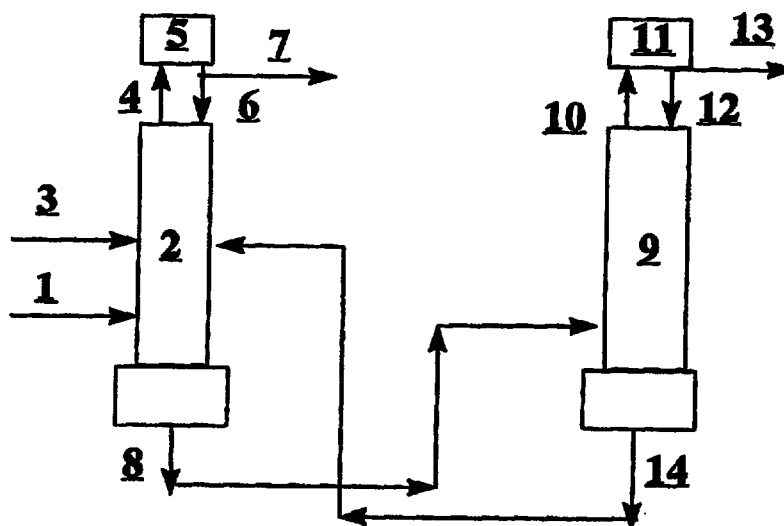


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(54) Title: PROCESSES FOR PURIFYING PERFLUOROCYCLOBUTANE



(57) Abstract

Disclosed is PFC-C318 containing less than 10 parts-per-million-molar of halogenated impurities and processes for producing such substantially-pure PFC-C318. In operating these processes, various PFC-C318-containing azeotropes and azeotrope-like compositions have been discovered and are of utility. These compositions comprise: perfluorocyclobutane (PFC-C318) and 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124); perfluorocyclobutane (PFC-C318) and 1,1,2,2-tetrafluoroethane (HFC-134a); perfluorocyclobutane (PFC-C318) and 1,1,1,2-tetrafluoroethane (HFC-134a); and perfluorocyclobutane (PFC-C318) and 1,1-difluoroethane (HFC-152a). The processes of the present invention for producing substantially-pure PFC-C318 comprise: a) azeotropic distillation processes for separating PFC-C318 from halogenated impurities, and b) extractive distillation processes for separating PFC-C318 from halogenated impurities by employing entraining agents selected from ethers, ketones, alcohols, hydrocarbons, and hydrochlorocarbons.