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METAL PROCESSING-4 TREATABILITY

Integrated Engineers, Inc. conducted the below treatability on a Metal Processing facility that were using soluble machine coolants and cutting fluids in their machining process; below are the results.

Untreated Parameters:
pH = 8.8
Conductivity = 3,010 microSiemens (uS)

This sample is representative of a **strong** emulsion similar to mop/scrubber water. The treatment required pH adjustment from the 8.8 to 6.2 pH with about 125 ppm of acid (solution was buffered with the alkaline additives). The best product was treated with 1.7 grams of Floccin-HP (powdered) in a 100 ml sample and required a lot of hard mixing (5 minutes). The dosage equates to a treatment of 141 lbs/1,000 gallons.

Recommended treatment:

- Pre-ozonation to start breaking the emulsion
- Oil skimming
- PH adjustment
- ORP Control if discharging to a POTW and need metals removed
- Flocculation