

ABSTRACT

A pre-treatment equipment for exhaust gas disposed on the entrance side of a CO₂ separation and recovery equipment, which separates and recovers CO₂ from combustion exhaust gas is
5 provided. This equipment comprises an LDH reaction tower filled with layered double hydroxide LDH and a gas cooling tower that cools the combustion exhaust gas discharged from the LDH reaction tower using cooling water. This enables efficient removal of acidic gas components from the exhaust
10 gas during CO₂ separation and recovery from waste incinerators and coal-fired power plants, while minimizing equipment and operating costs.