

Investigation on the Flammability Limits of Some Refrigerant Mixtures with Flammable Components

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An experimental apparatus has been built to measure the flammability limits of combustible gases based on the Chinese national standard of GB/T 12474-90. The flammability limits of four binary mixtures of R161/R134a, R152a/R134a, R161/N₂ and R152a/N₂ were measured with this apparatus at atmospheric pressure and ambient temperature. Comparisons were made with the literature data; good agreements for most measurements were obtained. Additionally, R134a has a better dilute effect than nitrogen in reducing the flammability of hydrofluorocarbons.