

EUROPEAN PATENT APPLICATION

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54 Hydrocarbon treatment process.

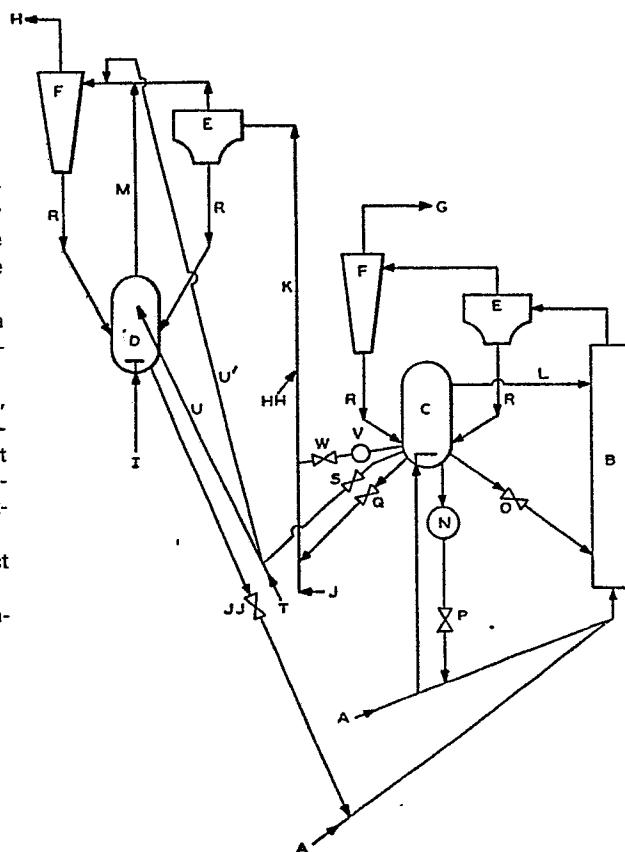
57 A process wherein lower boiling products (H) are obtained from a hydrocarbon feed (J and/or HH) by contacting the feed with fluidized solid contact material at elevated temperature in a riser (K), spent contact material is separated and stripped of volatile hydrocarbons in a stripping zone (D), stripped contact material is regenerated with oxygen-containing gas (A) in a regeneration zone (B), and hot freshly regenerated fluidized solid contact material is returned to the riser (K), the process further including two or more of the following:

(i) suspending hot regenerated contact material in a carbonizable lift gas at the lower portion of the riser and injecting hydrocarbon feed higher in the riser;

(ii) charging hydrocarbon feed into the base of the riser, steam cooling a portion of the hot freshly regenerated contact material, and contacting the hydrocarbon feed with hot regenerated contact material upstream of where said hydrocarbon feed is contacted with the steam cooled contact material;

(iii) cooling a portion of hot freshly regenerated contact material before returning it to the riser; and

(iv) adding a portion of freshly heated regenerated contact material to said stripping zone.





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	US-A-3 886 060 (OWEN) * Figure 1; column 5, line 55 - column 6, line 10; column 4, lines 3-10; claims *	1-4	C 10 G 11/18
Y	---	5	
X	EP-A-0 137 998 (ASHLAND OIL) * Figure 2; abstract *	1-4	
Y	---	5	
Y	US-A-2 353 505 (SCHEINEMAN) * Figure *	5	
A	---	4,5	
A	US-A-2 427 820 (THOMAS) * Figure 1 *	4,5	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
A	---	4,5	C 10 G B 01 J
A	US-A-2 374 073 (BELCHETZ) * Figure *	4,5	

The present search report has been drawn up for all claims			
Place of search THE HAGUE	Date of completion of the search 22-07-1987	Examiner MICHIELS P.	
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			