

ABSTRACT

MULTI-STAGE AMMONIA-PROCESS DECARBONIZATION METHOD

The invention relates to a method for multi-stage ammonia-process decarbonization, the method comprising absorbing, using ammonia as an absorbent, CO₂ from a process gas in an absorber including four or more stages of absorption, the four or more stages including, sequentially arranged along the flow direction of the process gas, a first-stage absorption, a second-stage absorption, a third-stage absorption, a fourth-stage absorption, and an optional higher stage absorption; and controlling a temperature of the process gas in the second- and third-stage absorptions to be not lower than a temperature of the process gas in the first-stage absorption, and a temperature of the process gas in the fourth- and the optional higher-stage absorptions to be lower than the temperature of the process gas in the first-stage absorption.

[Figure 1]