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PROCESS SIMULATION OF HYDROCARBONS REMOVAL FROM WATER SURFACE USING A CAPILLARY ABSORPTION SYSTEM

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Abstract

The paper presents a conceptual model applied for simulating petroleum hydrocarbon removal using an absorption system that works via capillary action. The mathematical model allows numerical assessment of the capillary ascensions for diverse liquids (hydrocarbons). Also, the model assesses the volume of hydrocarbons picked-up by the capillary absorption system.
The goal of this paper is to give an account of the physical concepts that make up the basis of oil absorption via capillary action. The paper also sets up a theoretical framework suitable for description and modeling of capillary phenomena in oil recovery using absorbents.

Keywords: oil sorbents, oil spill, oil absorption, capillary phenomena, mathematical modelling

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