



Ultrafiltration Systems

- *Treatability studies*
- *Analysis*
- *Capital and operating cost preparation*
- *Design*
- *Build*
- *Complete skid mounted/modular treatment systems*
- *Installation*
- *Parts management*
- *Client satisfaction*

Enprotec manufactures factory preassembled ultrafiltration systems for treating a wide variety of industrial wastewaters. These include oily wastes, coolants, chemical and mechanical emulsions, metal hydroxide precipitates, suspended solids, colloidal solids, pigments and other particulates.

This tubular membrane system is capable of treating wastewaters ranging from heavy oily emulsions typically at 2,000 GPD to low oil particulate separations up to 10,000 GPD.

Laboratory and pilot systems are available to confirm the application, membrane type and material, recovery from cleaning and output rates.

Membranes

- High velocity flow through a hollow tubular membrane scours the surface of the membrane to help prevent fouling and blinding by solids and oil. This parallel flow to the membrane surface results in high filtration rates and assists cleaning. Low (typically 1 to 20 psig) trans membrane pressures assist membrane life. Many types of membranes are available depending upon the application.

Ultrafiltration advantages:

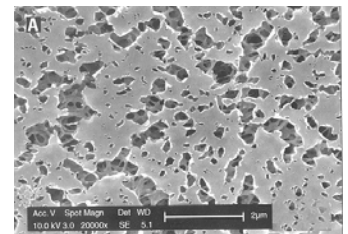
- Semi-automatic operation with almost no operator attention.
- No chemical treatment. No acid cracking emulsions.
- Reduces hauling coolants and oils by up to 98%.
- No sludge generation or disposal costs.
- Standard easily obtained industrial components.
- No hazardous chemicals to store or prepare.

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Hebron, KY 41048

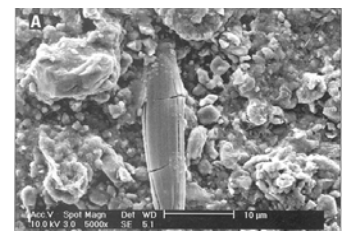
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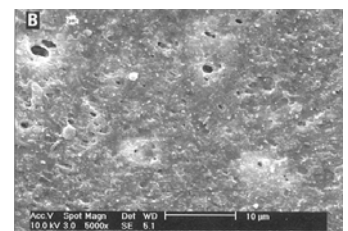
Reduce Membrane fouling use Enprotec's R3f prefiltration with alum coagulation (ref AWWA Journal – April 06, K J. Howe, pg 133)



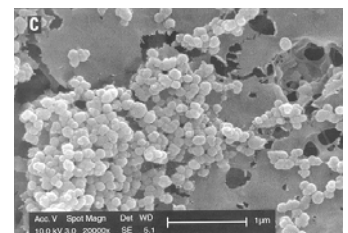
Clean membrane polypropylene microfiltration



Raw water filtered by polypropylene microfiltration membrane



Prefiltered raw water followed by filtration using polypropylene microfiltration membrane



Prefiltered alum coagulated raw water followed by filtration using polypropylene microfiltration membrane (Note: Clean membrane with coagulated alum colloids on the surface).