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EUROPEAN PATENT APPLICATION

21 Application number: **88200829.5**

51 Int. Cl.⁴: **C 10 J 3/46**
C 10 J 3/52

22 Date of filing: **27.04.88**

30 Priority: **05.05.87 DE 3714915**

43 Date of publication of application:
09.11.88 Bulletin 88/45

84 Designated Contracting States: **DE GB IT NL**

88 Date of deferred publication of search report:
08.02.89 Bulletin 89/06

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54 **Process and apparatus for the preparation of synthesis gas.**

57 A process for the preparation of synthesis gas by partial combustion of finely divided solid carbon-containing fuel with an oxygen-containing gas in a reactor. The liquid slag formed during the partial combustion process falls into a water bath or slag quench vessel where it solidifies and from there falls by gravity into a lockhopper from which the solidified slag is batchwise sluiced out of the gasification system. A gas bubble or gascap is created and maintained in the lockhopper, the pressure of the gas bubble being lower than the pressure in the slag quench vessel. Thus an initial downwards flow of water and slag is created during opening of the valves between the lockhopper and the slag quench vessel.

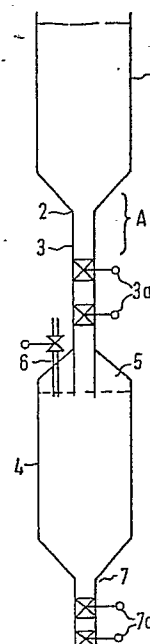


FIG.1



| 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-3 235 313 (WALDHOFFER) * Column 3, line 1 - column 3, line 10 * | 1-8 | C 10 J 3/46 C 10 J 3/52 |
| A | GB-A-2 086 931 (TEXACO) * Page 4, claims 1-13 * | 1 | |
| A | US-A-4 533 363 (JAHNKE) * Columns 9-10, claims 1-6 * | 1 | |
| | | | TECHNICAL FIELDS SEARCHED (Int. Cl.4) |
| | | | C 10 J |
| The present search report has been drawn up for all claims | | | |
| Place of search THE HAGUE | | Date of completion of the search 16-11-1988 | Examiner WENDLING J.P. |
| CATEGORY OF CITED DOCUMENTS 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 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 | | | |