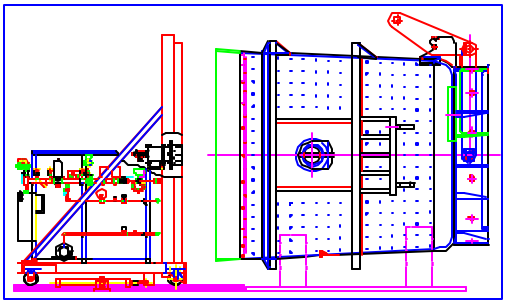
OXYGEN AIR ADVANCED BURNER TECHNOLOGY

PYRETRON Ô
for Ladle Preheating

- American Combustion division of Air Liquide offers oxygen enhanced combustion technology for preheating and drying of transfer ladles.
- Staged high radiative burner technology for rapid and energy efficient heat transfer.
- High flame velocities throughout the whole firing range improves the heating of the whole ladle.
- Patented technology by American Combustion Division of AIR LIQUIDE Group



For *Horizontal* and *Vertical* Stations in the Non-Ferrous and Steel Industry

Main advantages of this technology

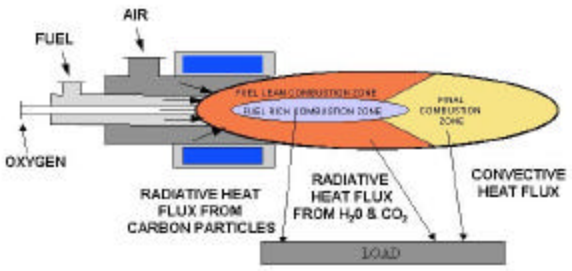
- Decrease Heat-Up time
- Optimal use of oxygen
- Decrease total energy cost up to 50% (including oxygen)
- Uniform heating of refractory
- Extend Refractory life
- Increased turn-down of burner for better temperature control

AIR LIQUIDE

PYRETRON ™ Technology

American Combustion (ACI) put forward and patented an innovative approach to high temperature combustion process in industrial furnaces.

PYRETRON™ Flame Pattern Structure



PYRETRON ™ : Method of Combustion

For standard ***PYRETRON*** ™ applications, the fuel is oxidized with **both oxygen and air**. The combustion is staged and occurs within three zones : central, peripheral and final zones of combustion :

- **Primary fuel rich Zone**
  This inner zone generates carbon particles, providing an intensive radiant heat transfer.
- **Secondary Fuel Lean zone**
  This outer zone has high velocity excess oxidizer.
- **Final zone**
  Where complete fuel oxidation takes place.

Characteristics of *PYRETRON* ™ technology

- **Economics**: ***PYRETRON*** ™ flame is designed to sustain all sorts of variations in O_2 participation
- **Flexibility**. The oxygen participation can be changed during different phases of one cycle and/or can be changed according to production needs, fuel price, etc.
- **NO_X:** Low amount of NO_x due to:
  1. Staged combustion.
  2. Multiple, high velocity jets (perfect mixing and reduced residence time)
  3. Independently control of the oxygen / air ratio

Available Burners for Ladle Preheating

Brand Name	Part Number	Firing Rate - Range		
		Minimum	Nominal	Maximum
Pyretron II	PT2 1500	275 KW	1500 KW	2000 KW
	PT2 2500	350 KW	2500 KW	3000 KW
	PT2 5000	800 KW	5000 KW	6000 KW
	NF 1500	300 KW	1500 KW	2000 KW
	NF 2500	450 KW	2500 KW	3000 KW
	NF 5000	900 KW	5000 KW	6000 KW

For more information about the ***PYRETRON*** ™ technology,
Please contact us : *ACI.info@airliquide.com*

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www.airliquide.com