

Refinery Dehydrates Aggravated Crude Oil Emulsion

Problem

A refinery in Alaska attempted to treat crude slops accumulated from several locations. A chemical company had recommended soda ash, and created a large volume of highly-stabilized emulsion, analyzing at 8% solids and 60% water.

Solution

An environmental services company was invited to help. They immediately obtained a representative sample and rushed it to Emulsions Control, Inc. A treatment protocol was designed using 3000 ppm of **ECO 60BC*** at 170°F, followed by 3000 ppm of sulfuric acid. Water drop and solids removal occurred rapidly and completely.

Results

The customer treated approximately 200,000 gallons of the caustic-stabilized emulsion, by heating 15,000 gallon batches in tanks equipped with steam coils. Once heated to 170-175°F, the oil was pumped to an empty tank while adding in-line 3 gallons of **ECO 60BC** per 1000 gallons. After a contact time of one hour, the oil was pumped back while metering in 93% sulfuric acid at 2.5 gallons per 1000 gallons.

Within 12-24 hours, all water and solids had settled out, leaving clean, bright crude oil analyzing at <0.02 % solids and non-detectable water.

In the future the refinery will utilize **ECO 60BC** chemistry to treat crude slop, without need of sulfuric acid.

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