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(54) Title: PROCESS FOR THE GENERATION OF A SYNTHESIS GAS

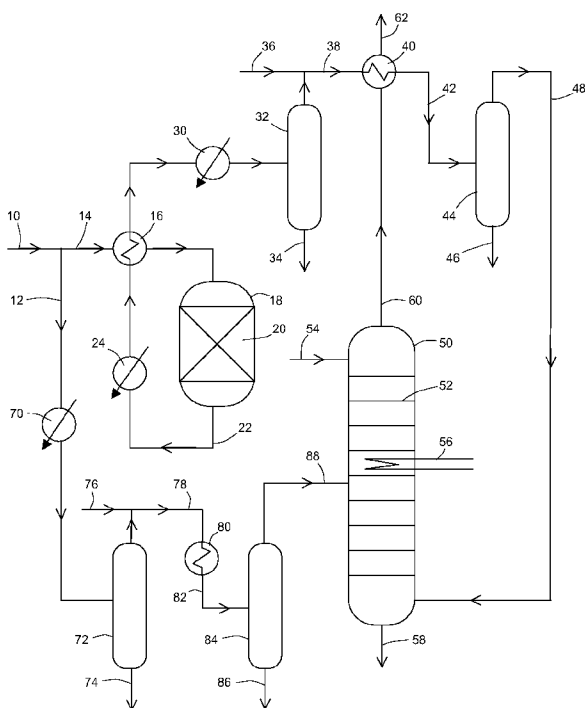


Figure 2

(57) Abstract: A process for the generation of a synthesis gas is described comprising the steps of: (a) forming a raw synthesis gas comprising hydrogen and carbon oxides by (i) gasification of a carbonaceous feedstock at elevated temperature and pressure, and (ii) cooling and washing the resulting gas stream with water, (b) dividing the raw synthesis gas into first and second streams, (c) subjecting the first stream of raw synthesis gas, in the presence of steam, to the water gas shift reaction to form a shifted gas mixture, (d) cooling the second raw synthesis gas stream and shifted gas mixture to below the dew point to condense water and separating the resulting condensates therefrom to form a dry raw synthesis gas mixture, and a dry shifted gas mixture respectively, (e) feeding the dry raw synthesis gas mixture and a dry shifted gas mixture to a gas-washing unit operating by means of counter-current solvent flow, such that the solvent flowing through said unit contacts first with the dry raw gas mixture and then the dry shifted gas mixture, and (f) collecting from said gas-washing unit a synthesis gas having a stoichiometry ratio, $R = (H_2 - CO_2)/(CO + CO_2)$, in the range 1.4 to 3.3. The synthesis gas may be used for methanol production, for the Fischer-Tropsch synthesis of liquid hydrocarbons

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or for the production of synthetic natural gas.



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C. 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	US 4 235 800 A (PINTO ALWYN [GB]) 25 November 1980 (1980-11-25) figure II	1-23
A	US 5 392 594 A (MOORE ROBERT B [US] ET AL) 28 February 1995 (1995-02-28) the whole document	1-23
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
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