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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- of inventorship (Rule 4.17(iv))

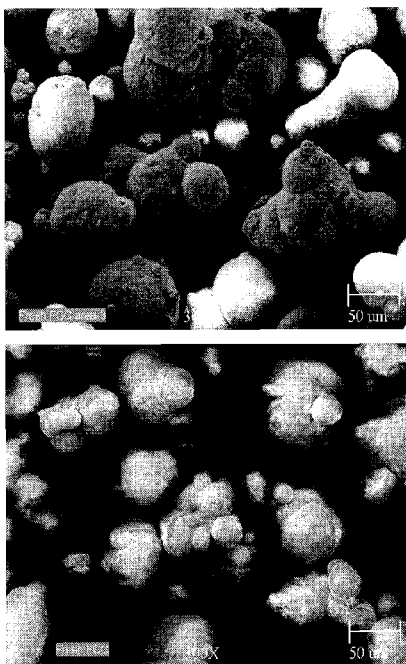
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- (54) **Title:** PROCESS TO IMPROVE FORMULATIONS OF HYDROCARBON CONVERSION CATALYSTS THROUGH REMOVAL AND MODIFICATION OF DETRIMENTAL PARTICLES AND REUSE OF MODIFIED FRACTIONS

FIGURE 1



- (57) **Abstract:** An improved hydrocarbon conversion catalyst is obtained through removal and modification by various means, of detrimental large and/or small particle fractions. Such modified fractions may be reused in the same or similar processes. The improved catalyst is advantageous to a wide range of hydrocarbon conversion processes.



— *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))*

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/029341**A. CLASSIFICATION OF SUBJECT MATTER*****B01J 37/00(2006.01)i, B01J 35/08(2006.01)i, C10G 11/18(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)

B01J 37/00; B01J 38/06; B01J 8/26; B01J 38/72; B07B 7/00; C07C 27/06; C07C 1/00; B01J 23/72; B01J 38/10

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

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: spray-dried catalyst, size, screening, air classification, fraction

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 2009-0069451 A1 (BELMA DEMIREL et al.) 12 March 2009 See abstract, paragraphs [0023], [0067], [0069]	1, 7, 12-13, 15 2-4, 8, 14, 16-20
X A	US 7090081 B2 (STEPHEN NEIL VAUGHN et al.) 15 August 2006 See abstract, claims 5, 8	12-13 1-4, 7-8, 14-20
X A	US 6800579 B2 (MICHEL DAAGE et al.) 05 October 2004 See claims 13, 14	12 1-4, 7-8, 13-20
X A	US 2007-0088187 A1 (LAWRENCE W. MILLER et al.) 19 April 2007 See claims 1-6	12 1-4, 7-8, 13-20

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

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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

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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