

Projects - Machinery - Engineering - Process Automation and Controls

Electroplating and Paint tunnel effluent

The client operates a large electroplating, stamping shop and a continuous paint tunnel. Our scope of work was the design and manufacture of a pilot plant installation utilizing impregnated fiber filters and multiple membrane technology to remove heavy metals, VOC's and coagulated polymer flocks to allow for full scale industrial modeling and scale-up.

**Membrane units**

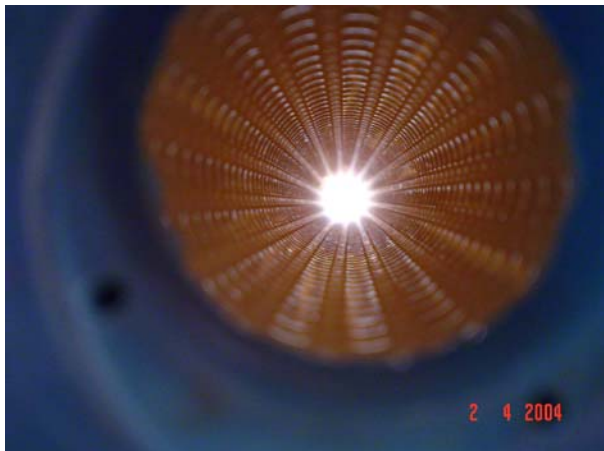
The location in an industrial park puts a premium in control effluent water discharge quality and emphasizes the need to maximize water recovery and minimize waste.

The very extreme PH, clay and organic contents provided also additional design challenges and careful construction materials specifications selection to meet technical needs and safety standards.

To optimize results, we designed a pre treatment system with special filters, backwash flush to remove fibers, specialized carbon filters, and followed by a high efficiency multiple stage membrane system, to operate at high PH and temperatures.

A series of high precision metering pumps are also provided to optimize reagent water control.

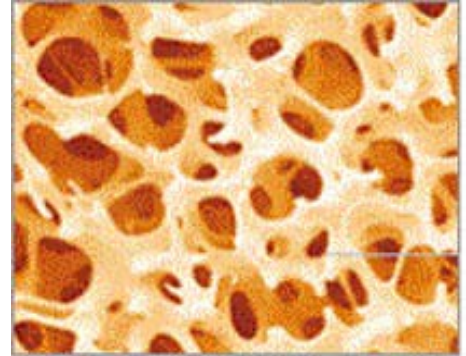
The Effluent quality met and exceed target, allowing for a full scale industrial design.

**Polymer impregnated fibers****Inside view of high pressure cartridge**

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A very modern and complete set of Ultra Sonic flow meters and digital analytical laboratory instruments was also provided to ensure constant process quality monitoring and raw materials inspection.



Indagro monitored the plant process parameters, chemical analysis and collection of samples during 60 days, and test programming was up-dated weekly with the client's team of engineers to further evaluate different operational loadings and materials.

The testing results exceeded expectations for separation efficiency and allowed for industrial design of the new treatment system to meet all requirements

Indagro also supplied engineering design and installation / start – up services. By careful planning and support of our highly qualified engineers the system was up and running in less than 10 days

