

Laboratory Evaluation of RECOVEROL* Demulsifiers For Lube Oil

Introduction

The dehydration of waste lube oil has not been economically profitable for many reclaimers as a result of inconsistent treatment, high sludge volumes, and lengthy settling requirements.

Today reclaimers are faced with yet another challenge, heavy metal reduction in waste oil.

RECOVEROL* demulsifiers have been developed to cope with these challenges and meet stringent regulatory requirements.

Emulsions Control, Inc. has developed a simple and reliable procedure, modified from American Society of Testing & Material (ASTM), to evaluate RECOVEROL* demulsifiers for waste lube oil treatment.

Recommended Procedure

1. Obtain a representative, chemical-free emulsion sample.
2. Determine BS&W (see information Bulletin No. 6).
3. Pour sample into 100 ml. graduated bottles and heat to 160-180°F.
4. For metal removal, add 2000-4000 ppm sodium hydroxide (50% solution) or Metal Deactivation Pretreatment, and shake 100 times by hand. Allow 1-2 hours contact.
5. Inject approximate amount of ECO demulsifier, 0.1 ml. for 1000 ppm, 0.2 ml. for 2000 ppm, etc.
6. Give bottles 50-100 shakes, depending on the extent and duration of mixing in the system.

7. Look for early signs of emulsion resolution; color change, droplet size, increased fluidity, etc.
8. Replace bottles in water bath or oven and monitor periodically; 1, 4, 15 hours. Read percent water and clean top oil.
9. Select the demulsifier at the concentration that gives the most rapid recovery of clean oil, the least unresolved emulsion (interface) and the minimum oil loss into the water.
10. Expect BS&W around 0.5%, 60-90% metal removal, and significantly reduced metals and ash.

Technical Service

Emulsions Control, Inc. offers a complete package of preliminary system evaluation, chemical and dosage selection, the supply of chemical and supervision of initial trials.

ECI also has the ability to formulate tailor-made demulsifiers for unusual emulsion problems. Technical service and further information are available through your ECI representative.

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