

Application brief

Eclipse Product: Eclipse ThermThief Burners

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Application SPS Technologies Inc. replaced 1 of 17 Diamond Engineering burners on a four zone belt annealing furnace with an Eclipse TFB075 burner. Their goal was to improve ignition reliability, improve combustion quality and eliminate soot.

Fuel Type: Natural Gas

Results: The operators at SPS report that the burner was installed and commissioned without requiring any adjustments to the air and gas. At operating temperature of 1630° F, oxygen ranged between 2.5% to 3.2%. We could not verify low fire O₂ since the furnace was running production. However, low fire is not a big concern because the Eclipse TFB burners have much better turndown than the old Diamond Engineering burners which must operate high/off. Therefore, the Eclipse TFB burner will be at low fire only during ignition and then go to high fire. When the remaining 16 burners are converted, we will verify low fire settings. At that time, we will also look at operating high/low to increase the service life of components like spark rods and solenoid valves. The furnace has been in operation for several months now and the operators report no problems with the three Eclipse burners that are now installed. They hope to convert the other burners to Eclipse and drastically improve the reliability and productivity of the furnace

