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[Continued on next page]

(54) Title: CATALYTICAL HYDRODESULFURIZATION OF KEROSENE IN TWO STEPS ON COBALT-MOLYBDENUM CATALYST AND INTERMEDIATE STRIPPING

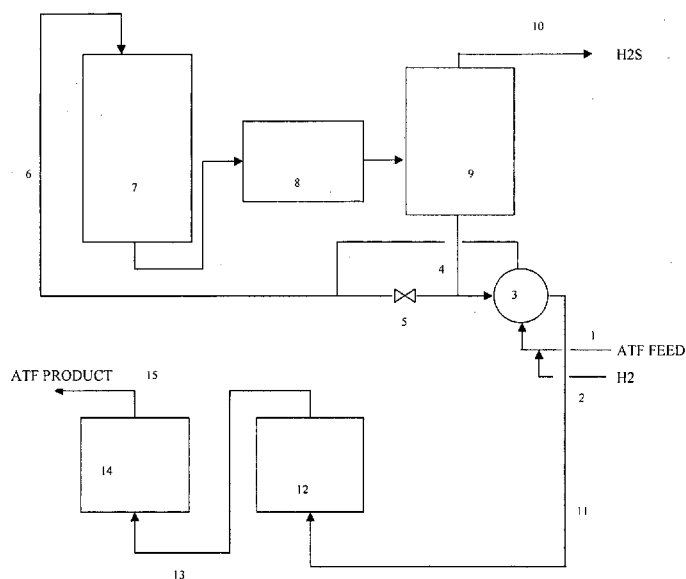


FIGURE 1

(57) Abstract: The present invention relates to a process for selective removal of mercaptan from aviation turbine fuel (ATF) feed comprising: mixing aviation turbine fuel feed with hydrogen, at a pressure in range of 3 bar to 20 bar to obtain a reaction mixture, heating the reaction mixture at a temperature range of 150 °C to 350 °C to obtain a heated mixture, reacting the heated mixture with a hydrotreating catalyst in a reactor to obtain a reactor effluent, stripping H₂S gas from the reactor effluent to obtain a stripper bottom product, and removing moisture from the stripper bottom product to obtain aviation turbine fuel product having less than 10 ppm mercaptan. The process of present invention also improves properties such as colour, acidity etc of other products. The present invention further relates to an aviation turbine fuel product having less than 10 ppm mercaptan prepared by a process of the present invention. The process of present invention is flexible and can be employed for a grass root unit or retrofitting-existing unit.



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LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
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B. FIELDS SEARCHED		
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FREEMAN SELF ET AL.: "GAS OIL HYDROTREATING PROCESS", AMERICAN INSTITUTE OF CHEMICAL ENGINEERING REFINING OVERVIEW: PETROLEUM PROCESSES AND PRODUCTS, 31 December 2000 (2000-12-31), 31 December 2000 (2000-12-31), XP0000002657144, Retrieved from the Internet: URL:http://astraenergy.net/images/002_Hydr oprocessing.pdf [retrieved on 2011-08-18]	1-12
Y	SEE FIGURE ----- -/-	1-12
☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
* Special categories of cited documents :		
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "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 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family		
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18 August 2011	31/08/2011	
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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CHUNSHAN SONG ET AL.: "DESULFURIZATION" In: "ENCYCLOPEDIA OF CHEMICAL PROCESSING", 31 December 2006 (2006-12-31), TAYLOR AND FRANCIS, XP0000002657145, pages 651-661,	12
Y	see tables 1,2; page 652, right column, lines 33-40. see table 3, footnote (b). see figures 1, 2, 3 -----	1-12
X	US 3 850 744 A (STROM J ET AL) 26 November 1974 (1974-11-26)	1-12
Y	see table 2 at col. 9,10 sulfur ppm "south louisiana furnace oil" see table 1 at col. 7,8 mercaptan sulfur weight percent of "south louisiana furnace oil", "south louisiana kerosene" being 4 ppm and 6 ppm respectively. see col.6, lines 36-52 and lines 59-66= pressure 7 kg/cm ² or less and temperature 260 to 232°C -----	1-12
X	US 3 876 532 A (PLUNDO ROBERT A ET AL) 8 April 1975 (1975-04-08)	1-12
Y	see tables 1-3 -----	1-12

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3850744	A	26-11-1974	NONE	

US 3876532	A	08-04-1975	NONE	
