

# HELEX<sup>®</sup>

## HIGH EFFICIENCY LOW EMISSIONS FORCED AIR FIRETUBE TECHNOLOGY

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Foremost Universal LP offers an alternate heating system to be utilized within pressure vessels and storage tanks. Forced air burner systems offer up to 85% efficiency, a 20%-40% gain over conventional natural draft burner systems.

Our patented forced air burner system is not dependant upon stack draft to move the heat through the fire tube as the heat is "driven" through the tube by an electric motor coupled to a blower. This results in improved heat distribution along the surface of the fire tube. As well as the fuel air mixture being fully adjustable which allows the system to be tuned to maximize efficiency.

An important aspect of the HELEX<sup>®</sup> forced air burner systems is the versatility of its design. Conventional fire tubes are u-shaped to reduce the pressure drop within the system. With the HELEX<sup>®</sup> forced air system; a blower pushes the heat through the fire tube, eliminating any concern over pressure drop. This allows firetube geometries and configurations to fit into any sized tank or vessel.



**FOREMOST**  
ENERGY EQUIPMENT

**DESIGN. BUILD. PERFORM.**

Engineered solutions for the resource industry.

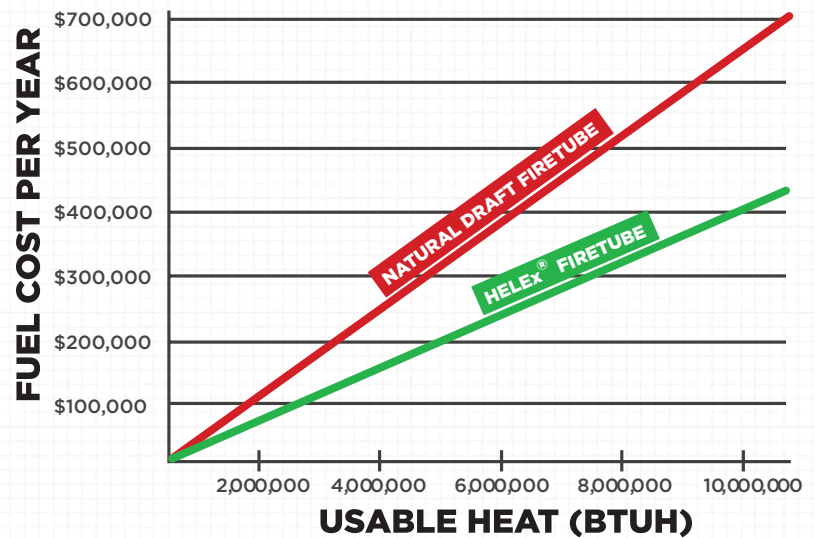
# HELEX<sup>®</sup>

## High Efficiency Low Emissions Forced Air Firetube Technology

- Firetube designed for 80% efficiency; field tests have shown as high as 85%
- Smaller diameter tube is more efficient as the high velocity flue gases scrub the inner walls of the tube
- HELEX<sup>®</sup> Firetube Mating Flange has a no leak guarantee
- Firetube takes up less volume, making your tank or vessel more efficient
- Significantly reduced greenhouse gas production
- Optional low NOx burner designs
- Burners are B149.3 compliant
- Field results show reduced downtime
- Payback period typically less than 2 years
- Can be retrofit into any tank or treater
- Each unit is typically 3.5 MMBtu/hr to 8.5 MMBtu/hr



### Fuel Cost Comparison



### Case Study: UIC/COLT Flash Treaters<sup>®</sup>

Stack Analysis - Flue Gas Analysis Conducted January 7, 2009

			STACK TEMPERATURE (°C)	EXCESS AIR	EFFICIENCY	CO <sup>2</sup> (TONNES/YR)
Phase I Flash Treater	Tube I	Naturally Aspirated Burner in Conventional Firetube	440	135%	60.8%	7645
	Tube II		429	130%	62.4%	7449
Phase II Flash Treater	Tube I	Forced Air with HELEX <sup>®</sup> Firetube	305	34%	82.7%	5621
	Tube II		378	27%	79.8%	5825

CO<sub>2</sub> production based on 10 MMBTUH

### Actual Savings By Changing To HELEX System

	AVG. EFFICIENCY	PROCESS HEAT (BTU/HR)	FUEL INPUT (BTU/HR)	FUEL GAS USAGE (SCFH)	COST OF FUEL PER YEAR*
Current Phase I Treater with Naturally Aspirated Burner	61.6%	10,000,000	16,233,766	16,234	\$426,623.38
Upgraded Phase I Treater with Forced Air Burner and HELEX Firetube	80%	10,000,000	12,500,000	12,500	\$328,500.00

\*Assuming \$3.0/1000 SCF Natural Gas

**NET SAVINGS PER YEAR** \$98,123.38  
**CO<sub>2</sub> SAVINGS PER YEAR** 1,736 TONNES