

# GASFE AMMONIA DISSOCIATOR PLANT



## DISSOCIATED AMMONIA (CRACKED AMMONIA)

Cracked ammonia gas is a combination of hydrogen and nitrogen gas. After the purification system, this gas mixture has a high pure  $N_2+H_2$  with less impurities. This gas mixture is used for versatile applications.



### GAS COMPOSITION

75% Hydrogen + 25% Nitrogen

### RESIDUAL AMMONIA

(UNCRACKED)

1-ppm max.

### DEW POINT OF OUTLET GAS

Upto (-)80 C

### FURNACE HEATING METHOD

Electrically heated

### PRODUCT RANGES

5 NM /hr to 200 NM /hr

### GAS OUTLET PRESSURE

Up to 7 kg/cm g directly

from the Cracking Unit If required, a booster gas compressor is added to increase the pressure of the cracked ammonia.

## CRACKING TECHNIQUE

Ammonia is cracked using the Thermal Cracking technique **endothermic reaction** to produce disassociated ammonia ( $NH_3 \rightarrow N_2 + 3H_2$ ) which consists of 75% Hydrogen and 25% Nitrogen. This output gas is further purified through a purification system by removing traces of uncracked ammonia and moisture.

## SPECIFICATIONS / DATA

|                    |                         |
|--------------------|-------------------------|
| Output pressure    | : Max.7 bar             |
| Dew point          | : upto (-80 °C)         |
| Residual ammonia   | : 1-ppm (max)           |
| Outlet temperature | : + 15 °C above ambient |



## **Applications:**

- For providing reducing atmosphere for all types of Furnaces
- Stainless steel wire annealing, Bright annealing, Bimetal products annealing and Powder annealing
- Stainless steel Brazing application
- Continuous galvanizing lines
- PM industries for Sintering.
- Heat treatment industries for case hardening like Nitriding, Nitrocarburizing

## **Highlights:**

- Energy efficient
- Fully automatic
- Improved design
- High turndown ratio H<sub>2</sub> 75% N<sub>2</sub> < 25%
- Quick startup.
- Least maintenance.

## **PRODUCT LINE**

### **GAS GENERATORS WITH PURIFICATION SYSTEM**

Nitrogen Gas Generator

Cracked ammonia Gas Generator

Oxygen gas generator

Compressed Air Dryers (CAT)

All type of Batch/Continuous Furnaces and aligned accessories



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