



Treatment of Tightly Emulsified Spent Coolants

Problem

A Southern California waste treatment facility suspected that certain spent coolants were contaminated with chelating metal-working additives. The emulsion stream, which was high in oil, did not readily respond to conventional demulsifiers.

Solution

A new product was needed that contained a component that would "neutralize" the effect of the chelates responsible for emulsion stability. ECA* 140 was developed to handle this particular problem. When used at 2500-3000 ppm, ECA 140 destabilized the coolant emulsion and released a compact oily layer.

Results

The customer now treats 25,000-gallon batches of this spent coolant with 50 to 80 gallons of ECA 140. The demulsifier is added slowly while agitating with compressed air for 4 hours. After overnight settling, 5-8% oil can be recovered and the clear water is discharged to the sewer. Less than 3% by volume of the sludge is removed for further dewatering. Treatment cost of 2-4 cents per gallon.

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