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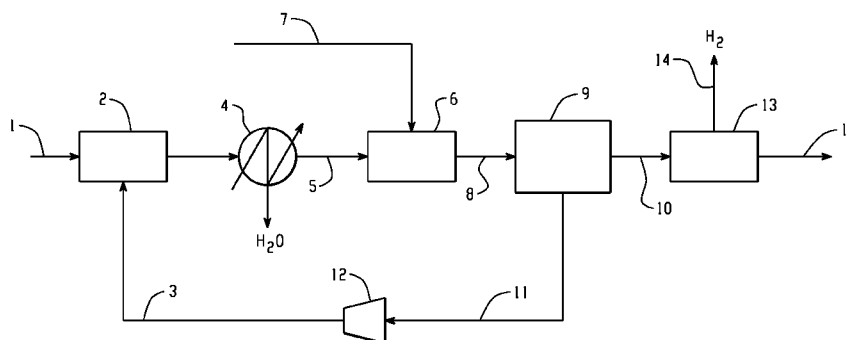


Fig. 1

(57) **Abstract:** Disclosed herein are processes for producing a synthesis gas mixture and for producing an organic chemical product. The process can comprise: (i) steam reforming a feed gas stream comprising one or more hydrocarbons to produce a reformed synthesis gas mixture comprising H₂, CO and CO₂; (ii) cooling reformed synthesis gas mixture obtained in (i) and removing H₂O from the reformed gas mixture; (iii) subjecting reformed synthesis gas mixture obtained in (ii) to a reverse water gas shift reaction so as to decrease the H₂/CO molar ratio of the reformed synthesis gas mixture; and (iv) removing CO₂ from synthesis gas mixture obtained in (iii). A first stream of CO₂ is added to the gas mixture in step (i) and a second stream of CO₂ is added to the gas mixture in step (iii), and wherein the first and/or second streams comprise recycled CO₂ removed in step (iv).

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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ADD.

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)

C01B C10K

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)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 737 647 A2 (AIR PROD & CHEM [US]) 16 October 1996 (1996-10-16)	1-16, 20-22, 25-29
Y	page 1, lines 10-15, 40/41 page 4, lines 56-59 page 5, lines 1-30 page 7, lines 34-47 page 11, lines 42-44 page 16, lines 8,9,12 page 17, lines 5-13; figure 8 claim 10	17-19, 23,24
Y	----- US 2003/014974 A1 (ROJEY ALEXANDRE [FR] ET AL) 23 January 2003 (2003-01-23)	17-19
A	paragraphs [0038] - [0041] ----- -/--	1-16, 20-29

☒ 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

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A	[US] ET AL) 18 October 2007 (2007-10-18) paragraphs [0086], [0108]	1-22, 25-29
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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