PyreTron™ Ladle Heating System

The PyreTron™ Combustion System is designed to heat ladle homogenously via a long flame using both oxygen and air.

Highlights of the PyreTron™ Combustion System
- Safe and Reliable Operation
- Over 180 references world wide
- Air/Oxy design
- 10%-95% O₂ Participation
- Heating/Drying/Curing
- High speed jet fuel stream
- From 1.5 to 5 MW nominal power
- Built-in UV detection and pilot burner
- Fuel gas/oil capabilities
- Staged burner design
- Adjustable flame length and flame temperature
- Air-cooled refractory combustor
- For vertical or horizontal mount

Benefits of the PyreTron™ Technology for Customers
- Fuel Savings
- Cost Optimization based on NG and O₂ Costs
- Fast Heating Rate
- Accurate Temperature Control
- Increased Operational Flexibility
PyreTron™ Ladle Heating System

Gas Control Valve Trains

- O₂ valves trains are specifically designed for safe operation
- Fuel valve trains can be designed for a variety of fuel types
- Includes combustion air spool and blower

PLC Programming and HMI

- Provides control logic to continuously optimize flame characteristics to quickly bring ladle to temperature
- PLC options: Allen-Bradley, Siemens, Square D, GE, Modicon, Mitsubishi
- HMI options: Allen-Bradley, Siemens, Mitsubishi, Automation Direct
Benefits of PyreTron™ Ladle Heaters

Fuel Savings
- Up to 60% fuel savings compared to air burners
- Decreased heat loss through the flue gases
- Fuel savings through increased heat transfer efficiency
- Decreased amount of excess air in the ladle
- Less energy required during heating and soaking compared to air burners

Cost Optimization
- Air/Oxy design allows for flexible operation according to fuel and O₂ costs
- Adjustable flame temperature
- Improved ladle refractory life
- Short payback period of ___ months

Benefits of PyreTron™ Ladle Heaters
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Increased Operational Flexibility
- Based on PLC control and temperature feedback from thermocouples
- Custom heating profile for accurate control of all aspects of Ladle Heating
- Air cooled burner, lowering maintenance requirements and increasing operational reliability

Fast Heating Rate and Accurate Temperature Control
- Up to 50% increase in heating rate of ladles compared to air burners
- Up to 30% reduction in heating time compared to air burners
- Allows higher operating temperatures without large increase in energy use
- Enables heating to higher face temperature when needed
- Longer heat retention of steel inside ladle, reducing heat requirements for the downstream processes