IPOS
200004904-9

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International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : C10G 29/20, 21/20, 19/02 | A1

(11) International Publication Number: **WO 99/50376**

(43) International Publication Date: 7 October 1999 (07.10.99)

(21) International Application Number: PCT/US99/06078

(22) International Filing Date: 19 March 1999 (19.03.99)

(30) Priority Data:
09/049,466 27 March 1998 (27.03.98) US

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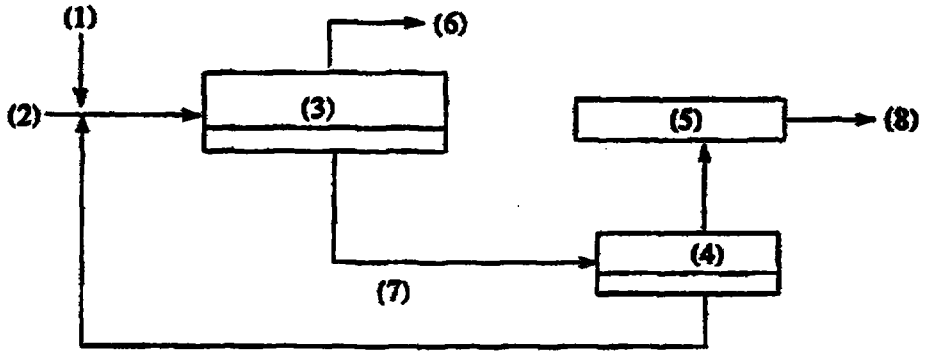
(81) Designated States: AU, BR, CA, CN, JP, MX, NO, RU, SG, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.

(54) Title: REMOVAL OF NAPHTHENIC ACIDS IN CRUDE OILS AND DISTILLATES



$$R{-}\underset{\displaystyle H}{\overset{\displaystyle |}{N}}{-}(CH_2CH_2O)_mH \qquad (I)$$

(57) Abstract

The instant invention is directed to a process for extracting organic acids including naphthenic acids, heavy metals, and sulfur from a starting crude oil comprising the steps of: (a) treating the starting crude oil containing organic acids, heavy metals, and sulfur with an amount of an ethoxylated amine and water under conditions and for a time and at a temperature sufficient to form a water-in-oil emulsion of amine salt wherein said ethoxylated amine has formula (I): where m=1 to 10 and R=C_3 to C_6 hydrocarbon; (b) separating said emulsion of step (a) into a plurality of layers, wherein one of such layers contains a treated crude oil having decreased amounts of organic acids, heavy metals and sulfur; (c) recovering said layer of step (b) containing said treated crude oil having decreased amounts of organic acids, heavy metal and sulfur and layers containing water and ethoxylated amine salt.