Case Study

Automotive Industry

Effluent recycling treatment plant

Problem Statement

Our client used municipal water as a rinse water source in their paint shop while effluent water from another area was not utilised and wasted as a result.

Solution

The solution was to build a water treatment plant that could treat the effluent water from the first zone so that it could be used as rinse water for another. This eliminated the use of municipal supply in the circuit. This was achieved by incorporating a double pass RO unit as a main treatment step.

Typical Plant Feed

- Conductivity between 3000 – 4000 µS/cm
- Phosphates between 60 – 80 mg/L
- pH < 6.00

Performance Target

- Up to 3.5 m^3/hr plant production
- Conductivity <10 µS/cm
- RO recovery rate of 60-65% (Pass 1) & 80-85% (Pass 2)

Process

- Chemical addition
- Settling
- Mixed media pre - treatment
- Membrane technology
- Sludge handling

Innovation

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

- Eliminating the need to use municipal water
- Saving costs