

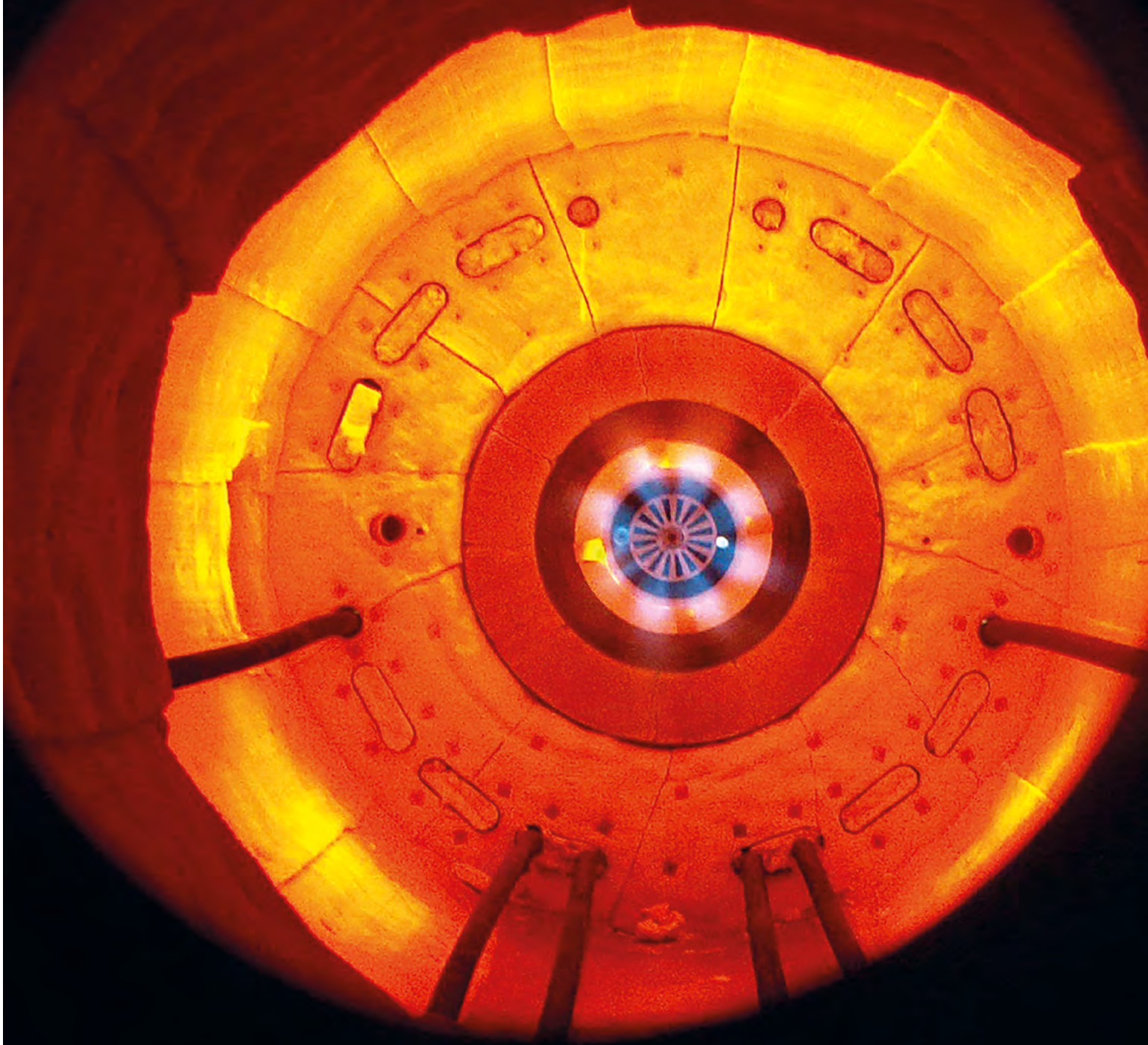


**Passionforcombustion**  
since 1983

**I.C.E.**   
INTERNATIONAL COMBUSTION EQUIPMENT S.r.l.



**Our** company  
passion for combustion



*I.C.E. International Combustion Equipment is a leader in providing tailor made solutions in the field of Industrial Combustion. Born in 1983, I.C.E. is now a well established and renewed company all over the world.*

All our products are engineered and manufactured according to National Regulations, international standard, EPC specifications and company internal standards.

Former staff of I.C.E. comes from renewed companies in the industrial combustion field. The product developing in the years has grown in order to follow the new regulations which become a constant constrain for operators.

The characteristics of the company, very small and flexible, permitted I.C.E. to be competitive against big names, making its best effort in order to demonstrate to be a trustful company able to stand contract requirements and delivery/ quality deadlines.

The company owns a test area where burners are developed and technicians make experience. Thanks to this, in the years, a proprietary sizing procedure has been internally created and related software for burners (all process models for direct and indirect heaters), flare packages (elevated and ground) and other equipments.

In order to comply to international standards and requirements of EPC contractors, we use also commercially available software for product sizing and developing such as Softbits Flaresim and others.

We are active in the industrial field:

---

Refineries

---

Waste management plants

---

Power station

---

Oil and gas plants

---

Pipelines

---

Cement plants

---

I.C.E. production line includes the following items:

---

**Combined process heaters burners**

---

**Reformer burners**

“Terrace Wall”<sup>®</sup> design

“Top fired” design

“Radiant wall” design

---

**SRU/Claus burners**

---

**Special burners for incinerators  
(natural and forced draught)**

---

**Flares packages, derrick,  
self-supporting or guyed design**

---

**Ground flares for biological,  
coke and refinery gas (H<sub>2</sub>S included)**

---

**Indirect heaters**

---

**Liquid or gaseous streams  
incinerators**

---

**Complete control panel board  
for the above specified equipment**

---

**Fuel skids**

---

Site services related to:

---

**Tuning of furnaces / fired heaters /  
reformers**

---

**Flares**

---

**Incinerators**

---

**Burners and all relevant ancillaries**

---





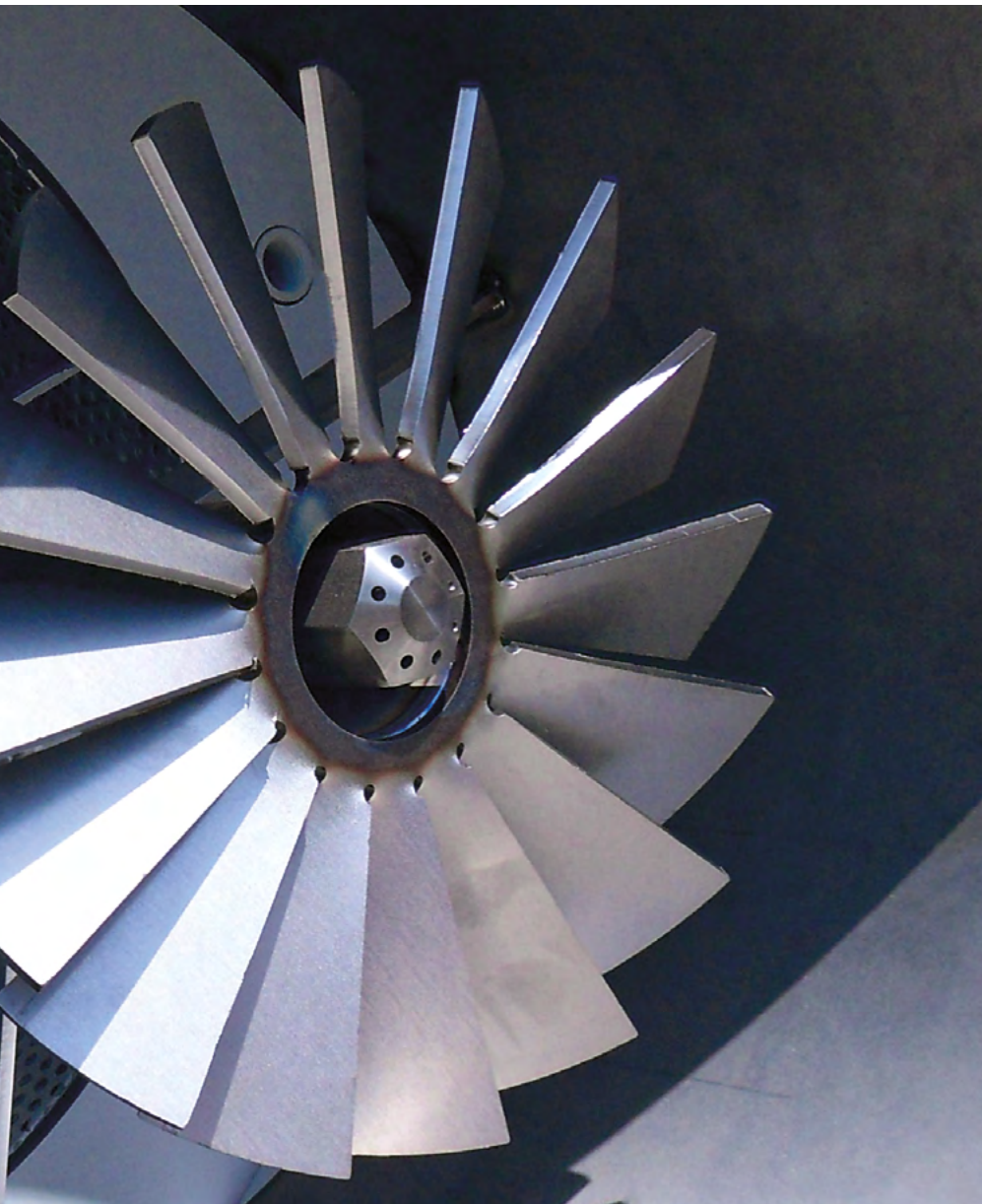
# Research and development

our service

*I.C.E. staff is qualified and able to develop the process engineering of equipment, focusing on clients requirements and able to study and find also customized solutions to face any problem in clients project.*

---

Our engineering capabilities allow us to grant process guarantees of all our products, being these fully internally designed, based on company know how. Owning a production facility and test area in continuous implementation and improving, we can dedicate our strengths to R&D, to offer to our Customers a product which is continuously tested and improved, according to the most updated technologies, also in terms of environmental issues.



Thanks to the flexibility and capabilities of our well trained staff and qualified advisors and co-operators, we can lead internal simulations, using the most known softwares in the combustion field.

Due to its long time experience in the Industrial Combustion field, I.C.E. is available to perform advisory services and consulting for such applications.

I.C.E. after sales service is worldwide available and this all the year long and it is in a position to supply spares, to submit suggestions and to provide well trained specialists for intervention as well as on-site training to Customer's personnel.

I.C.E. assures the availability of spare parts, either the original ones and components from commerce. In this last case, as spares for obsolete or out of production parts I.C.E. will alternately provide updated components perfectly fit for a good functionality.

**I.C.E. capabilities is to internally design equipment under the following major international codes and standards:**

API, ASME, ASTM, ANSI, UNI, DIN, IEC, ATEX, NFPA, PED, BS, ISO

Any other relevant to specific field / country of installation.

**I.C.E. is ISO 9001:2008 certified.**

Quality Policy and Quality System are continuously implemented and diffused among personnel to ensure a high quality job and to meet clients' and project requirements, aiming at complete Customer Satisfaction.



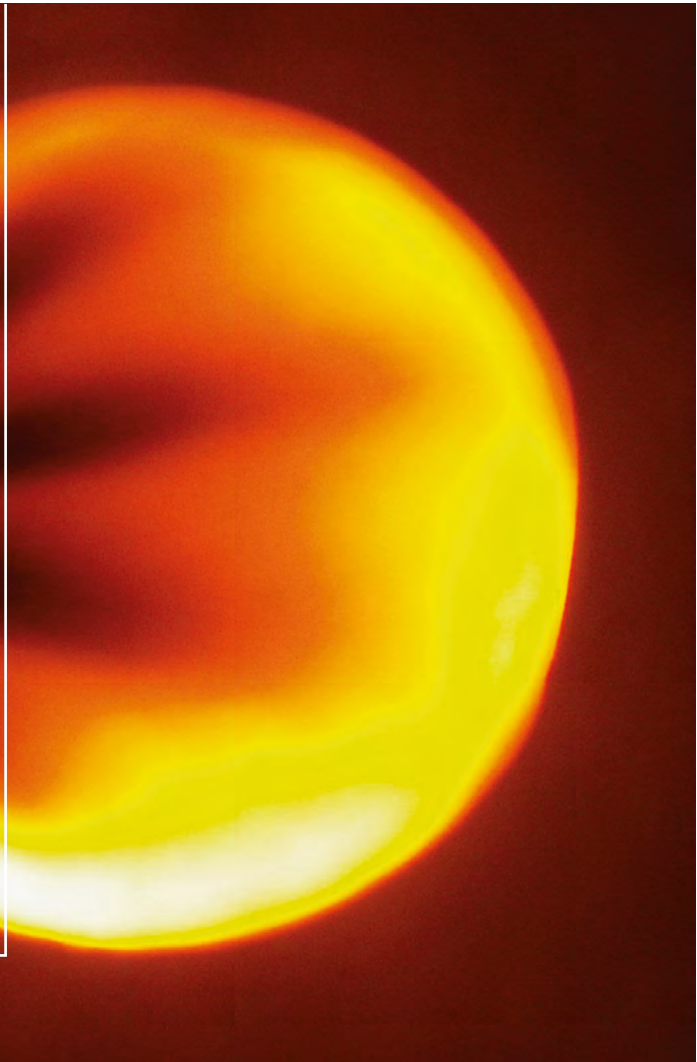
Member of CISQ Federation

**RINA**  
ISO 9001  
Certified Quality System



RINA, certificate n° 20585/09/S



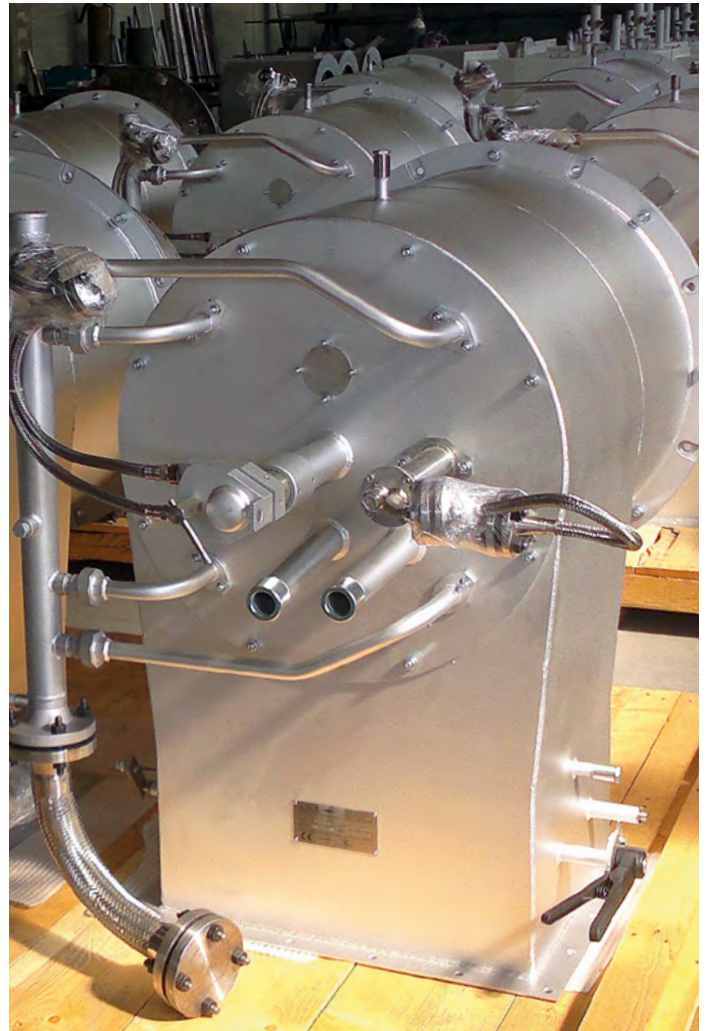


# Process heaters burners

We have experience with all refinery and petrochemical **heaters** installation, from large topping units to small service heaters.

Natural, induced or forced draft applications, with combustion air ranging from cold polar environment (natural draft burners supplied with inlet air heat tracing) up to preheated air up to 500°C.

Pollutant emission levels as low as 20 ppmV of NOx with natural gas and combustion air at ambient temperature. We own a product portfolio that can be customized according to your needs, equipment, standard or process specification. Our over 30 year experience led us to deal with worldwide contractors in hundreds of EPC projects with numerous successful installations.







# Reformer burners



**Reformers** are the most critical furnaces for industrial applications: we have experience with Hydrogen, Methanol, and Ammonia Reformers.

I.C.E. has experience with following reformers designs:

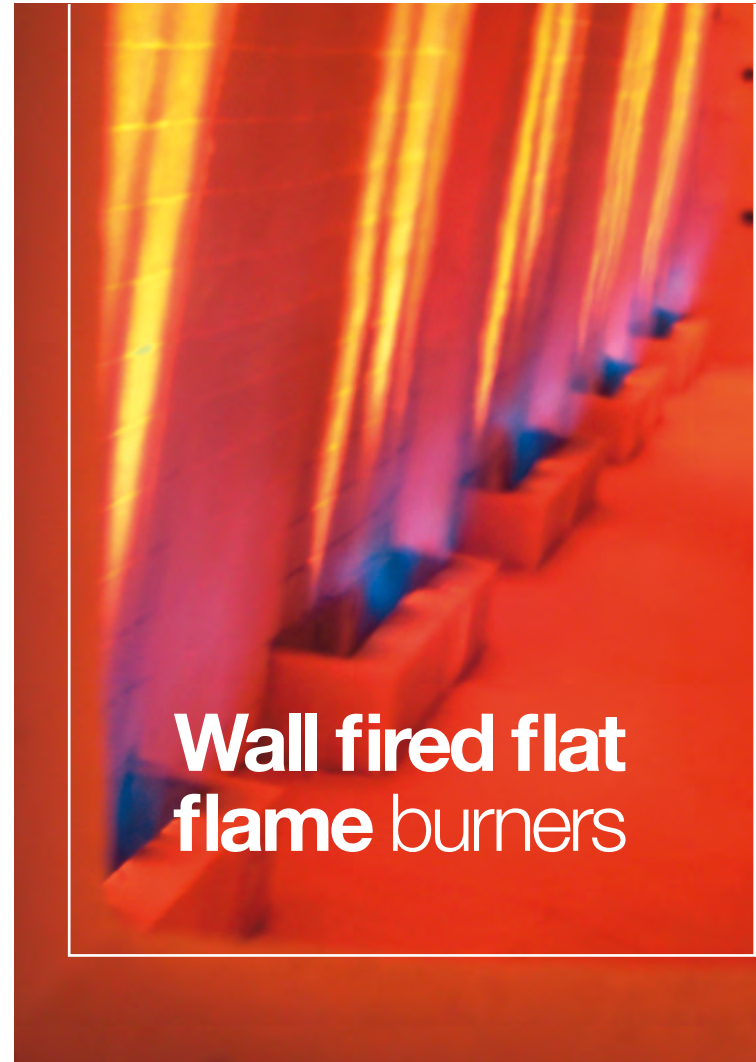
- “Terrace Wall”® design
- “Top fired” design
- “Radiant wall” design

Premixed purge gas and fuel gas as well as separated nozzle can be provided.

We are able to achieve <25 ppmv with mixed firing using our fuel staging technology with air preheated up to 400°C.







## Wall fired flat flame burners



I.C.E. is regular supplier to the most reputed vendor for **wall fired** applications such as delayed coker and other world markets leaders designs.

Our production program is ranging from single to multi-fuels (including liquid), available with configurations for continuous operation or start-up only. Our wall fired burners are available both natural and forced draft with preheated air up to 450°C.



## Pilot burners



I.C.E. burners are equipped with **pilots** completely designed and manufactured internally, well knowing the critical rate of such a special equipment. Our pilot can be equipped with single or double electrode for

ignition and flame detection and can be designed for working from 10 kW to 50 kW or more, upon request. Pilot stability is assured between 0.1 and 1.0 bar(g). Special large duty pilots according to NFPA codes are also available.



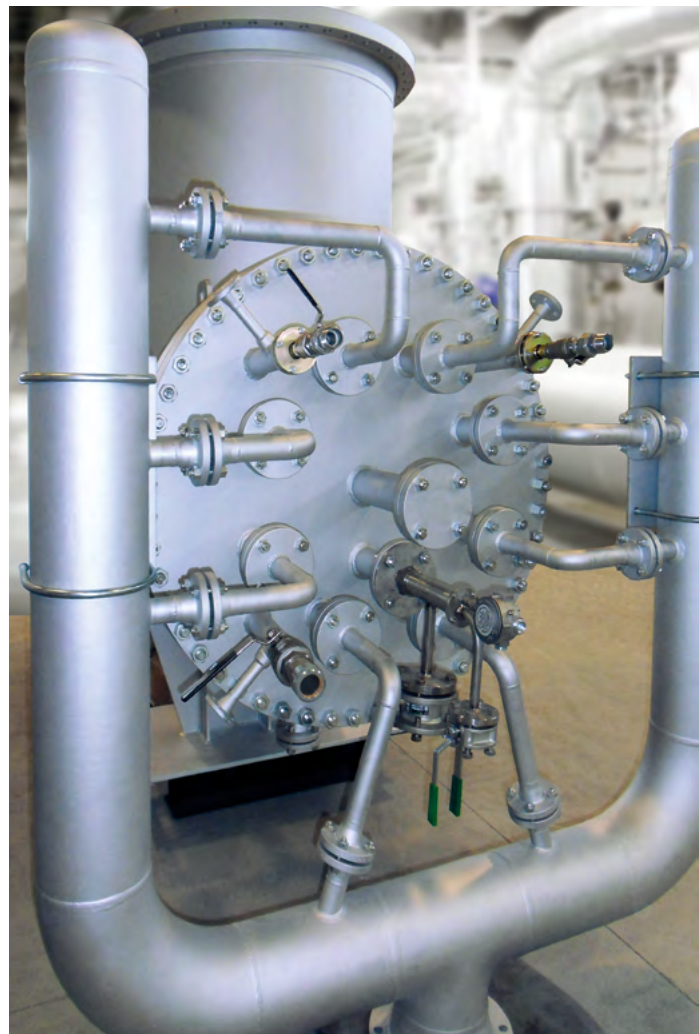


# SRU/Claus process burners

I.C.E. has experience with the following **SRU/Claus** equipment supply:

- Thermal reactor burners
- Tail gas incinerator burners
- RGG/Inline burners

We can supply also support mechanical/electrical/lining and control engineering and ancillaries, such as instrumentation, special equipments and cabinets.







# Flare packages

I.C.E. has supplied a broad range of **elevated and ground flares**, with the most common designs:

- Self supporting
- Guy wired
- Derrick
- Continuous derrick guy wired
- Ground (cylindrical type)
- Ground (fenced)
- Package biogas flare

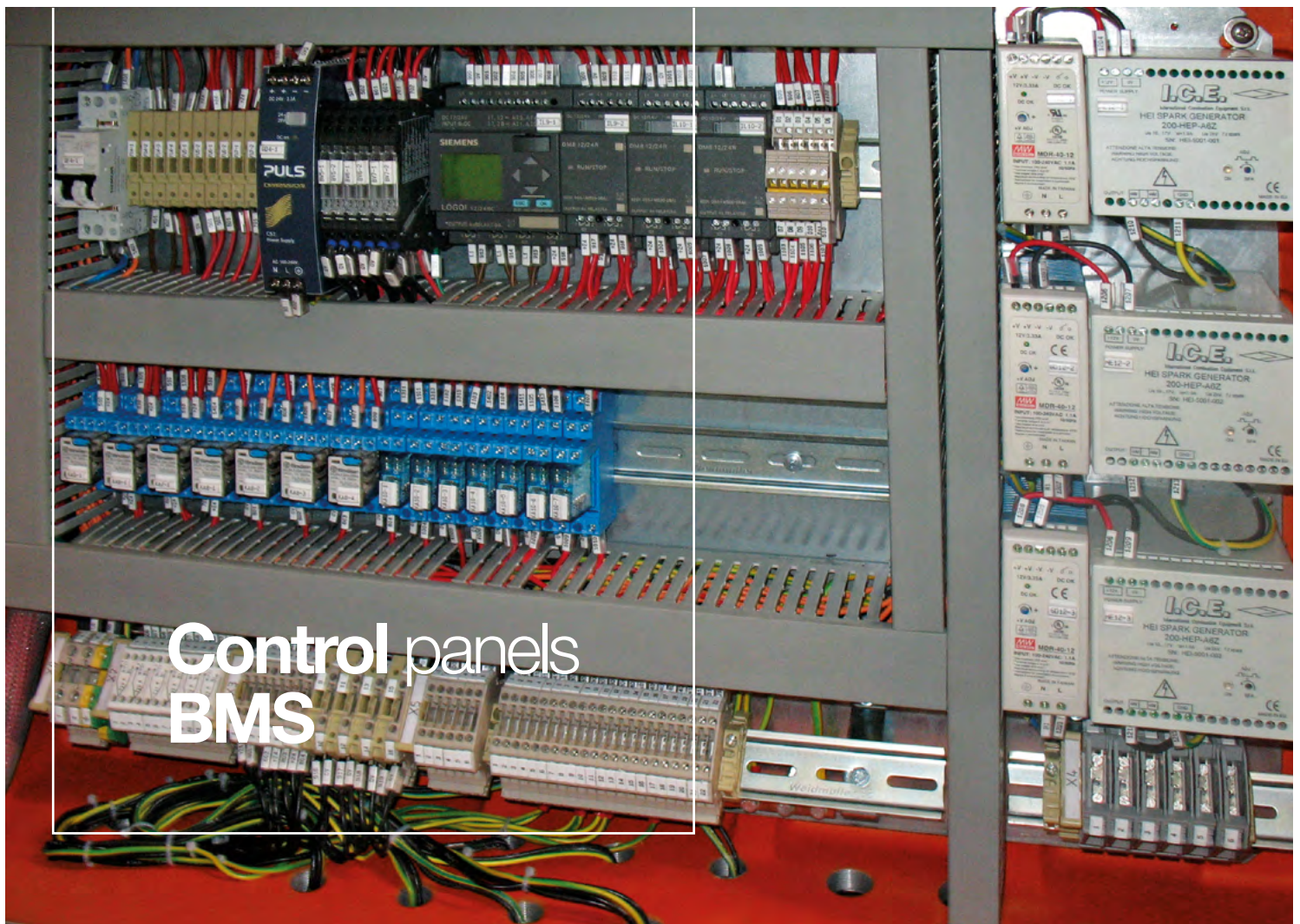
Supplied with relevant engineering.

The supply can be related to full packages or tips and panels and engineering and supply with fabrication of structural parts and ancillaries done by others.

We are available for retrofitting of existing flares as well as troubleshooting/maintenance support/consultancy for bid package preparation.







I.C.E. has capability to design and supply for all ancillary **instrumentation and controls** for combustion equipment, such as:

- Fired heaters and reformer packages
- Claus / SRU equipment
- Incinerator packages
- Flare packages

The scope of supply can be engineering of instruments and parts or complete supply including procurement, testing, site assistance for installation of scope of work. We currently work with the most experienced vendors for instrumentation available in the international vendor lists. We have designed **Burner Management Systems** and related software using the most common platforms. We have experience with control panels, junction boxes and connections from control room to equipment on field.

We are familiar with all industrial configurations for chemical/ petrochemical application including:

- Weather proof
- Intrinsically safe
- Explosion proof

We have experience with SIL certified equipment and related calculations.







[www.it-ice.com](http://www.it-ice.com)

**I.C.E.**   
INTERNATIONAL COMBUSTION EQUIPMENT S.r.l.

**I.C.E. S.r.l.**

**Headquarters**

Via Cesare Battisti, 112 - 20862 Arcore (MB) - ITALY  
Ph +39 039 61 80 445 - Fax +39 039 61 68 84

[info@it-ice.com](mailto:info@it-ice.com) - [www.it-ice.com](http://www.it-ice.com)

**Workshop / Test Area**

Via degli Artigiani, 25/27 - 26010 Cremona (CR) - ITALY  
Ph +39 0373 27 36 54 - Fax +39 0373 29 12 59