

EUROPEAN PATENT APPLICATION

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Process for upgrading heavy hydrocarbonaceous oils.

Process for the upgrading of heavy, viscous hydrocarbonaceous oils, comprising (a) fractionally distilling said hydrocarbonaceous oil to produce at least one distilled fraction and a residuum without substantially cracking said hydrocarbonaceous oil, (b) contacting said residuum with a liquid hydrogen donor material stream to produce a hydrocracked stream and (c) separating said hydrocracked stream into a gaseous stream and a liquid hydrocracked stream, characterized in that:

(d) said liquid hydrocracked stream is fractionally distilled to separate from higher and lower boiling fractions a hydrogen donor precursor stream boiling above a temperature from substantially 180°C to substantially 200°C and below a temperature from substantially 330°C to substantially 350°C.

(e) said hydrogen processor stream is catalytically reacted with a hydrogen-rich gaseous stream to produce a hydrogenated hydrogen donor material, and,

(f) at least part of said hydrogenated hydrogen donor material is recycled as the material which constitutes the entire liquid hydrogen donor material stream to contact said residuum.



European Patent
Office

EUROPEAN SEARCH REPORT

0035864

Application number
EP 81 30 0887

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl.)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
	<p><u>GB - A - 784 136 (ESSO)</u></p> <p>* Page 1, lines 13-26; page 2, line 105 - page 3, line 25; page 3, line 91 - page 4, line 49; page 4, line 65 - page 5, line 19; page 7, line 74 - page 8, line 99; claims 1-22; figures 1-5 *</p> <p>--</p>	1,3,4,6,7	C 10 G 47/34 65/12
D	<p><u>US - A - 2 953 513 (A.W. LANGER)</u></p> <p>* Column 1, lines 26-64; column 2, lines 21-55; column 3, line 72 - column 4, line 54; examples 2-4; figure 1; claims 1-15 *</p> <p>--</p>	1-5	TECHNICAL FIELDS SEARCHED (Int. Cl.)
DA	<u>US - A - 4 115 246 (SWEENEY)</u>		C 10 G 45/28 47/22 47/34 49/20 65/12
A	<u>GB - A - 708 244 (ANGLO-IRANIAN)</u>		
A	<u>GB - A - 758 413 (ESSO)</u>		

			CATEGORY OF CITED DOCUMENTS
			<p>X: particularly relevant</p> <p>A: technological background</p> <p>O: non-written disclosure</p> <p>P: intermediate document</p> <p>T: theory or principle underlying the invention</p> <p>E: conflicting application</p> <p>D: document cited in the application</p> <p>L: citation for other reasons</p>
			&: member of the same patent family, corresponding document
<p>The present search report has been drawn up for all claims</p>			
Place of search	Date of completion of the search	Examiner	
The Hague	15-07-1981	LO CONTE	