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- (71) Applicant (for all designated States except US): **H R D CORPORATION** [US/US]; 14549 Minetta, Houston, Texas 77035 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **HASSAN, Abbas** [US/US]; 14549 Minetta, Houston, Texas 77035 (US). **HASSAN, Aziz** [US/US]; 14549 Minetta, Houston, Texas 77035 (US). **ANTHONY, Rayford G.** [US/US]; 14549 Minetta, Houston, Texas 77035 (US).
- (74) Agent: **WESTBY, Timothy S.**; PORTER HEDGES LLP, P.O. Box 4078, Houston, Texas 77210-4078 (US).
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[Continued on next page]

(54) Title: HIGH SHEAR APPLICATION IN PROCESSING OILS

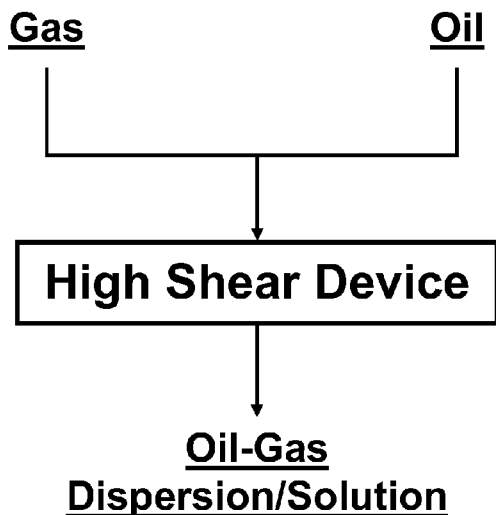


Figure 2A

(57) Abstract: Herein disclosed is a method of processing oil, comprising providing a high shear device comprising at least one rotor and at least one complementarily-shaped stator configured to mix a gas with a liquid; contacting a gas with an oil in the high shear device, wherein the gas is an inert gas or a reactive gas; and forming a product, wherein the product is a solution, a dispersion, or combination thereof. Herein also disclosed is a high shear system for processing oil, comprising; at least one high shear device, having an inlet and at least one rotor and at least one complementarily-shaped stator configured to mix a gas with a liquid; a gas source fluidly connected to the inlet; an oil source fluidly connected to the inlet; and a pump positioned upstream of a high shear device, the pump in fluid connection with the inlet and the oil source.

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INTERNATIONAL SEARCH REPORT

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PCT/US2012/032517**A. CLASSIFICATION OF SUBJECT MATTER****C10G 3/00(2006.01)i, C10L 1/32(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

C10G 3/00; C07C 51/255; C07C 51/36; C11B 3/10; C11C 3/12; B01J 8/00; C11B 3/00; B01J 19/18; B01D 17/00; C10L 1/32

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: oil, high, shear, rotor, stator, gas

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008-0161588 A1 (HASSAN, A. et al.) 03 July 2008 See paragraphs [0043], [0127], [0144], claims 1, 16, 17, 25, 31.	1-25
X	US 2005-0033069 A1 (HOLL, R. A. et al.) 10 February 2005 See abstract, paragraphs [0009], [0025], [0040], [0041], [0047], [0066], [0074], [0101], figure 3.	1-25
X	US 03988329 A (ZUCKER, F. J.) 26 October 1976 See abstract, column 5, line 41- column 6, line 22, claims 1, 3, 7-9, figure 1.	1-25
X	US 2011-0003370 A1 (GORDON, R. et al.) 6 January 2011 See abstract, paragraphs [0024], [0025], [0028], claims 1-3, 5, 6, 8, 12, 13, 15.	1-25
A	US 2009-0306419 A1 (MYONG, K. K. et al.) 10 December 2009 See abstract, paragraphs [0007], [0009], claim 1.	1-25

 Further documents are listed in the continuation of Box C. See patent family annex.

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"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

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Korean Intellectual Property Office
189 Cheongsu-ro, Seo-gu, Daejeon Metropolitan City,
302-701, Republic of Korea

Facsimile No. +82-42-472-7140

Authorized officer

LEE Dong Wook

Telephone No. +82-42-481-8163



INTERNATIONAL SEARCH REPORT

Information on patent family members

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