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(54) **Title:** ALKYLATION OF BENZENE AND/OR TOLUENE WITH METHANOL

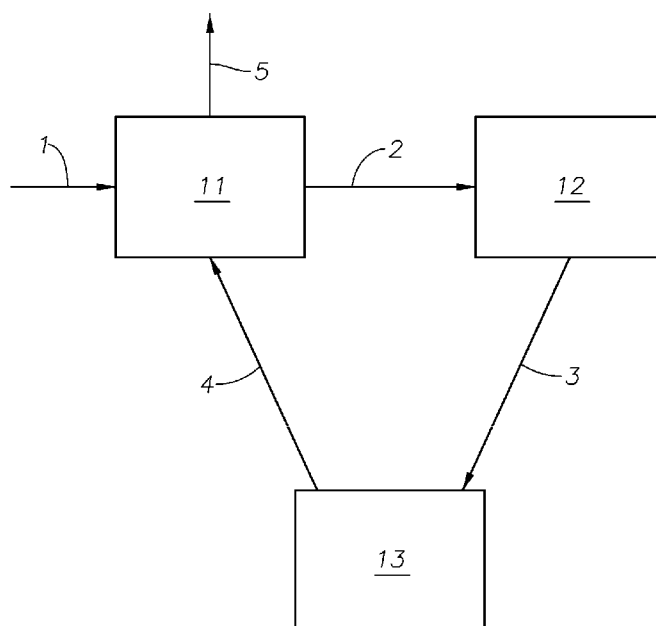


Fig. 1
(Prior Art)

(57) **Abstract:** The present inventors have surprisingly discovered that paraxylene selectivity is found to increase as the amount of coke on catalyst increases. In embodiments the paraxylene selectivity and productivity is maximized by controlling the amount of coke on the catalyst while maintaining xylene yield at an acceptable value. The control of coke may be achieved by one or a combination of the following techniques: increasing catalyst on-oil time, decreasing catalyst residence time in the regenerator, reducing the air or oxygen supply to the regenerator, and decreasing catalyst circulation rate, or a combination thereof.



**Declarations under Rule 4.17:**

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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