



● STEEL MANUFACTURING

Steel Mill Spray Bar Case Study Ontario, Canada

HydroFLOW® reduced reported supply-line clogging from 65% to 10%, with no reported shutdowns or blockages during the following year.

85%

Reduction in Line Clogging

1 year

Without reported blockages

\$35,000

Calculated annual savings

3 months

Calculated payback

⇒ BEFORE & AFTER

● BEFORE

- Six spray bars changed every three weeks
- Supply line 65% clogged
- Cleaning and stoppages disrupted production

● AFTER

- ✓ Supply-line clogging reduced by 85%
- ✓ Sprays had almost no clogging deposits at 3 weeks
- ✓ One year without shutdowns or blockages



OVERVIEW

A major steel manufacturer in Ontario used six spray bars to cool product on a galvanising line. Recycled liquid was pumped through a 3-inch header at 500 US gallons per minute to supply the cooling spray system. High concentrations of dissolved solids and contaminants created demanding operating conditions, with deposits affecting the spray bars, nozzles and recirculation pipework.



CHALLENGE

Recurring spray nozzle and pipe blockages interrupted production and required frequent mechanical and chemical cleaning.

- Six spray bars changed every three weeks
- Supply pipe reported 65% blocked
- Frequent mechanical and chemical cleaning
- Around \$35,000 annual maintenance cost

SOLUTION

HydroFLOW® was installed on the pump output line for a three-month onsite trial. The system was inspected at three-week intervals to assess scale build-up and blockage.

UNIT INSTALLED

1 × *HydroFLOW® i100*

FINAL INSTALLATION POINT

Output pipe downstream of system pump

SYSTEM FLOW

500 US gallons per minute

TRIAL PERIOD

3-month onsite trial



INSTALLATION

On the pump output line



RESULTS

Supply-Line Clogging Reduced

Supply line went from 65% clogged to 10%.

Sprays Clear at Three Weeks

Almost no clogging deposits after three weeks.

One Year Without Blockage

No shutdowns or blockages for one year.

Calculated Annual Savings

Customer analysis estimated annual savings of \$35,000 from reduced maintenance and loss.

% 3-Month Calculated Payback

The report calculated payback at three months for this application.

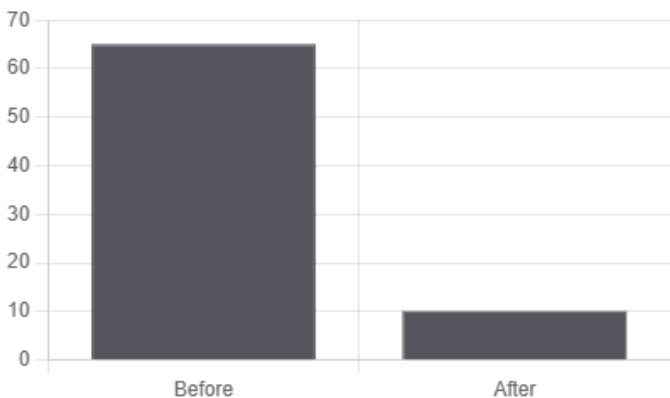
Deposits Easier to Remove

Remaining deposits were described as loose and fluffy, rather than concrete-like.



GRAPHS

Reported Supply-Line Clogging



Reported supply-line clogging reduced from 65% to 10%



TESTIMONIAL

"The results were unquestionable!!"

— Customer

KEY TAKEAWAY

Summary

HydroFLOW® reduced supply-line clogging from 65% to 10%, while the spray system operated for one year without shutdowns or blockages. Customer analysis calculated \$35,000 in annual savings and a three-month payback.

65→10%

SUPPLY-LINE CLOGGING

1 year

NO REPORTED BLOCKAGES

\$35K

CALCULATED ANNUAL SAVINGS



ADDITIONAL PHOTO EVIDENCE



BEFORE

Scale build-up across cooling spray bars



BEFORE

Heavy deposits on spray bar surfaces



BEFORE

Blocked spray bar before treatment

HYDROPATH

The Forefront of Sustainable Water Treatment

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Keep industrial spray systems flowing

Discuss scale and blockage control for recirculating process water.

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