



Demulsifier Resolves Ultrafiltration Concentrate Problem

Problem

Ultrafiltration membranes are widely used in the treatment of oily wastewaters, such as metalworking coolants, industrial laundries, parts-washing etc. The clarified water permeates through the membrane leaving behind the reject phase, high in oil and solids. Also remaining in the concentrate are surfactants and oil-coated particles, which make the U.F., concentrate a highly stabilized and persistent emulsion.

Solution

RECOVEROL* ECO 6N50 was found to resolve this emulsion under varying conditions of concentration and temperature. In certain cases, the addition of acid speeded up the phase separation, without creating corrosivity problems.

Results

Case I

An aircraft manufacturer in the Midwest generates a U.F. concentrate, analyzing at around 50% BS&W. This is treated with 2000 ppm of ECO 6N50, injected in-line, then heated to 150°F and fed continuously to a 3-phase centrifuge. Clean oil with 1-2% BS&W is recovered, along with fairly clear, solids-free water and a small volume of relatively dry solids.

Case II

An aircraft manufacturer in the Northwest treat their U.F. concentrate at 110°F, by mixing into the holding tank 3000 ppm of ECO 6N50, followed by 2000 ppm of sulfuric acid. After 1-2 days settling, the concentrate is dehydrated from an initial 60-70% BS&W down to less than 10%.

**Trademark of Emulsions Control, Inc.*