



Dewatering Crude Slops- Simple and Effective

Problem

A crude slop treater in the Mountain region used centrifuge with heat and polymer but was only able to reduce water content to 1-3%. His iron count was as high as 400-800 ppm. Gravity and viscosity fluctuations made reliable centrifugation a concern.

Solution

Several ECO demulsifiers were tested at 170-180°F, and ECO* 91NG at ~1000 ppm (1 gal/1000 gal) gave the best results, reducing water and solids down to less than 0.5%.

Results

The customer now treats 250 bbl batches using 1 gal/1000 gal of ECO 91NG mixed into crude slops at ~ 180°F. After 15 minute contact, the mixture is ready to feed the 3-phase centrifuge, with a small concentration of polymer added just upstream.

Recovered oil typically analyzes at 0.2-0.3%, with the iron count in the 20-40 ppm range. De-oiled solids are scrolled out fairly dry and oil-free. The water phase retains no emulsified oil or suspended solids.

Many types of crude slops have so far been processed with consistent results.

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