

A study on oil adsorbency for sorbents of snare types

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I. Introduction

Objective of the study

- Using oil sorbents for removal of oil
 - While widely used in spill clean up, sorbents have problems such as secondary contamination, retrieval, storage and disposal
 - The use of oil sorbents is generally considered to be one of the most efficient techniques mainly due to the lower costs and high effectiveness
- This study describes laboratory tests that covers the performance of adsorbents as snare types sorbents in floating and nonemulsified oils from surface of water
 - ⇒ Compare existing domestic performance test as the notification of Ministry of Public Safety and Security with ASTM standard method

II. Experiments

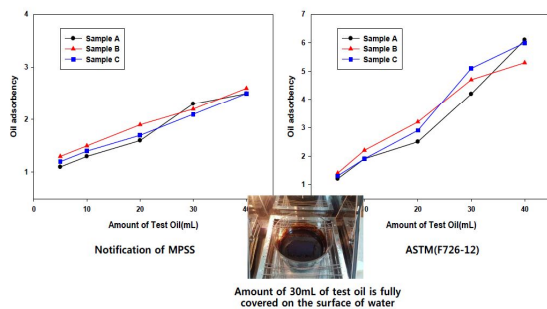
Summary of Test Apparatus

- Test Oil is Marine Fuel Oil(MFO 30) with viscosity 20.99mm²/s(at 50°C)
 - Plan to experiment Bunker-A as test oil
- Test Cell is a glass bowl with 30cm(diameter) x 20cm(depth) half-filled fresh water
- Mesh Baskets to drain water shall be of a sufficient size and strength to accommodate the sample size and weight
- Shaker, capable of a frequency of 150 cycles/min and an amplitude of 2.5 cm, for ASTM Standard Method
- Test samples are three snare types of adsorbents(15 cm long x 10g weight) produced local companies

III. Results & Further Work

Oil adsorbency for adsorbents of snare types

- Comparison of Test methods for Oil adsorbency of sorbents



IV. Conclusions

- Snare sorbents as loose fibres or look like cheerleaders' pompons
 - effective on a wide range of oils
 - catch tarballs and small quantities of oil brought by tides and waves
- Snare sorbents by ASTM test with shaking have greater sorption capacity
 - Physical properties by shaking affect the flow rate of oils
- The oil with high viscosity tends to have higher adsorption ratio
 - Sorbents easily hold the oils having higher specific gravity

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