

Petrochemical applications



Ultimate combustion solutions and service to optimize process and environmental performance

ITAS Solvent recovery unit



Solvent Recovery Unit (SRU) is a system which allows the recover of most of the solvent used for printing. The system recovers the VOC contained in the effluent with a filtration, at low temperature, through an activated carbon bed. After filtration the flow can be send to the atmosphere while respecting the emission limits. When VOC are separated from impurities, they may be reused.

From engineering and system design to site assistance and supervision, on-line remote assistance, revamping and training, Fives designs and supplies regenerative thermal oxidizers to meet any technical requirements or project specifications, and help customers exceed their objectives in terms of polluting emission. ITAS Solvent Recovery Unit's management is fully automatic.

Optimized and easy to operate thanks to a regulation system based on flow and temperature in the combustion chamber, ITAS Solvent Recovery Units do not require direct combustion, avoiding NO_x or CO emission ; the return on investment is around 18-24 months and the treatment is turned into productive recovery, thus optimizing operations.

Sulfur Recovery Units



ITAS and Pillard ranges:

- Burners for the Claus desulfurization process for reaction furnaces
- Complete tail gas incinerators and auxiliary burners
- ITAS complete SRU packages including reactors furnace and recovery boilers

Pillard SULFLAM[®]



Double stream acid gas tip

High turndown ratio

Proprietary stages co-firing
technology



Pillard SULFLAM® is a leading technology of acid gas burners for Claus thermal reactor of Sulphur Recovery Units (SRU). It features a double stream acid gas tip allowing a two stage mix, matching the different phases of the kinetic reaction in the Claus furnace. Each Pillard SULFLAM® burner is tailor engineered, with the help of in-house CFD modeling to fit each unique SRU process characteristics so as to deliver optimal performance.

Applications

Thermal reactor furnace of Sulfur Recovery Units (Claus units)

Double stream acid gas tip

The patented double stream acid gas tip of Pillard SULFLAM® achieves a highly turbulent two stage mix of the acid gas, which improves the recovery efficiency of the Claus furnace.

High turndown ratio

Natural gas is available, while ensuring excellent flame stability during the cold start-up and refractory dry-out phases, under high excess air conditions.

Proprietary staged co-firing technology

Pillard SULFLAM® its proprietary technology of staged co-firing natural gas, allows to increase flame temperature under lean acid gas firing condition without soot formation.



Key features

Pillard SULFLAM® burner is available in axial and tangential firing configurations and can easily retrofit existing SRU, allowing improvement of S₂ conversion efficiency, sulfur quality and refractory lifetime of the Claus unit.

Available for 5TPD up to 1 000 TPD Claus units

- Axial and tangential firing configurations
- Refineries and gas plants applications
- Firing from very lean up to rich acid gas and SWS gas

References

- experience in SRU process since 1961
- over 110 references worldwide

Fives to supply SRU Pillard burners for PROSERNAT in Russia

Fives was recently awarded 2 new contracts by PROSERNAT for Lukhoil Perm gas field and Taif refineries in Russia.

PROSERNAT selected Fives and its Pillard SulFlam for its high efficiency. A high impulse acid gas burner for the Claus reaction furnace, Pillard SulFlam is at the heart of the Sulphur Recovery Unit process.

For Lukhoil Perm site in Kokiusk area, the customer was also looking for a solution able to burn lean acid gases with low H₂S content, without soot formation, which Fives provides through proprietary co-firing equipment.

A few months later, Fives was awarded another contract to supply two Pillard SulFlam for the Claus furnaces, and two Pillard GRFlam for the thermal gas treatment unit to be installed in TAIF Nizhnekamsk refinery, Russia. This equipment is planned to be delivered in 2015.

For the tail gas incineration unit, Fives offered PROSERNAT a tailor made “LoNO_x” version of its Pillard GRFlam. The main challenge was to meet the NO_x emission requirements minimizing the impact of the Amine content in the tail gas upstream.

PROSERNAT is a long term customer to Fives, and with those 2 contracts, once again confirmed its trust in the high value-added of Fives solutions for the SRU market.



- REACTION FURNACE



For
SRU Plant



Turn Key Plants
Commissioning
Start Up

