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- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

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(54) Title: A PROCESS FOR INITIATING A HIGHLY SELECTIVE ETHYLENE OXIDE CATALYST

(57) Abstract: A start-up process for epoxidation of ethylene is provided. The process includes initiating an epoxidation reaction by reacting a feed gas composition in the presence of an epoxidation catalyst at a first temperature of about 180 °C to about 210 °C. The first temperature is increased to a second temperature of about 230°C to about 290°C, over a time period of about 6 hours to about 50 hours, while simultaneously adding a sufficient concentration of moderator so that the amount of moderator adsorbed on the catalyst after achieving the second temperature is from about 10 to about 50 g/m³ of catalyst. The second temperature is maintained for about 50 hours to about 350 hours, while regulating the feed gas composition to contain about 0.5% to about 25% CO₂. The second temperature is decreased to a third temperature, while simultaneously increasing moderator concentration to a level greater than the sufficient concentration.



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A. CLASSIFICATION OF SUBJECT MATTER*C07D 301/10(2006.01)i, C07C 11/04(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)

C07D 301/10; C07D 301/06

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: epoxidation, ethylene, ethylene oxide, moderator

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 7553980 B2 (RIZKALLA, NABIL et al.) 30 June 2009 See claims 1, 12; column 7, line 51 - column 8, line 14; column 8, line 49 - column 9, line 16; column 12, line 50 - column 13, line 9.	1-11
A	US 2004-0110971 A1 (EVANS, WAYNE ERROL et al.) 10 June 2004 See claims 1, 7-8, 13-15, 17-18; paragraphs [0041]-[0042].	1-11
A	US 2007-0032670 A1 (ZHANG, LIPING et al.) 08 February 2007 See claims 1, 6; paragraph [0100].	1-11
A	WO 2004-002971 A1 (SHELL OIL COMPANY) 08 January 2004 See claims 1, 4-5, 7-8; p. 10, lines 12-20; p. 17, lines 7-24.	1-11

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

* Special categories of cited documents:

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"E" earlier application or patent but published on or after the international filing date

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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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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

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