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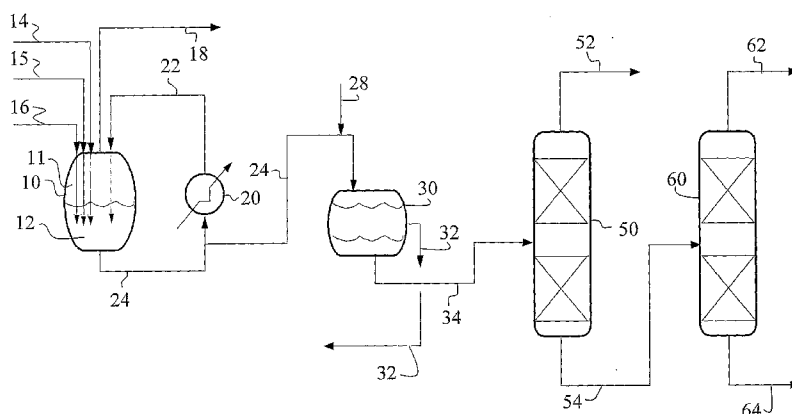
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Declarations under Rule 4.17:

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

[Continued on next page]

(54) Title: PROCESSES FOR PRODUCTION AND PURIFICATION OF NORMAL PROPYL BROMIDE



(57) Abstract: A process for oxygen-initiated hydrobromination of propene to form a crude reaction mixture of 95 GC area % n-propyl bromide. The process includes feeding an oxygen-containing gas, propene and hydrogen bromide into a liquid phase mixture comprised of n-propyl bromide and hydrogen bromide. At least the oxygen-containing gas and the propene of the feed are fed subsurface to the liquid phase mixture and either (a) the oxygen-containing gas and the propene do not come together in the absence of hydrogen bromide or (b) the oxygen-containing gas and the propene come together only in a propene:oxygen molar ratio in the range of 145:1 to 180:1. Purification processes provide a propyl bromide product containing at least 99.7 GC area % n-propyl bromide. Also provided is a novel composition of enhanced thermal stability which comprises a mixture of n-propyl bromide and isopropyl bromide. The mixture has an n-propyl bromide content of at least 99.7 GC area %, and an isopropyl bromide content of no more than 0.05 GC area %. The mixture, if subjected to storage in a closed chemically inert container at 60°C for at least 480 hours, has an APHA color of 10 or less while the mixture is devoid of any added stabilizer component.

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