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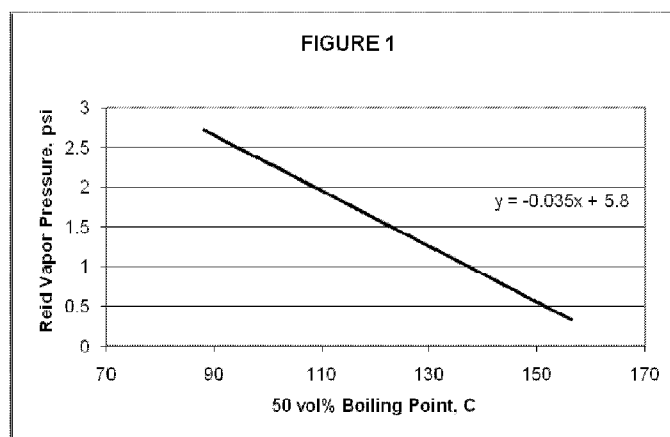
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[Continued on next page]

(54) Title: PROCESS FOR PRODUCING A JET FUEL



(57) Abstract: A process for producing a jet fuel, comprising contacting an olefin and an isoparaffin with an unsupported catalyst system comprising an ionic liquid catalyst and a halide containing additive in an alkylation zone under alkylation conditions to make an alkylate product, and recovering the jet fuel from the alkylate product, wherein the jet fuel meets the boiling point, flash point, smoke point, heat of combustion, and freeze point requirements for Jet A-1 fuel. Also a process for producing a jet fuel, comprising providing a feed produced in a FC cracker comprising olefins, mixing the feed with an isoparaffin, alkylating the mixed feed in an ionic liquid alkylation zone, and separating the jet fuel from the alkylated product. We also provide a process comprising alkylating isobutane and butene in the presence of specific chloroaluminate ionic liquid catalysts, to produce a jet fuel.



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