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(54) Title: METHOD FOR MAKING A HYDROPROCESSING CATALYST

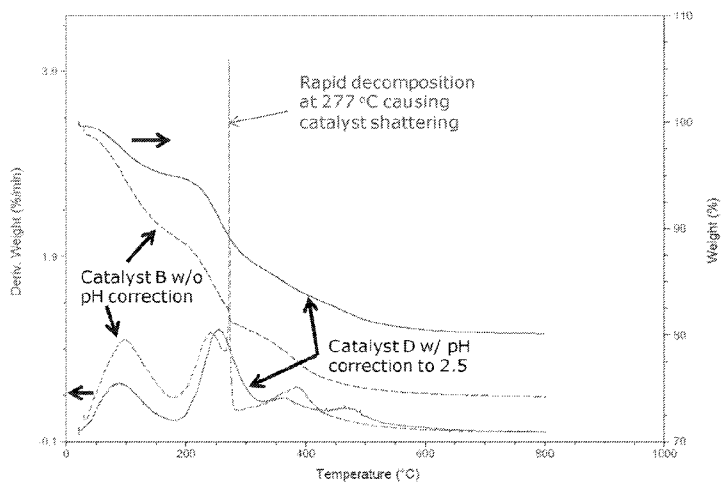


FIG. 1

(57) Abstract: The present invention is directed to a method for making a catalyst for hydroprocessing a carbonaceous feedstock under hydroprocessing conditions. More particularly, the present invention is directed to methods for inhibiting rapid decomposition of ammonium nitrate during calcination of the catalyst following metal impregnation, wherein ammonium nitrate is formed when a nitrate-containing composition and an ammonium-containing component is used in the deposition of metal onto the catalyst.



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A. CLASSIFICATION OF SUBJECT MATTER*C10G 45/12(2006.01)i, B01J 29/08(2006.01)i, B01J 37/02(2006.01)i, B01J 37/20(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)

C10G 45/12; C10G 45/04; C10G 47/02; B01J 23/00; B01D 8/00; B01J 27/047; B01J 29/06

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: hydroprocess, nitrate, zeolite

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006-0060503 A1 (STUART SOLED et al.) 23 March 2006 See abstract, claims 1, 7, 14-20, paragraphs 20, 22, 28-29, 32, 34-35, 38-40, 42, 44, 55-58, 60.	1-2, 4-6, 8-15, 17-20
Y	See claim 14, paragraphs 42	3, 7, 16
Y	US 2004-0152587 A1 (EDWARD JULIUS CREYGHTON et al.) 05 August 2004 See abstract, claims 1-10, paragraphs 100-106.	3, 16
Y	US 2005-0202964 A1 (FERNANDO ANTONIO CAVALCANTI et al.) 15 September 2005 See abstract, claims 1, 3, 6, paragraphs 52, 76, 78, 133, 141, 201.	7

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

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2006-0060503 A1	23.03.2006	AU 2006-306306 A1	03.05.2007
		AU 2006-306306 B2	03.03.2011
		CA 2579616 A1	06.04.2006
		CA 2579616 C	01.02.2011
		CA 2627372 A1	03.05.2007
		CN 101360560 A	04.02.2009
		EP 1791639 A1	06.06.2007
		EP 1951426 A2	06.08.2008
		JP 2008-513204 A	01.05.2008
		JP 2009-513786 A	02.04.2009
		US 2006-0060502 A1	23.03.2006
		US 2007-0084754 A1	19.04.2007
		US 7544632 B2	09.06.2009
		US 7591942 B2	22.09.2009
		US 7648941 B2	19.01.2010
		WO 2006-036609 A1	06.04.2006
		WO 2006-036610 A1	06.04.2006
		WO 2007-050632 A2	03.05.2007
		WO 2007-050632 A3	03.05.2007
		WO 2007-050633 A2	03.05.2007
WO 2007-050633 A3	03.05.2007		
US 2004-0152587 A1	05.08.2004	US 7192900 B2	20.03.2007
US 2005-0202964 A1	15.09.2005	BR P10500609A	10.07.2007
		CN 1830557 A	13.09.2006
		EP 1574253 A2	14.09.2005
		EP 1574253 A3	29.03.2006
		JP 2005-262212 A	29.09.2005
		KR20060043537A	15.05.2006