



Case Study

Automotive Industry

Paint effluent treatment
for water reuse



Problem Statement

Automotive paint operations generate a noticeable volume of paint water effluent which, if left untreated, is unsuitable for re-use and costly to dispose of off-site.

Solution

The solution was to build a water treatment plant to treat the paint water effluent on-site to a level where it becomes suitable for use in the client’s existing RO unit, thus eliminating the need for municipal water for use in boilers and cooling systems. Treated effluent can either be re-used as process water or only treated to a level where it can be disposed of easily.



Typical Plant Feed

- pH – 5.50-6.00
- TDS – 200-300mg/L
- TSS – 50-70mg/L
- Apparent colour > 1000Pt-Co
- Turbidity – 150-200NTU
- COD – 1800-2000mg/L O₂
- Oil & Grease – 40-50mg/L



Performance Target

- pH – 5.00 – 6.00
- TDS – 200-300mg/L
- TSS < 1mg/L
- Apparent colour < 1Pt-Co
- Turbidity < 1NTU
- COD < 10mg/L O₂
- Oil & Grease < 1mg/L



Process

- Clarification/settling with associated chemicals
- Sand & carbon filtration
- Softening
- pH correction



Innovation

Since implementing the new treatment system our client has the benefit of:

- Re-using the treated paint water effluent
- Decreased reliance on municipal water usage
- Decreased effluent disposal costs