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(21) International Application Number: PCT/US95/15660 (22) International Filing Date: 4 December 1995 (04.12.95) (30) Priority Data: 08/364,145 27 December 1994 (27.12.94) US (71) Applicant: MOBIL OIL CORPORATION [US/US]; 3225 Gallows Road, Fairfax, VA 22037 (US). (72) Inventors: CHENG, Jane, Chi-Ya; 26 Deer Trail Drive, Clarksburg, NJ 08510 (US). SMITH, Charles, Morris; 19 Locust Street, Princeton, NJ 08540 (US). VENKAT, Chaya, Rao; 35 Littlebrook Road North, Princeton, NJ 08540 (US). WALSH, Dennis, Edward; 36 Redwood Drive, Northampton Township, Richboro, PA 18954 (US). (74) Agents: KENEHAN, Edward, F. et al.; Mobil Oil Corporation, 3225 Gallows Road, Fairfax, VA 22037 (US).	(81) Designated States: AU, CA, CN, JP, KR, SG, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <div style="text-align: center; font-size: 1.2em;">RTMP's copy</div>	

(54) Title: **CONTINUOUS PROCESS FOR PREPARING ETHYLBENZENE USING LIQUID PHASE ALKYLATION AND VAPOR PHASE TRANSALKYLATION**

(57) Abstract

The present invention relates to a process for preparing ethylbenzene using liquid phase alkylation and vapor phase transalkylation. The liquid phase alkylation reaction may be catalyzed by an acidic solid oxide, such as MCM-22, MCM-49 and MCM-56. The vapor phase transalkylation may be catalyzed by a medium-pore size zeolite such as ZSM-5. The process may be run continuously with the continuous introduction of fresh benzene feed containing at least 500 ppm of nonbenzene hydrocarbon impurities. The combined ethylbenzene product of these alkylation and transalkylation reactions has very low levels of impurities including xylene, hydrocarbons having 7 or less carbon atoms and hydrocarbons having 9 or more carbon atoms.