INERCO

LOW NOx BURNERS & COMBUSTION EQUIPMENT

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GENERAL OVERVIEW

INERCO offers a wide range of custom-built solutions for the environmental and performance optimization of combustion process with maximum benefit-cost ratios, including:

- Burner replacement or upgrade to improve combustion performance, reduce emissions and/or solve operational problems of industrial boilers and furnaces.
- Windbox retrofit and installation of OFA systems for implementing Low NOx scenarios through an optimized air distribution along the furnace that minimizes process imbalances and enables complete combustion.
- Flue Gas Recirculation systems (FGR) for NOx reduction and increased operation control in combustion units.
- Supply or retrofit of boilers, furnaces and heat exchange tube banks.

INERCO gathers a number of successful references worldwide for any kind of boiler or furnace design and type of fuel.

APPLICATIONS

- Low NOx Burners designed to consider the optimal conditions of turbulence, air mixing, velocity and temperature required at the burner flame for the reliable minimization of NOx generation.
- Extension of service life.
- Improvement of operational capability.
- Automation of existing regulating capabilities.
- Replacement of burner instrumentation (ignitors, flame detectors).
- Adaptation to any boiler arrangement (T-fired, wall-fired, arch-fired, etc.) and type of fuel (coal, biomass, oil, natural gas, dual burners, etc.).

COMPETITIVE ADVANTAGES

- Tailor-made solutions to upgrade combustion capabilities with optimized benefit-cost ratios.
- Robust and well-proven technologies.
- Maximum flexibility to respond to specific problems.
- Optimized design based on advanced CFD modelling to achieve minimum NOx emissions while protecting the register integrity from the high temperatures produced in the combustion area.
- Extensive experience and ability to adapt to different burner designs and fuels.
- Guaranteed results to achieve lowest NOx emissions, with reduced UBC, minimal windbox pressure loss and optimal fuel/air distribution.

EXECUTIVE SUMMARY

INERCO's tailor-made combustion solutions reduce emission levels effectively at lower capital cost to meet regulatory requirements:

- NOx reductions: 30÷60%.

High synergy with other **INERCO**'s combustion optimization technologies to simultaneously achieve:

- Heat Rate (CO_2) reduction: 0.5÷2.0% (coal-fired applications).
- Fuel consumption reduction (CO_2): 1.0÷5.0% (oil/gas-fired applications).
- LOI reductions: 2÷4% (coal-fired applications).
- Favorable in-furnace conditions: corrosion control (O_2 > 1%); CO levels < 200 ppm; tube temperature control; slagging reduction; balanced thermal profiles.
- Short boiler outage required: 4 weeks.

The achievement of lowest NOx emission scenarios compatible with process safety and reliability lead to reduced SNCR/SCR investment and operating costs.

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OUR CLIENTS

GAS AND ELECTRICITY

Abelló Linde - AGA - Air Liquide - Alstom - Atco Power - BP Solar - CENER – CFE - Colbún - EON - EDF - EDP - Elcogas - Emgesa - Enagas -Endesa - Endesa Ireland - EnergieKontor - EON France - EON Italia - EVN - Gas Natural - GDF Suez - HidroCantábrico -Iberdrola - Intergen - Linde Gas - MedGaz - Pegop - Praxair - Promigas - PKE Polska - Reganosa - Saggas - Scottish Power – Viesgo - WBPDCL

HYDROCARBONS

Agencia Nacional de Hidrocarburos de Colombia - Asociación Colombiana del Petróleo - Atofina - Baker Hughes - Bhp Billiton - BP - Cepsa - CLH - Conoco Philips - Ecopetrol - Exxon Mobil - Mansarovar Energy Colombia - Petro Santander Colombia - Petróleos de Venezuela - Petrolifera Petroleum - Petronor – Petrobras- Repsol - Sonatrach

CHEMICAL AND PETROCHEMICAL

BASF - Biofilm - Brenntag - Brinsa - Dow Chemical - ENCE -Ercros - Erkol - Fertial - FMC Foret - Huntsman Tioxide - MAXAM - Mexichem - Oiltanking - Propilco - Rhodia - Solvay - UBE - Voridian

MINING

Bhp Billiton - Boliden - Catalina Huanca Sociedad Minera - Cerro Matoso - CLC - Glencore - Los Quenuales - Matsa - Perubar

CEMENT AND STEEL

Aceralia - Acerinox - Argos - Atlantic Copper - Cementos Portland - Cemex - Cimpor - EADS - Holcim - IZAR - Lafarge Asland - Malpesa - Titan America / Separation Technologies - UNESID - Xstrata Zinc - Zinsa

ENGINEERING COMPANIES AND INFRASTRUCTURES

Abengoa - Acciona - Conalvías - Duro Felguera - Elecnor - FCC - Fluor - Foster Wheeler - Gamesa - General Electric - Inabensa - Intecsa-Inarsa - Isolux Corsán - Lima Ingeniería y Construcción - OHL - Opain - Sener - Soluziona - Technip - Técnicas Reunidas - Vicon