Description

Steam assisted flares are designed to dispose of heavier waste gases which have a greater tendency to smoke. In order to prevent incomplete combustion, steam is injected into the waste stream using peripheral steam rings, center steam spargers, and/or inner induction tubes. The injection of steam has two principal effects:

- High-pressure steam flow causes turbulence in the waste stream which improves mixing and therefore improves combustion efficiency.
- Additional air is induced into the waste gas providing the oxygen necessary for augmented smokeless capacity.

Steam flares are typically used in applications where the customer has high-pressure steam available on site.

Advantages

- Low maintenance costs
- High smokeless capacity due to steam injection
- Stable, reliable combustion due to flame retention ring
- High smokeless flow rate
- Longer tip life due to steam cooling effect

SA MODEL

- External steam injection stabilizes the flame and entrains air, ensuring efficient combustion

SAI MODEL

- Internal induction tubes with venturi inlets for improved air inspiration
- Higher smokeless capacity
- Reduced noise at a given capacity
Principal Applications
- Petrochemical processing
- Petroleum refining

Design Features
- High pressure steam must be available
- High alloy material construction in the heat affected zone prevents induction tubes, rings, and spargers from warping and cracking

Primary or secondary steam injection through:
- Peripheral ring (SA Model)
- Center sparger (SA & SAI Models)
- Internal induction tubes (SAI Model)

Flame Retention Ring to stabilize combustion
- Low noise design with the use of external noise muffler (SAI Model)

Specifications

DIMENSIONS
Length: 10'-0" (3)
Diameter: 4"-84" (0.1-2.13m)

Upper Section: 304,316,310 SS, Incolloy 800H (options)

MATERIALS
Lower Section: Carbon Steel
Retention Ring: 304.316.310SS
Dynamic Seal: 304SS
Steam Ring: 321SS
Center Sparger: 321SS
Internal induction Tubes: 304.316.310SS