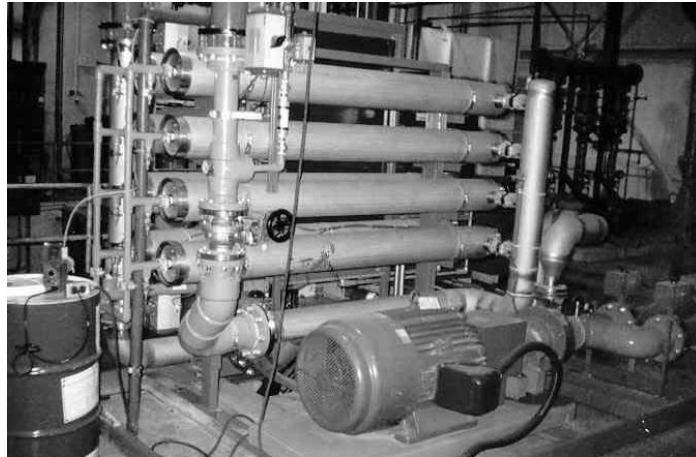


Aluminum Casting Plant Ultrafiltration Membrane System



Case Study Details

PARAMETER	INFLUENT	EFFLUENT
TSS(mg/l):	1000	<2
O&G(mg/l):	450	<50
pH:	5.0	7

The metal industry casting processes generates wastewater with a large quantity of oils and grease (O&G).

Methods of separating oils from water include physical and/or chemical treatments.

In physical separation, free oil can be removed due to differences in specific gravity or differences in surface tension using technologies such as oil/water separators and oil skimmers.

The removal of emulsified oils requires either chemical pre-treatment and clarification or physical separation at a sub micron level. Emulsions have oil droplets in size of between 0.1 μm and 1.0 μm . Ultrafiltration (UF) membrane elements have pore openings below 0.01 μm and are very effective at rejecting emulsified oils, and are commonly used to filter oil-in-water emulsions.

H2FLOW Equipment provided a complete 30 gallon per minute ultrafiltration membrane system to Chrysler Canada in 2001.