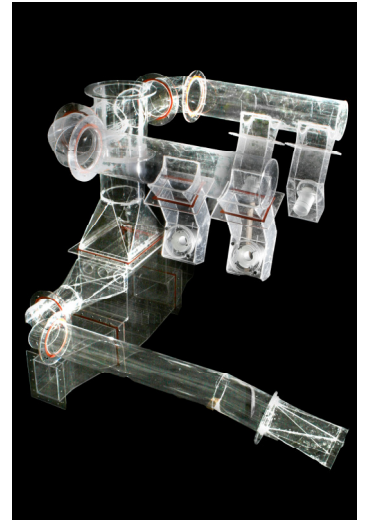


## ECOjet™ Technology + SMARTflow™ Modeling Makes a Difficult Application Look Easy

**The Challenge:** A major petroleum refinery in Texas wanted to convert their 400,000 PPH Riley Turbo-Furnace CO boiler to a power boiler. This included new ultra-low NOx burners firing Refinery Gas.

Other burner manufactures wanted to make major furnace wall modifications to accommodate their burners, as the Turbo-Furnace design has opposed burners firing at a downward angle into the furnace.

**Our Success:** We fully met the client's needs, without re-design of the furnace walls. Actual firing results of the burners "out of the box," with minimum burner start-up time (less than one week), confirmed the design.



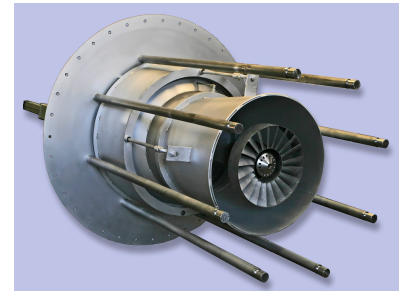
Turbo-Furnace Flow Model used for Petroleum Refinery application

	Guarantee (at 100% MCR)	50% MCR	100% MCR
NOx (corr. to 3% O <sub>2</sub> )	16.5 ppm	9 ppm	15.6*
CO	0.04 lb/mm btu	0	0*

\*Results actually firing at over 100% MCR

**Why we succeeded:** Hamworthy Peabody Combustion succeeded because of our unique combination of:

- Supplying four **ECOjet™** Ultra-low NOx burners, including Flue Gas Recirculation and Steam Injection, firing Refinery Gas (30% Hydrogen, 30% Heavies). This is an enhancement of the **APR®** burner design.
- **STABLEflame** technology
- **SMARTflow™** air-flow modeling studies
- Previous successful track record of retrofitting burners to similar boilers. This includes a Florida utility company's 600,000 PPH Turbo-Furnace boiler equipped with ten APR® burners that ran successfully for 20 years.



ECOjet™ Ultra-Low NOx Burner supplied for Petroleum Refinery application

Hamworthy Peabody Combustion showed the customer, and gave him confidence, that we could meet the requirements with just a burner retrofit.

An ISO 9001:2000 Approved Company

For more information about our products and services visit [www.hamworthy-peabody.com](http://www.hamworthy-peabody.com)  
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