

Decomposition of HFC-134a in gasification-melting system

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HFCs has been considered as an eco-friendly refrigerants due to the absence of Cl which is the destruction material of the ozone layer. However, Global Warming Potential is high and HFCs has been regulated by Kyoto protocol and Bali Roadmap. HFC-134a has been used as refrigerants of air conditioner for the Korean vehicles from 1996. Therefore, the efficient treatment has been needed for the ELVs management. Absorption, thermal treatment and plasma treatment etc. have been researched. Thermal treatment of HFC-134a has been known as one of the effective methods to destroy HFC-134a. In this study, thermal treatment of HFC-134a from ELVS(end of life vehicles) has been performed in a shaft-type gasification-melting plant of 5t/d pilot and 100t/d demonstration scale. The certain amount of HFC-134a has been injected to gasification melting reactor with air and sampling has been performed after main reactor and produced gas has been analyzed with IR and GC-MS.