

R-32 separation purification from R-410a

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Waste refrigerants are required to have high-capacity, high-purity separation, refining and regeneration facilities as measures to cope with the global warming by the Kyoto Protocol and the ODS substances by the Montreal Protocol.

With the emergence of GWP 600 of R-32 in R-410a, R-32 separation technology in R-410a is attracting attention. However, separation of R-125 from R-410a is easy, whereas separation of R-32 from R-410a is difficult. A technique for separating R-32 from R-410a using extractive distillation was studied.

The Aspen Plus simulator was used for this study. The Fluid Package used REFPROP. The solvent used for the extractive distillation was selected considering the total annual cost (TAC) and energy yield.

Currently, we are studying the separation using Ethylene Glycol which is mainly used for refrigerant.

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