Hydration Technology Innovations

High Performance Ultrafiltration Systems with HTI's SepraMem™ Membrane

HTI has pioneered unique versions of High Performance Ultrafiltration membranes targeted at separating oily wastewaters in industrial and food manufacturing applications. HTI's SepraMem UF family of membrane products available in spiral wound cartridges, are your ultimate solution to difficult oily wastewater applications.

Many industries and processes produce oil containing waste streams that are difficult to treat using conventional methods. Cutting fluids, wash down water and food processing waste contain high concentrations of emulsified oils and fats. Regulations typically require aggressive filtration or treatment before discharge and traditional waste treatment solutions are ineffective or prohibitively expensive.

When used to separate emulsified oils and fats from wastewater streams HTI's SepraMem UF technology:

- Resist high solids fouling
- Substantially improves water quality
- Provides an energy efficient solution
- Eliminates the use of dangerous chemicals and compounds, thereby reducing environmental impact

In High Performance Ultrafiltration, hydrostatic pressure forces the high concentration emulsified oil solution against a specialized semipermeable membrane that separates the oil from the water and removes suspended solids. HTI's SepraMem UF technology is widely applicable for filtration or concentration of difficult commercial and industrial waste streams.

HTI's innovative SepraMem family of Ultrafiltration products provides the complete solution for your oil/water separation wastewater problems. With SepraMem membranes, HTI engineers have created a unique and proprietary cellulose ester flat sheet membrane that is extremely oleophobic while at the same time highly hydrophilic. In short the SepraMem membrane hates oil, but loves water. In some applications, the SepraMem membrane has concentrated emulsions to as high as 30% oil.

The technology is ideally suited for emulsified oils generated from metalworking, hydraulics and aqueous parts washing. In most cases the alternative is expensive evaporation or hauling and disposal. A few examples of the many applications for HTI's SepraMem are:

- Oil and gas E&P produced water
- Emulsified oily wastewaters
- Colloidal silica concentration
- Wastewaters from food processing
- Wash waters from metal chip processing
- Metal working fluids
- Industrial laundry
- Pretreatment to reverse osmosis
- Alkali wash recycle