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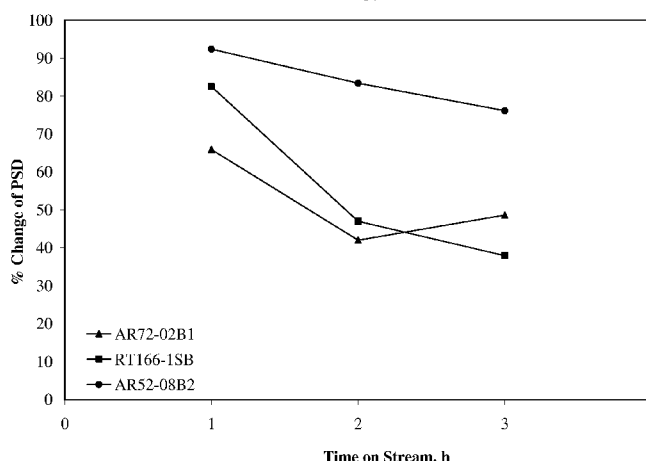
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- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

[Continued on next page]

(54) Title: STRENGTHENING IRON FISCHER-TROPSCH CATALYST BY CO-FEEDING IRON NITRATE AND PRECIPITATING AGENT OR SEPARATELY PRECIPITATING FROM FERROUS NITRATE AND FERRIC NITRATE SOLUTIONS

FIG. 1



(57) Abstract: A method of producing a catalyst precursor comprising iron phases by co-feeding a ferrous nitrate solution and a precipitation agent into a ferric nitrate solution to produce a precipitation solution having a desired ferrous:ferric nitrate ratio and from which catalyst precursor precipitates; co-feeding a ferric nitrate solution and a precipitation agent into a ferrous nitrate solution to produce a precipitation solution having a desired ferrous:ferric nitrate ratio and from which catalyst precursor precipitates; or precipitating a ferrous precipitate from a ferrous nitrate solution by contacting the ferrous nitrate solution with a first precipitation agent; precipitating a ferric precipitate from ferric nitrate solution by contacting the ferric nitrate solution with a second precipitation agent and combining the ferrous and ferric precipitates to form the catalyst precursor, wherein the ratio of ferrous:ferric precipitates is a desired ratio.



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**PCT/US2009/045636****A. CLASSIFICATION OF SUBJECT MATTER*****B01J 23/745(2006.01)i, B01J 37/03(2006.01)i, B01J 27/25(2006.01)i***

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)

IPC 8 B01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models since 1975

Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) "catalyst" "ferrous" "ferric" "precipitation"

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                                 | Relevant to claim No. |
|-----------|--------------------------------------------------------------------------------------------------------------------|-----------------------|
| X         | US 2004/0106517 A1 (Thulani Humphrey Dlamini et al.) 03 June 2004<br>see examples 4-5 and claims 18-20.            | 1 - 30                |
| A         | US 6,627,666 B1 (Rentech Inc.) 30 September 2003<br>see the abstract and claims 40-41.                             | 1 - 30                |
| A         | US 5,504,118 A (Rentech Inc.) 02 April 1996<br>see the abstract and claims 2-3.                                    | 1 - 30                |
| A         | US 4,622,308 A (Research Association for Petroleum Alternatives Development) 11 November 1986<br>see the abstract. | 1 - 30                |



Further documents are listed in the continuation of Box C.



See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&amp;" document member of the same patent family

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**INTERNATIONAL SEARCH REPORT**

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| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s)                                                                                                                            | Publication<br>date                                                                                                        |
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