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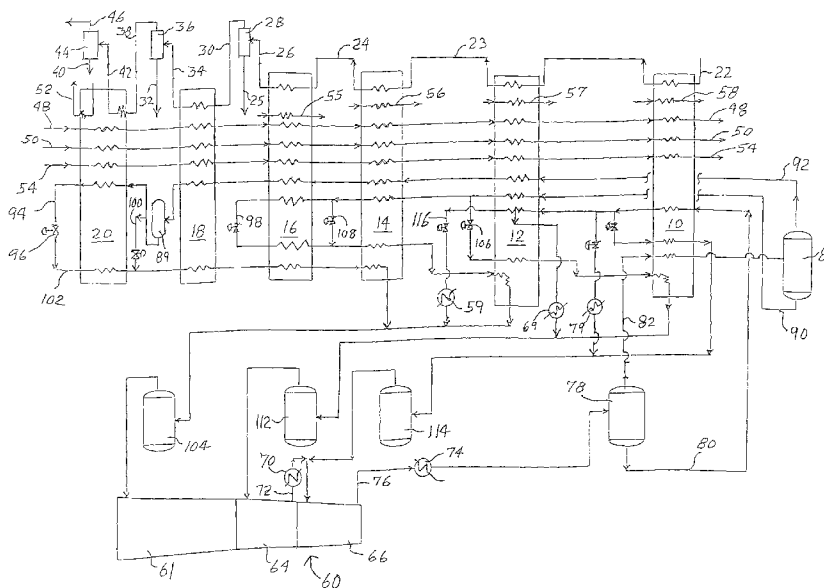
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**Declarations under Rule 4.17:**

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations

[Continued on next page]

(54) Title: OLEFIN PLANT REFRIGERATION SYSTEM



(57) Abstract: The refrigeration system for an ethylene plant comprises a closed loop tertiary refrigerant system containing methane, ethylene and propylene. The tertiary refrigerant from a compressor final discharge is separated into a methane-rich vapor fraction and two levels of propylene-rich liquids so as to provide various temperatures and levels of refrigeration in various heat exchange stages while maintaining a nearly constant refrigerant composition flowing back to the compressor and with the bulk of the total return refrigerant flow going to the first stage compressor section. This tertiary system can also be applied to an ethylene plant with a high pressure demethanizer.

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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*

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