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Application brief

Eclipse Product: TJ 150 ThermJet Burner, 1500M Extern-Therm

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Application Replacement of a 104 MVTA-PCA Burner with a TJ 150 ThermJet Burner for use with preheated combustion air supplied by an Eclipse 1500M Extern-A-Therm on an Aluminum and Zinc Die Casting Furnace.

Fuel Type: Natural Gas

Specifications: The burner is arranged for fixed-air with a by-pass pilot to give maximum adjustment of low-fire/ignition gas flow realizing that the system will be fuel lean at cold start, becomming less lean as the system comes up to temperature. Dungs MVDLE valves are used on the pilot. The main gas valve train uses a 200 Series Locktite valve. Flame monitoring is by an Eclipse Veri-Flame with straight U.V. Scanner. Cooling air is required for the scanner due to the high ambient temperatures associated with the use of pre-heated combustion air. Also, remember the combustion air blower must be sized properly to compensate for the additional resistance (pressure drop) created in devices like the burner and the recuperator as the combustion air gets hotter. Using an oxygen analyzer is recommended to be sure of achieving optimum high-fire fuel/air mixture for performance and efficiency. So far the system is operating 24 hours a day, 7 days a week. The people at Empire Die Casting plan to replace all of their MVTA-PCA Burners with ThermJet Burners. Since the MVTA-PCA Burners worked so well for them, they have not experienced any significant improvements since switching to ThermJet Burners (other than a much lower cost compared to a MVTA-PCA Burner). But, we are confident that they will experience benefits over time (like longer crucible life, better temperature uniformity, increased production, and so on).