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(54) Title: PROCESS OF SYNTHESIS GAS CONVERSION TO LIQUID FUELS USING SYNTHESIS GAS CONVERSION CATALYST AND NOBLE METAL-PROMOTED ACIDIC ZEOLITE HYDROCRACKING-HYDROISOMERIZATION CATALYST

(57) Abstract: A process is disclosed for converting a feed comprising synthesis gas to liquid hydrocarbons within a single reactor at essentially common reaction conditions. The synthesis gas contacts a first catalyst bed comprising a synthesis gas conversion catalyst, and a second catalyst bed comprising a mixture of a hydrogenation catalyst and a solid acid catalyst. A Fischer-Tropsch wax is formed over the first catalyst bed and the wax is then hydrocracked and hydroisomerized over the second catalyst bed, resulting in liquid hydrocarbons substantially free of solid wax.

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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, C07C, B01J

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 practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: (Fischer* <or> Gas To Liquid), (syngas <or> syn*), hydrocrack*, hydroisomeriz*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 2055380 A1 (PETROLEO BRASILEIRO S.A. PETROBRAS) 06 May 2009 See abstract; [0024]-[0047]; claims	1-15
Y	US 2006-0100293 A1 (EDGAR EVERT STEENWINKEL et al.) 11 May 2006 See [0018]; claims	1-15
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PX	EP 2067762 A1 (PETROLEO BRASILEIRO S.A. PETROBRAS) 10 June 2009 See figure 1; [0025]-[0029]; [0050]-[0069]	1-15
A	US 6472441 B1 (KIBBY; CHARLES L.) 29 October 2002 See abstract; claims	1-15
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 Further documents are listed in the continuation of Box C. See patent family annex.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	JP 2005-513242 A (EXXONMOBIL RESEARCH AND ENGINEERING COMPANY) 12 May 2005 See abstract; claims; figure 1	1-15
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