



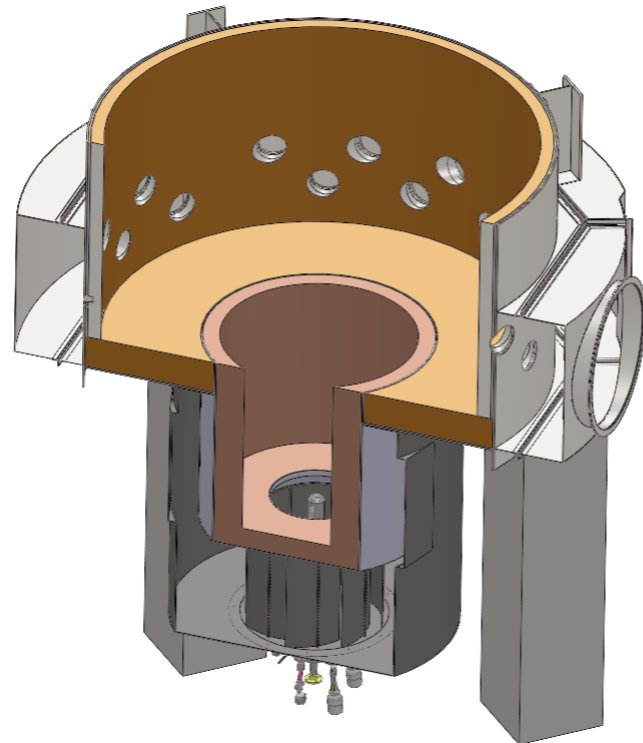
ACID GAS BURNERS READY FOR SHIPMENT

For the Sulphur Recovery Units (SRU) or others where an Acid Gas is involved, ITAS can provide:

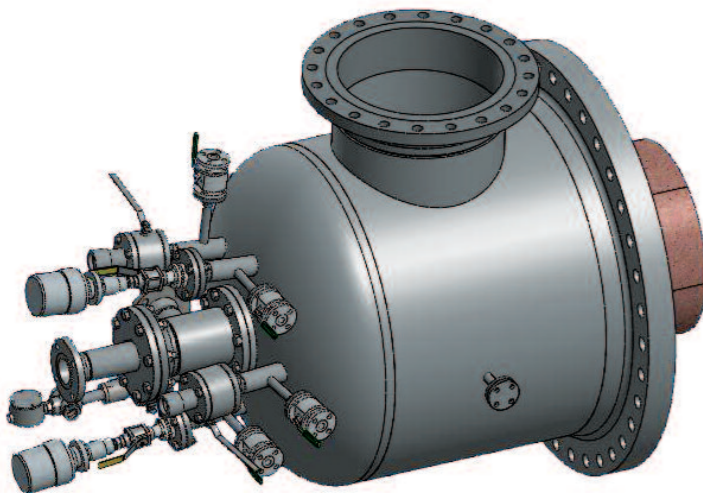
- ACID GAS BURNER
- TAIL GAS BURNER
- HIGH INTENSITY BURNER
- IN-LINE REACTOR BURNER

ITAS profile

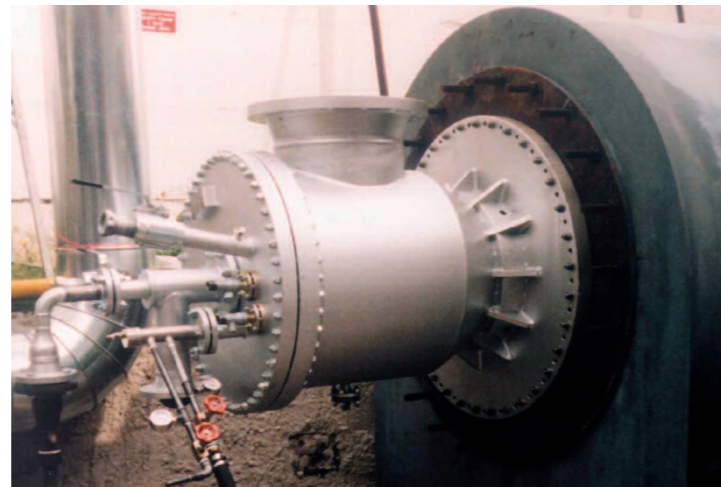
ITAS S.p.a. is an engineering company designing and supplying, amongst many other products, burners and accessories for combustion system as well as entire turn-key combustion plants.



OIL/GAS HIGH INTENSITY BURNER MIXING SECTION

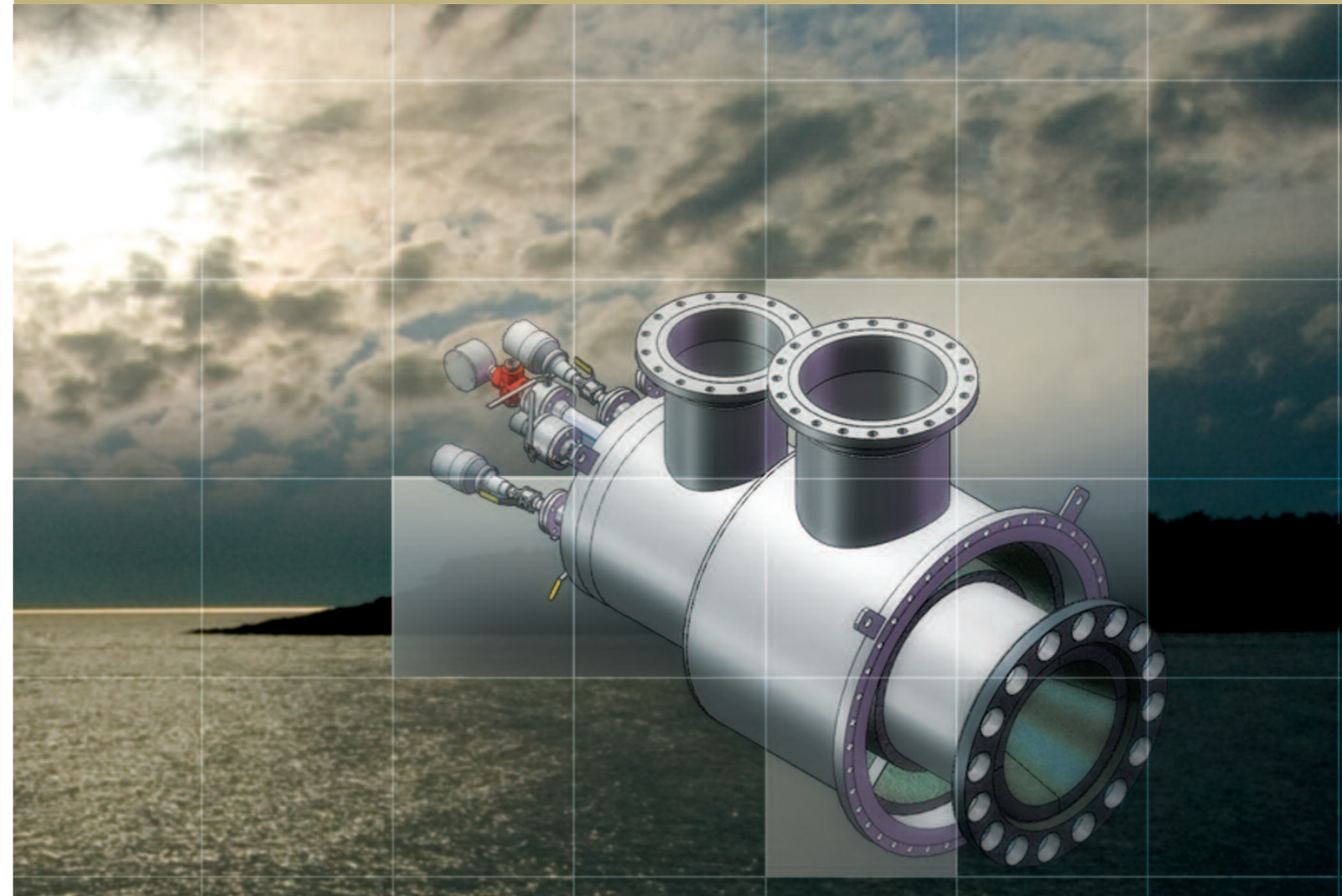


ITAS ACID GAS BURNER - 3D MODEL



ACID GAS BURNER PERFORMANCE TEST

ITAS Burners For Thermal Oxidizers and Incinerators



E/P/B/T/O01120



Burners for thermal oxidizers and incinerators

The process of incineration is most often used to control the emissions of VOC - volatile organic compounds - from process industries.

At a sufficiently high temperature and adequate residence time, any organic vapour can be incinerated (oxidized) to produce energy and incineration gases which may include carbon dioxide and water.

The tail gases for the Claus Units can also be treated by the incineration process.

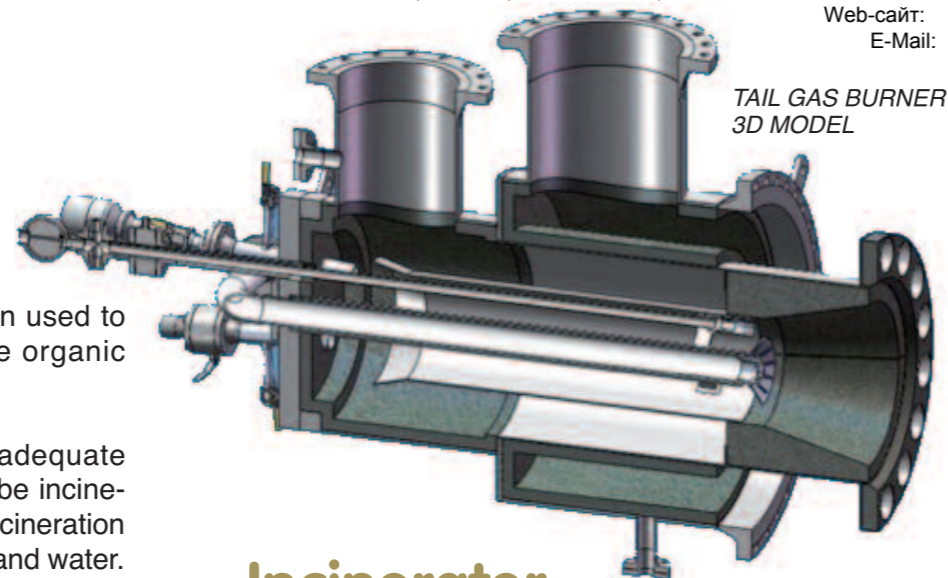
They contain appreciable quantities of sulphur compounds (hydrogen sulphide - H_2S - and sulphur dioxide with traces of carbonyl sulphide and carbon disulphide) which must be reduced before discharge the gases to the atmosphere.

Incinerators are capable of achieving very high removal efficiency (99.99%).

They consist of burners, which mix and ignite the support fuels and wastes and a combustion chamber, which provides appropriate residence time for the oxidation process.

To support the combustion, fuel gas is required to sustain temperatures necessary for the oxidation of the sulphur compounds.

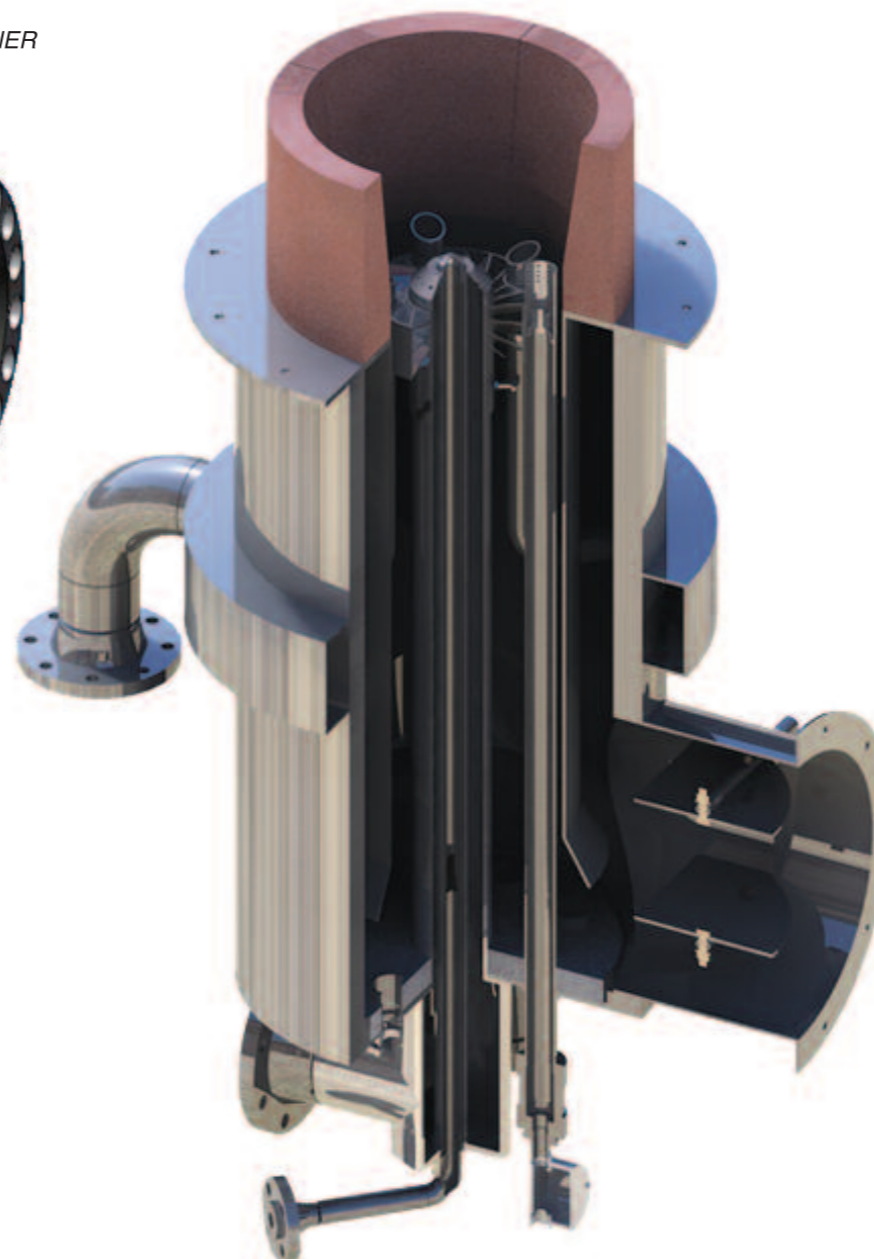
MULTIFUEL INCINERATOR BURNER



Incinerator burner design

The main factors affecting incineration for emission control are:

- **TEMPERATURE:** the higher the temperature in the combustion chamber, the faster the oxidation reaction will proceed.
- **TIME:** the residence time affect combustion in much the same manner as temperature.
- **TURBULENCE:** proper mixing is important to complete combustion, to avoid that un-reacted waste will be exhausted from the stack.
- **OXYGEN COMBUSTION:** O_2 is necessary to achieve complete combustion.
- **FLAME COMBUSTION:** mechanism of combustion when mixing fuel and air, for example nozzle mix or premix.



ITAS incinerator burner 3D model rendering

An effective turbulence and proper flame pattern can be achieved by means of good burner design.

The Incinerator burners are available as single or multi-fuel solutions, as well as liquid fuels.

Incinerator Burners are custom designed and manufactured suitable for each kind of installation.

The burners must be able to maintain a stable flame throughout all range of design pressures, input rates and fuel/air ratios in the system.

The burners must be designed to supply a minimum of 80% of the total heat input of the incinerator design capacity, and also to be capable of modulating down to 15% of the total heat input requirement.

The basic components of a burner include:

- a pilot to provide fuels ignition
- manifolds and gun systems to inject fuels and wastes in the combustion chamber
- swirl vanes to introduce combustion and dilution air in the combustion chamber
- various devices to provide flame stability
- accessories for flame monitoring (UV scanners and flame amplifiers).

Low heat value special incinerator burner

Special application for heaters and/or thermal oxidizers where the gas to be burnt has both low heat value and/or low pressure.

Operation may be natural draft, forced draft. This burner can be either horizontal, vertical or down-firing installed. Capacity can vary from 0,5 to 40 MW and further.

