with scale

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COUNTRIES	YEARS EXPERIENCE	UNITS INSTALLED

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