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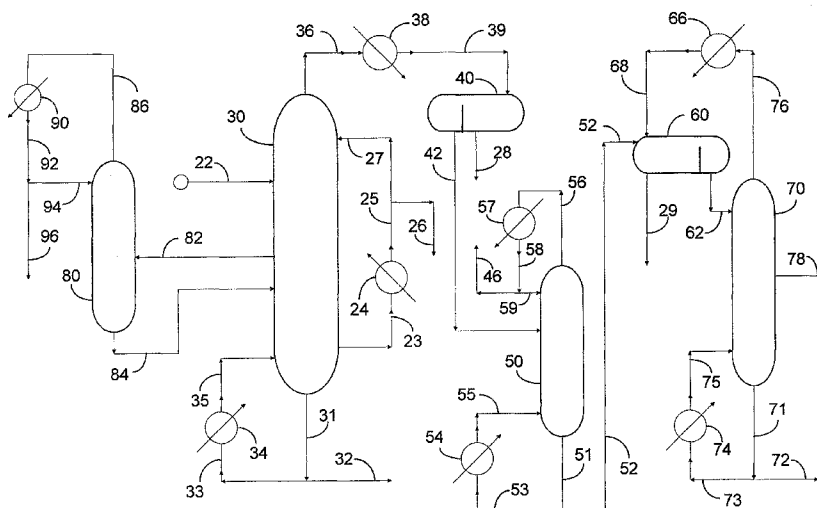
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(54) Title: METHOD FOR INHIBITING POLYMERIZATION DURING THE RECOVERY AND PURIFICATION OF UNSAT-
URATED MONONITRILES



(57) Abstract: Economical processes are disclosed for recovery and refining of valuable nitrogen-containing organic compounds formed by catalytic oxidation of least one feed compound selected from the group consisting of propane, propylene, isobutane and isobutylene in the presence of ammonia to produce a gaseous. Processes of the invention include quenching the gaseous reactor effluent with an aqueous quench liquid; forming an aqueous solution comprising the corresponding unsaturated mononitrile, hydro-
gen cyanide and other organic co-products; and using an integrated sequence of distillations and phase separations to recover for recycle of a useful aqueous liquid, and obtain the desired nitrogen-containing products. According to the invention aqueous solutions are fractionated in an integrated system of multi-stage columns while an effective polymerization inhibiting amount of at least one member of a preselected class of *p*-phenylenediamine compounds is maintained therein.

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