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[21] Application No.: GCC/P/2001/1669 [22] Filing Date: 13/10/2001 [30] Priority: [31] Priority No. [32] Priority date [33] State 0025081.1 13/10/2000 GB [72] Inventors: 1- Ian Allan Beattie Reid, 2- David Charles Wilson, 3- Philip Hall [73] Owner: BP Chemicals Limited, Britannic House, 1 Finsbury Circus London, EC2M 7BA, United Kingdom [74] Agent: Hasan AL-Mulla	[51] Int. Cl. ⁷ : C07C 5/48; C10G 11/22 [56] Cited Documents: - US 4069272 A (HUTSON JR.) 17 January 1978 - US 4891464 A (STAGGS) 02 January 1990 - US 5430209 A (AGASKAR et al.) 04 July 1995 - EP 0529793 A2 (THE BRITISH PETROLEUM COMPANY P.L.C.) 03 March 1993

[54] PROCESS AND APPARATUS FOR DETECTING A LOSS OF REACTION IN A HYDROCARBON CONVERSION REACTION

[57] Abstract: A hydrocarbon conversion process such as an auto-thermal cracking process in which a hydrocarbon feed and a molecular oxygen-containing gas are contacted in a reaction zone in the presence of a catalyst to produce an outlet stream having an oxygen concentration which is at, near or above the flammable limit and in which process a loss of reaction is detected and used as a signal to activate means for mitigating the risk of explosion downstream of the reaction zone. The loss of reaction may be detected for example by a sudden increase in oxygen concentration in the outlet stream and/or a sudden drop in temperature of the outlet stream.

No. of claims: 36