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## Declarations under Rule 4.17:

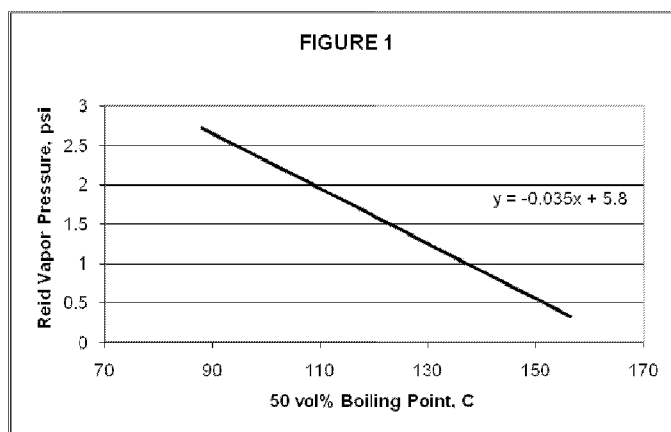
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
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[Continued on next page]

(54) Title: PROCESS FOR PRODUCING A MIDDLE DISTILLATE



(57) Abstract: A process for producing a middle distillate or a middle distillate blending component, comprising contacting a feed comprising an olefin, an isoparaffin, and less than 5 wt% oligomerized olefin, in an ionic liquid alkylation zone with an acidic haloaluminate ionic liquid, at alkylation conditions; and recovering an effluent comprising an alkylated product that has greater than 35 vol% C10+ and less than 1 vol% C55+. Also processes for producing a middle distillate by alkylating isobutane and butene in the presence of defined chloroaluminate ionic liquid catalysts, wherein a separating step separates the middle distillate and wherein the middle distillate is from 20 wt% or higher of the total alkylate product. Also a process for producing middle distillate with FC cracker feed comprising olefins. A separated middle distillate has greater than 30 vol% C10+, less than 1 vol% C55+, and a cloud point less than -50°C.



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