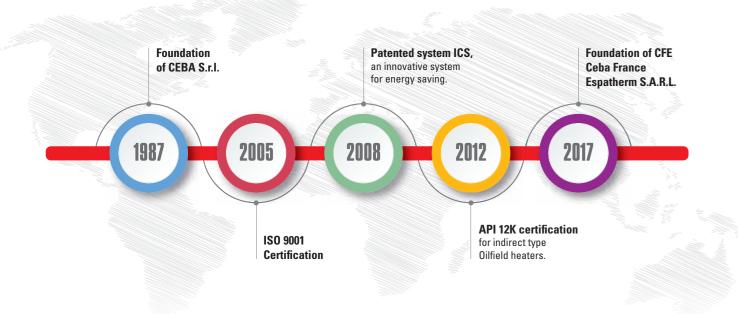
CEba

Mission: to be a world leader in combustion, offering the market innovative, customized and reliable solutions, focusing on energy saving and sustaining our development from a financial, social and environmental perspective.



COMPANY PROFILE



RESEARCH AND DEVELOPMENT

Innovation, research and development play a key role in **CEBA's** policy, with the aim to keep the innovation continuously alive and supply every time the best technology to its Customers. The investment on the research concerns not only the design and manufacturing but also the testing area included in its facilities. **CEBA** boasts a test rig area where two test heaters are installed for test of burners and development of new combustion solutions.

CERTIFICATIONS AND STANDARDS

CEBA is certified ISO 9001: 2015, the latest issue of the international standard for Quality Management Systems, for providing assurance about the ability to satisfy quality requirements and to enhance Customer satisfaction in supplier-Customer relationships. The highly qualified staff and the control of the goods in all the phases of the production, grants **CEBA** to face the market only with very high quality products. **CEBA** is also qualified among the world's most distinguished Engineering and Contractor companies and the whole design of each

project is realized from basic to detailed engineering according to Customers' specification and international standards and directives.

CUSTOMER CARE

CEBA's services are extended also to after sales and spare parts. Actually **CEBA** assists the Customer during installation, commissioning, start-up, start-in production, maintenance. Moreover **CEBA** is always available to supply any spare parts either finding it on the market or producing it.

ENVIRONMENT AND ENERGY EFFICIENCY

One of the main goal of CEBA's production is the achievement of environmentally friendly solutions in order to minimize emissions and wastes. In this way, CEBA can assure a low impact on the environment and economical operation by offering products that comply with current environmental regulations. This view is also reflected on its workshop, where CEBA has adopted photovoltaic systems.



INCINERATORS AND DUCT BURNER

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INCINERATORS AND DUCT BURNER

INCINERATOR BURNER

Incineration is a waste treatment process that involves the combustion of organic substances to convert the waste into ash, flue gas and heat. The flue gases must be cleaned of gaseous and particulate pollutants before being dispersed into the atmosphere. For this reason, in incinerator it is important to achieve high-temperature in order to minimize residual

combustion products.

CEBA is a reliable partner for the supply of incineration burners that must be correctly matched in capacity with the incinerator size, type and nature of waste to be destroyed. Each burner is custom manufactured and designed for each installation and, according to process requests, can fire a range of liquid, gaseous and solid fuels. Designed according to international standard, CEBA incinerator burners reach high levels of efficiency, performance and outstanding reliability.

REGENERATIVE THERMAL OXIDIZER (RTO)

CEBA designs and produces regenerative thermal oxidizer for different industries (petrochemical, flexible packaging, iron &steel, printing, painting, coating, others) in order to destroy a wide range of pollutants (VOC, H2S, CO, odours and other oxidizable compounds).

The regenerative thermal oxidizer (RTO) is used for the





DUCT BURNER

Duct burners are designed to work inside heat-recovery steam generator (HRSG) in order to increase the heat energy of a gas



turbine exhaust. **CEBA** duct burners guarantee maximum flame stability and reliability providing low emissions on a wide variety of applications. Duct Burners are usually stainless steel made in order

to resist to the high temperature inside the duct (up to 500 °C) and to provide long equipment life for components since they are used in combined cycles and they can work either with fresh air (when gas turbine is turned off) or exhaust gas. These burners are usually provided in multiple row and they are designed in modular configuration for an easy construction and maintenance. **CEBA** test rig area is also equipped for duct burner performance test.

Upon client's request, a CFD analysis can predict flow patterns and pressure drop.



CEDO

treatment of exhaust air and it allows oxidation of solvent, pollutants and odorous emissions that are often discharged from industrial or manufacturing processes.

Almost all industrial sectors produce by-products and, even if many methods and system are available to treat them, RTO is the only that actually destroys the waste materials.

Increasing the solvent laden air (SLA) over the temperature of 750-800 °C, this process allows a high heat recovery system thanks to the ceramic material. Each regenerative chamber contains a ceramic matrix, which, depending on the direction of flow, absorbs the heat from the waste gas after combustion or preheats the air prior to combustion. According to the pollutant flow rate, the plant can use 3 or 5 towers. The process flows upward through the bed in one chamber which has been preheated during the previous cycle; the bed preheats the air near to the combustion temperature, approximately 800°C, and during this period the temperature of the bed falls rapidly. The combustion temperature is maintained either by the heat produced from the oxidation of the VOC's or, if the VOC concentration is low, by addition of support fuel. The waste gas from the combustion chamber flows down through the bed in other chamber where the ceramic matrix absorbs the heat from the gas, before discharge to the stack. The heat absorbed by the bed in the outlet chamber is then used to preheat the incoming air during the next cycle.



The average cycle time varies from 60 to 120 seconds depending on the nature and concentration of the individual contaminants. The third chamber allows a further treatment of the waste air volume, which the flow inversion prevented from staying inside the combustion chamber at the required temperature for the necessary time.

In order to avoid over heating of the thermal oxidizer when high concentration of solvent occurs, a hot bypass discharging a hot stream directly from combustion chamber is used. This stream at about 900°C can be used for instance to heat up thermal oil, water or to produce steam.



