



● INJECTION MOULDING

Plastic Factory Cooling System Case Study Thailand

HydroFLOW® improved cooling performance by releasing existing scale and eliminating water softener chemicals, reducing cleaning time and preventing overheating in injection moulding machines.

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Water softener chemicals used

10 min

Monthly Cleaning Time

0

Overheating Incidents



Scale released into system



BEFORE & AFTER

● BEFORE

- Heavy scale in cooling tower and heat exchanger
- Bi-weekly cleaning required
- Frequent overheating of injection machines

● AFTER

- ✓ Existing scale released as sediment in system
- ✓ Monthly cleaning reduced to around 10 minutes
- ✓ No overheating observed in machines



OVERVIEW

An injection moulding manufacturer in Thailand operates ten injection moulding machines supported by a cooling tower and heat exchanger system. With water hardness at 380 ppm, chemical treatment was used to manage scaling, and frequent maintenance was required. A *HydroFLOW*® C60 unit was installed in June 2002 to treat the cooling system and improve operational performance.



CHALLENGE

- Severe scaling and high maintenance reduced cooling efficiency and machine reliability.
- High water hardness at 380 ppm leading to scale formation
 - Cooling tower required cleaning every two weeks
 - Heat exchanger scaling reduced heat transfer efficiency
 - Injection machines experienced frequent overheating

SOLUTION

A *HydroFLOW*® C60 unit was installed on the cooling system to treat the water, releasing existing scale and reducing reliance on chemical treatment.

UNIT INSTALLED 1x <i>HydroFLOW</i> ® C60	INSTALLATION POINT Cooling system pipework
INSTALL DATE June 2002	WATER HARDNESS 380 ppm

RESULTS

 Chemical Use Eliminated Water softener chemicals no longer required after installation	 Reduced Cleaning Frequency Cleaning reduced from bi-weekly to once per month	 Faster Maintenance Cooling tower cleaned in around 10 minutes per month
 No Overheating Issues Injection machines no longer experienced overheating	 Scale Released Existing scale observed as sediment in cooling tower	 Improved Heat Transfer Heat exchanger remained free of hard scale deposits

KEY TAKEAWAY

Summary

At an injection moulding facility in Thailand, high water hardness led to severe scaling and frequent maintenance in the cooling system. Following installation of a *HydroFLOW*® C60 unit, water softener chemicals were no longer required and existing scale was released as sediment. Cleaning frequency reduced to monthly, with maintenance taking around 10 minutes. Heat exchangers remained free of hard scale deposits, and no further overheating was observed in the injection moulding machines.

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WATER SOFTENER CHEMICALS
USED

10 min
MONTHLY CLEANING TIME

0
OVERHEATING INCIDENTS



Ready to reduce scale and chemical use?

Get a free consultation for your facility.

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