

## Application**brief**

*Eclipse Product:* ThermJet Burners

*Submitted by:* Vince Marts – Quality Combustion, Inc.

*Application:* Strip Anneal Furnace

*Description:* Supplied 72 Eclipse ThermJet Burners for LOI Engineering firm for a strip anneal furnace for Allegheny Ludlum.



*ThermJet Burner  
Flame Shape*

*Eclipse Products:*

- (24) TJ 150 HSC-NNF Burners
- (32) TJ 50 HSC-NNF Burners
- (16) TJ 50 HSC-NNF Burners
- (24) 112 BV - B-Butterfly Valves
- (48) 110 BV - B-Butterfly Valves

*Type of fuel:*  
Natural Gas

*Specifications:*

- Project Type: Anneal Furnace
- Dimensions: 124' long, 8' wide, 8' high
- Construction: 3/16" carbon steel plate, 12" thick fiber modules insulation rated 3000 degrees Fahrenheit
- Burner Requirements: Bloom 1430 Series Low Nox, Direct Spark Burners

*Approach:*

By presenting a unique value proposition, Quality Combustion Inc. was able to displace the competition (Bloom & Hauck) and secure the approval of the customers (LOI Engineering & Allegheny Ludlum Steel) for use of the Eclipse products. LOI Engineering personnel visited QCI with the purpose of evaluating the fabrication, construction and installation capabilities of QCI in support of the planned and awarded furnace to be built. QCI took this opportunity of a site visit to present a demonstration of the TJ50 burner. This demonstration included installing a TJ50 burner in a test stand and operating the burner at a variety of rated operating conditions. During the test the features of the burner were described and demonstrated. The concerns and questions of the engineers and support staff of LOI were able to be discussed and addressed. The test demonstrated the burner's performance characteristics and reliability as well as the ease of installation and access for repairs and adjustments if necessary. This story is even more interesting in that LOI Engineering is owned by Ruhr Gas located in Germany. Ruhr Gas also owns Hauck and Krom Schroder. LOI Engineering had convinced Allegheny Ludlum to move from Bloom burners to Hauck. (Continued on page 2.)



*ThermJet Burner with  
SiC Flame Tube*



*ThermJet Burner Piping Detail*

QCI had the task to convince both LOI Engineering and Allegheny Ludlum that Eclipse has the superior product. QCI's experience in the use of the TJ50 Burner with many other customers in similar applications enabled the unique features of the TJ Burner, including its large ignition range, excess air capabilities and three stage, low Nox design, to be presented. This provided confidence and in the end LOI Engineering and Allegheny Ludlum decided to use Eclipse burners and award QCI the entire turnkey project of site demolition and preparation, furnace construction, installation and startup.



*New Furnace Construction*

