

## **LOW-NOX DUCT BURNER**

**System Upgrades and Retrofit Program** 

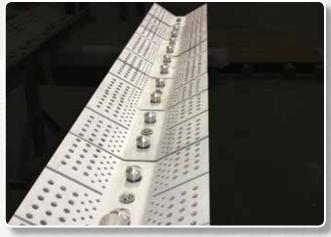
# **Zeeco Duct Burner System Upgrades and Retrofit Program.**

Zeeco's DB-LN burner series minimizes emissions while maximizing fuel flexibility and energy efficiency to provide reliable supplementary firing for power and steam generation. The ZEECO® duct burner uses a self-supporting design and does not require any mid span support structure. Each firing element and flow baffle is designed to grow and expand independently. This design extends equipment life in the high temperature and turbulence downstream of a combustion turbine. ZEECO duct burners are installed in combustion turbine facilities around the world, including flue gas reheat systems for SCR NOx reduction and air heating applications.



- Imbalanced flame patterns leading to imbalanced boiler heat absorption
- · Sagging or binding firing elements
- · Warped or corroded flame stabilizers
- · Warped or corroded duct liners
- · Ineffective ignition systems
- · Ineffective scanner locations and technology
- · Ineffective distribution grid systems
- · Improper velocity and air/exhaust gas mixing
- · Improper flame length
- Warranty issues and poor equipment performance





Low-NOx Duct Burner

#### **Zeeco Duct Burner Benefits**

- Proper design firing system leads to balanced flame patterns and boiler heat absorption
- · Self-supporting elements
- · Engineered for success from start to finish
- Full modeling capabilities, including CFD and physical air flow models.
- · Cost-effective system design and engineering
- Guaranteed emissions levels for NOx and CO
- · Predictable flame lengths
- · Retrofits that eliminate warranty and performance issues
- Comprehensive turnkey installation and startup services available

#### **Smarter Engineering**

We understand the real day-to-day challenges in the power and steam industry. That's why Zeeco engineers use proven cold flow and CFD modeling to simulate specific process conditions against actual equipment design, optimizing system performance and eliminating potential warranty issues. Zeeco's smarter engineering abilities minimize start up time, maximize revenue, and provide reliable results for a system that lasts significantly longer.











THERMAL OXIDIZERS

TAITIO & GEITFIGE

### **Low-NOx Duct Burner**

#### Heat Recovery Steam Generators – Duct Burner Systems.

Low NOx DB-LN Burners

AR/GS Gas and High Energy Spark Igniters

ProFlame Scanner Systems

Full BMS and Controls Integration

Fuel Delivery Systems and Valve Racks

Site Ports and Cooling Air Systems

#### **Engineering Studies.**

Environmental Compliance
Efficiency Audits
Fuel Conversions
Capacity Increase
Carbon Footprint Reduction

#### Flow Modeling Center.

Physical and CFD Modeling Combustion Air Systems Flue Gas Recirculation Systems Over-Fire Air Systems Exit Gas / Stack Modeling Selective Catalytic Reduction

#### **On-Site Technical.**

Start-Up Installation Supervision Preventative Maintenance Service Contracts Operator Training Aftermarket Parts

#### Turnkey.

Coordinating Supply
Equipment Modification
Demolition / Installation
Start-Up
Operator Training
Site Management



#### **Why Choose Zeeco?**

For nearly 40 years, Zeeco has made a positive impact for our customers on even the most complex projects. As a privately held company that attracts the best and brightest engineers around the world, we understand the basics of success from superior customer service to innovative engineering and advanced technological solutions. Our diverse work force delivers many years of combined global power and steam industry experience and a vast resource of technical know-how. Zeeco is a worldwide team of combustion experts and an unparalleled partnership for the long term. Find out for yourself why Zeeco is the preferred choice for advanced combustion and environmental solutions.

ZEECO® combustion and environmental solutions are designed and manufactured to comply with applicable local and international standards as defined by our customers ZEECO GERMANY ZEECO RUSSIA ZEECO CANADA ZEECO POLAND 7FFCO FUROPE--ZEECO ASIA ZEECO LOUISVILLE ZEECO FRANCE ZEECO CHINA CERTIFICATION APPLIES TO ZEECO HEADQUARTERS ONLY. ZEECO CONNECTICUT ZEECO ITALY ZEECO CORPORATE HEADQUARTERS **ZEECO HOUSTON Zeeco Corporate Headquarters ZEECO LIAE** ZEECO JAPAN/APPLICOT ZEECO MEXICO 22151 East 91st Street Broken Arrow, Oklahoma 74014 USA **ZEECO MIDDI E FAST** ZEECO SE ASIA Phone: +1 918 258 8551 Fax: +1 918 251 5519 Email: sales@zeeco.com ZEECO BRAZII ZEECO AUSTRALIA ZEECO\* is a registered trademark of Zeeco, Inc. in the U.S. ZEECO office, affiliate, sales, representative, or third party representative/licensee offices © COPYRIGHT 2017 - ZEECO, INC. ALL RIGHTS RESERVED 17-DB rev3