

Title (en)  
PROCESS AND APPARATUS FOR THE TREATMENT OF WASTE OILS

Title (de)  
VERFAHREN UND VORRICHTUNG ZUR AUFARBEITUNG VON ALTÖL

Title (fr)  
PROCEDE ET DISPOSITIF POUR LE TRAITEMENT DES HUILES USEES

Publication  
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Application  
**EP 97900905 A 19970124**

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• US 59247896 A 19960126

Abstract (en)  
[origin: WO9727273A1] The present invention is directed to a process and apparatus for the reclaiming and re-refining of waste oils. The process comprises raising a temperature of a feed mixture of fresh waste oil and a recycled non-volatile residue to a range of 400 DEG C to 490 DEG C for a time sufficient to cause pyrolysis of said heavy hydrocarbons contained in the feed mixture, but insufficient to permit substantial undesired polymerization, oxidation and dehydrogenation reactions to take place in said feed mixture; cooling the resulting pyrolyzed waste oil mixture to a temperature in the range of 300 DEG C to 425 DEG C, and maintaining said temperature while allowing volatile components in the pyrolyzed waste oil mixture to evaporate, leaving a non-volatile residue containing said contaminants; condensing the evaporated volatile components to form a reclaimed oil product; and mixing the non-volatile residue with fresh waste oil to form more of said feed mixture and repeating said temperature raising, cooling, evaporation and mixing steps on a continuous basis, while continuing to condense volatile components evaporated from said pyrolyzed waste oil mixture. The apparatus comprises a heating unit, a container, a condenser and pumping equipment and piping. The process and apparatus of the present invention generate #2 diesel fuel, gasoline and coke from waste oil.

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