Atmospheric Ammonia Decomposition System

The Atmospheric Ammonia Decomposition System is engineered for the controlled breakdown of ammonia in an atmospheric environment. It incorporates temperature control, pressure regulation, and catalytic conversion to facilitate the decomposition process.

Overview

Atmospheric Ammonia Decomposition System

This atmospheric ammonia decomposition system is designed to efficiently heat liquid ammonia to temperatures between 800 and 850°C. Utilizing nickel-based catalysts, it reliably breaks down ammonia into a high-purity gas mixture consisting of 75% Hydrogen (H2) and 25% Nitrogen (N2). The system features a robust design with integrated heating elements and precise control mechanisms, making it suitable for demanding industrial applications requiring consistent gas output.

Performance Metrics

Gas Output Capacity

20 Nm3/h	75 %	25 %
Decomposition Gas Quantity	Hydrogen (H2) Concentration	Nitrogen (N2) Concentration

Purity and Pressure

Parameter	Value
Operating Pressure	0.05 MPa
Dew Point	d-60℃
Residual Ammonia	d10ppm

Technical Specifications

Consumption and Power

- Liquid ammonia consumption: 7 kg/h
- Cooling water: 0.8 T/h
- Device power: 21 kW / 380 V + 5 kW / 380 V
- Actual use power: 5 kW

Catalyst

Ni-based catalyst

Exterior Dimensions	1700 x 1600 x 2100 cm