The Mechanical Separation of an Oil and Water Mixture

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The purpose of this experiment was to find a way to take oil out of water by using filtration and density method. In the experiment two apparatuses were built, one for filtration and one for density. The filtration apparatus allows an oil and water mixture to pass through filters to catch the oil and allow clean water to come out. The density apparatus allows an oil mixture to pass through different chambers and let to settle to be able to separate oil and water. The hypothesis was that the filtration method will allow more oil to be taken out of the water as compared to the density method because the oil will be absorbed by the filters and allow for more oil to be captured. The results from this experiment were: filtration method 3.5%, density method 3.8%, and a target value of 4.5%. The target value was the oil to water ratio that was being tested. Over all the filtration method was the most efficient. In conclusion, the information that was received from this experiment could be used to help oil companies improve the cleanup after an oil spill happens.

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