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(71) Applicant *(for all designated States except US)*: **EXXONMOBIL CHEMICAL PATENTS INC.** [US/US]; A Corporation Of The State Of Deleware, 5200 Bayway Drive, Baytown, TX 77520-2101 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **HAN, Lu** [CN/US]; 13139 Thornapple Place, Herndon, VA 20171 (US). **DAVULURI, Rathna, P.** [US/US]; 4879 Annamohr Drive, Fairfax, VA 22030 (US). **SMALLEY, Christopher, G.** [US/US]; 11422 Donnington Court, Manassasa, VA 20111 (US). **HAGEMEISTER, Mark, P.** [US/US]; 4410 Water Elm Way, Houston, TX 77059 (US). **SUGITA, Masaaki** [JP/US]; 8205 Peridot Dr #407, Mclean, VA 22102 (US). **FAMOLARO, Joseph, S.** [US/US]; 44103 Tippecanoe Terrace, Ashburn, VA 20147 (US). **TINGER, Robert, G.** [US/US]; 903 Murphy Lane, Friendswood, TX 77546 (US).

(74) Agents: **GRIFFIS, Andrew, B.** et al.; Exxonmobil Chemical Company, Law Technology, P.O. Box 2149, Baytown, TX 77552-2149 (US).

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[Continued on next page]

(54) Title: FLUID BED REACTOR WITH STAGED BAFFLES

(57) Abstract: The invention relates to a process of alkylating aromatic hydrocarbons, and more particularly a process of making paraxylene by alkylation of benzene and/or toluene with methanol and/or dimethyl ether, and to an apparatus for carrying out said process, the improvement comprising staged injection of one of the reactants, with the stages separated by structured packing so as to minimize at least one of gas phase back-mixing, by-pass phenomena, and gas bubble size.

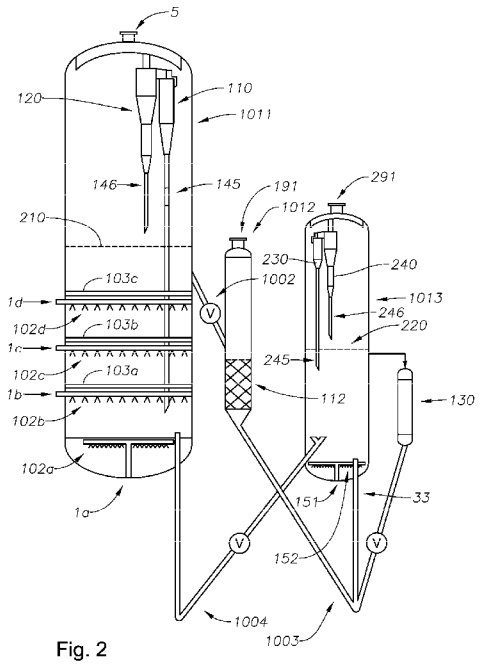


Fig. 2

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A. CLASSIFICATION OF SUBJECT MATTER

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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)

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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: fluid bed reactor, staged baffles, alkylating aromatic bydrocarbons

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6642426 B1 (JOHNSON; DAVID L. et al.) 04 November 2003 See abstract; column 4, line 18-column 10, line 28; figure 1	1-15
A	US 03982903 A (ANDERSON; ROBERT F.) 28 September 1976 See abstract; column 2, line 30-column 5, line 39; figure 1	1-15
A	US 2007-0232843 A1 (BEECH; JAMES H. et al.) 04 October 2007 See abstract; paragraph [0018-0077]; figure 1	1-15
A	US 6897346 B1 (MERRILL; JAMES T. et al.) 24 May 2005 See abstract; column 5, line 62-column 13, line 21; figure 1	1-15

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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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

"&" document member of the same patent family

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Korean Intellectual Property Office
189 Cheongsa-ro, Seo-gu, Daejeon Metropolitan City, 302-701, Republic of Korea

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Authorized officer

LEE, Jin Hong

Telephone No. 82-42-481-8649

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