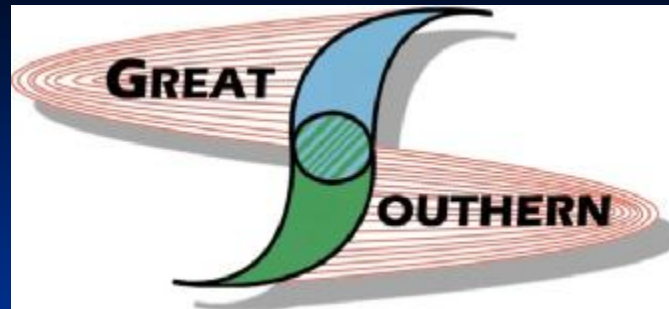


IFRF MEMBERS CONFERENCE

**FLAMELESS COMBUSTION
WORKSHOP**

June 10, 2009 Boston, MA





GREAT SOUTHERN FLAMELESS "GSF"

A Conventional Refinery Heater
That Can Also Be Operated in the
Flameless Mode

(patents pending)

GSF Flameless Combustion Key Design Features

- 🔥 Double Fired Radiant Coil (vertical or horizontal tubes)
- 🔥 Conventional balanced draft air preheat system
- 🔥 Patent Pending Textured Wall Surface to hold the circulating flue gas against the heater wall and provide more even heat transfer to the double fired coil

GSF Flameless Combustion

Key Design Features

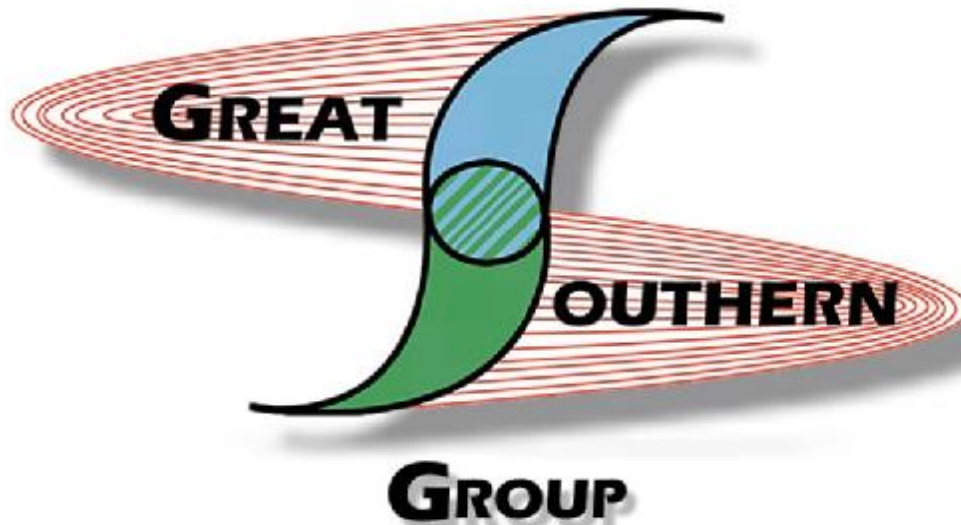
- 🔥 Move the fuel gas away from the air when changing from conventional to flameless combustion
- 🔥 Burner management system with patent pending, automated, 3-way valves to monitor and control conventional, staged fuel and flameless combustion
- 🔥 GSF technology is applicable for any size of heater or heater service

GSF Flameless Combustion

Key Design Features

- n 4 years of HAZOP, heater design and computer simulations to guarantee performance of a conventional heater that can be operated in the flameless mode and can achieve 50% turndown while remaining in the flameless mode
- 🔥 GSF technology can be retrofitted to any existing fired heater
- 🔥 GSF is ready to accept an order and guarantee performance

Questions and Answers



Great Southern
Technologies, LLC

Great Southern
Flameless, LLC

Great Southern
Independent, LLC

www.GreatSouthernGroup.com

Significantly different companies.