



Case History

Aries designs, builds and installs 140 gpm Wastewater Treatment and Recycle System at Metal Plating facility

Aries has completed the start up of a new Micro Filter (MF) and Reverse Osmosis (RO) based High Recovery wastewater treatment system at a Northeastern metal plating facility. The recycle system is designed to treat 140 gpm with 80 % recovery. The new system reduced water usage and improved water quality.

The metal plating facility had out grown its existing 45 gpm wastewater system. The lack of wastewater treatment capacity prevented the facility from maintaining rinse water quality which detrimentally affected product quality. Their rinse water became more contaminated then desirable for optimum parts washing. For optimum plating quality the facility needed to waste 140 gpm of rinse water, so the existing 45 gpm wastewater treatment system was inadequate.



MICRO FILTER



The metal plating facility required 140 gpm of high quality RO or DI water for rinses. Aries was contacted for assistance and Aries designed a new MF / RO recycle system to treat 140 gpm of rinse water and produce 112 gpm of permeate to be reused as rinse water. Aries engineering staff designed the system based upon Aries' experience designing and installing wastewater recycle and zero discharge systems in a variety of manufacturing facilities. Aries water treatment technologies include PLC system control, chemical pre-treatments, micro-filtration, reverse osmosis and solids dewatering. The treatment systems and controls were built at Aries fabrication facility and field installed by Aries' staff.



REVERSE OSMOSIS FILTER

The wastewater treatment system treats 140 gpm of plating rinse waters with Micro Filter (MF) and Reverse Osmosis (RO) technology. The system was designed to produce 112 gpm of high quality RO permeate to be used as rinse water. The RO concentrate is discharged to the local wastewater treatment plant. Solids are dewatered using a recessed chamber filter press.



NEW WASTEWATER RECYCLE SYSTEM vs OLD SYSTEM

	Old WWT System	New Aries WWT & Recycle System
Raw water flowrate – gpm	45 gpm	140 gpm
System Recovery Rate - %	0 %	80 %
Treated Wastewater Recycle (reuse) – gpm	0 gpm	112 gpm
Final effluent flowrate – gpm	45 gpm	28 gpm
Treated recycled water quality – TDS	No water recycled	< 35 ppm TDS

For further product and technical assistance, contact your Aries Chemical Representative, aries@arieschem.com or call Aries @ 315 346 – 1489.

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