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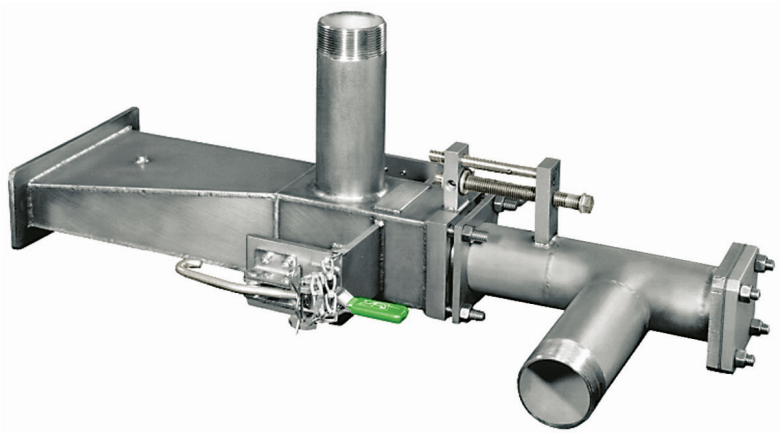
ECLIPSE PRIMEFIRE® 300 BURNERS

The Primefire® 300 burner is a quantum leap in flame luminosity and glass bath coverage, providing:

- Greater flexibility.
- Dual fuel capacity.
- Increased melter efficiency.
- Improved refractory life.
- Reduced melting cost.



Fish-Tail or Fan-Shaped Flame

In addition to providing increased load coverage, the Primefire® 300 burner provides uniform heat distribution that improves product quality, throughput, and extends furnace refractory life.

Increased Flame Radiation

In the visible light spectrum (500 to 2000 nanometers range), the Primefire® 300 burner will improve radiative heat transmission for the glass melting application and improve furnace efficiency.

*Adjustable Flame Shape**

An adjusting mechanism on the burner allows you to change the flame shape (overall length and width) to suit the melter width and the required temperature profile.

Extremely Low Mixing Rates of Oxygen and Fuel Streams

The Primefire® 300 burner creates a low momentum flame which has a lower peak flame temperature. This should result in lower operating crown temperatures and lower volatile transport rates.

*Multi-Fuel Capability**

The same burner can fire natural gas or light/heavy fuel oil (maximum viscosity of heavy fuel oil of 100 SSU).

The adjustable Primefire® 300 (Fish-Tail) burner is available in three capacity ranges:

- 0.50 to 2.00 MM Btu/h*
- 1.00 to 4.00 MM Btu/h**
- 2.00 to 8.00 MM Btu/h**

*Note: 0.50 to 2.00 MM Btu/h models are fixed burners and can only be fired using natural gas.

**Note: The oil firing option for dual fuel burners is recommended as a back-up to natural gas firing. Oil only versions are available for primary oil firing. Contact Eclipse for more information.

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Primefire® 300 Burners

A quantum leap in flame luminosity and coverage.

As shown in Figure 1, the Primefire® 300 Fish-Tail burner spreads the flame significantly over the melting surface. The adjustable control on the burner allows variation in flame coverage to suit melter size and temperature profile. This would result in better temperature uniformity, reduced peak flame temperatures, and elimination of hot spots.

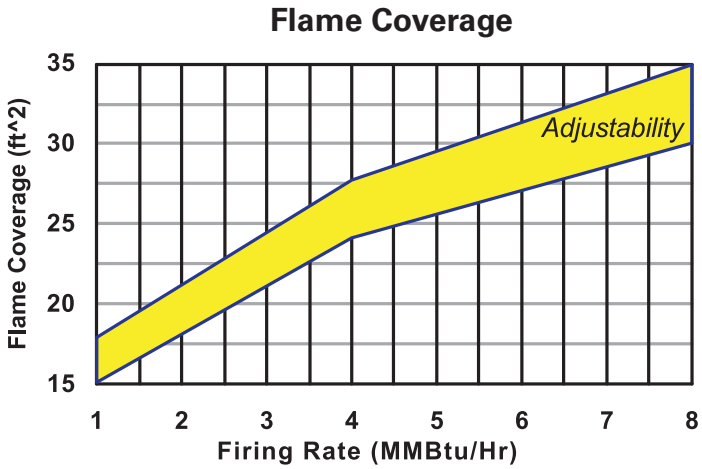

Figure 1. Flame coverage of the adjustable oxygen-fuel fish tail burner.

As shown in Figure 2, most of the radiative heat flux gain is from increased visible wavelength radiation which would be beneficial in improved transmittance through the glass and the reduction of scum and foam.

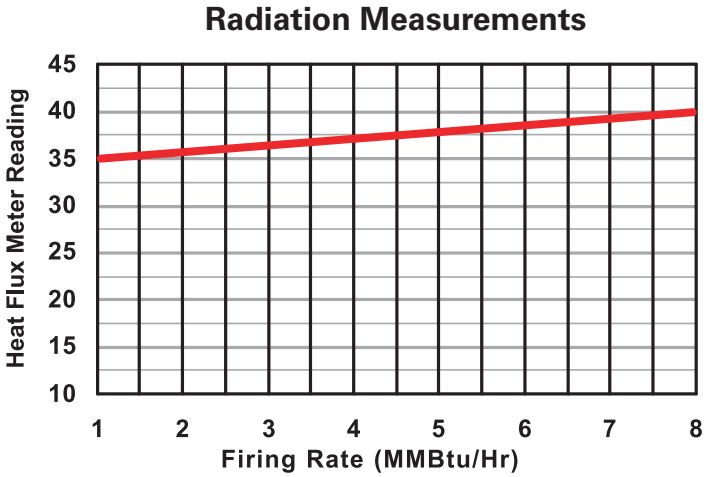

Figure 2. Measured heat flux reading from the adjustable oxygen-fuel fish tail burner.

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Litho in USA