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(54) Title: PROCESS, METHOD, AND SYSTEM FOR REMOVING HEAVY METALS FROM FLUIDS

(57) Abstract: Trace amount levels of heavy metals such as mercury in crude oil are reduced by contacting the crude oil with an oxidizing agent and then with a reducing agent. In one embodiment, the oxidizing agent is selected from the group of hydroperoxides, organic peroxides, inorganic peracids and salts thereof, organic peracids and salts thereof, halogens such as iodine (I₂), bromine (Br₂), and ozone. The treatment converts non-volatile mercury in the crude oil into a volatile form for subsequent mercury removal by any of stripping, scrubbing, adsorption, and combinations thereof. In one embodiment, at least 50% of the mercury is removed. In another embodiment, the removal rate is at least 99%.



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