114 F

LABORATORY AND MESOSCALE TESTING OF ELASTOL[T.M.] AND BRAND M DEMOUSSIFIER*

24529

M. Bobra and P. Kawamura
Consultchem
Ottawa, Ontario

M. Fingas and D. Velicogna
Environment Canada
Ottawa, Ontario

ABSTRACT

Recently, 2 promising oil spill treating agents have been developed. They are: Elastol, a viscoelastic enhancing agent, and Brand M Demulsifier/Demoussifier. Preliminary testing of the products were encouraging and as a result, the U.S. Minerals Management Service and Environment Canada decided to conduct further testing on a larger scale. These planned tests included wave basin testing and an offshore ocean trial.

Results from laboratory and tank testing of Elastol were presented at the 1987 AMOP Conference. Complete results from that study are presented in Bobra et.al.(1987a). This paper starts off with a brief summary of those findings and then presents a summary of the work performed to develop applicators suitable for mesoscale use for the 2 treating agents and to test the effectiveness of the products when thus applied.

SUMMARY OF PREVIOUS FINDINGS

The bulk of the work presented at the 1987 AMOP Conference was performed within the laboratory and on a small scale. The first phase of that work examined what effect Elastol had on specific oil properties and its effect upon the physical processes which occur to spilled oil. A simple and portable "die swell" apparatus was constructed in order to obtain a quantified characterization of the elastic component of treated oils. Die swell is a physical phenomenon associated with elastic fluids and manifests itself when the fluid is forced through a small opening (or die); the diameter of the extrudate swells to a diameter greater than the die opening. By measuring the degree of die swell exhibited, a relative indication of elasticity could be obtained.

[T.M.] Elastol is a registered trademark of General Technology Applications Inc.
* Brand M is a surfactant based demulsifier formulated by Environment Canada.