

COMBUSTION / BURNER BUSINESS

CASE STUDY #102020-1



TOTAL TURNKEY VISION-ULN RETROFIT SOLUTION

CUSTOMER: Major Specialty Chemical Manufacturer Located in Southwestern U.S.

CHALLENGE: Customer had an existing 150K PPH B & W boiler with an ultra-low NOx (9 ppm NOx) burner firing natural gas. The burner was experiencing several performance issues that were adversely impacting production:

- **Their existing burner was unable to provide heat input across the required capacity range (turndown limited) and failed to respond rapidly to the required load swings (ramp rate).**
- **Excessive wear and tear on burner internals required constant burner maintenance and frequent replacement which was very expensive.**

SOLUTION: Provide total turnkey installation of a brand-new VISION-ULN model burner ultra-low NOx performance that included specific guarantees:

- **9 ppm NOx**
- **50 ppm CO**
- **10-1 turndown**

The VISION-ULN burner incorporated proven partial premix technology that results in a compact flame and ultra-low emission. The VISION burner design features no high wear and tear or moving components.

We reduced the overall installation time and project costs by reusing the existing windbox, ducting, dampers and fans and the front wall opening. Only minor modifications were required to the existing controls and fuel skid.

RESULTS:

- 1 - Satisfied Customer - New VISION-ULN burner was installed and commissioned in two days, exceeding all performance requirements.**
- 2 - Superior Emission Performance - Delivered sub 9 ppm NOx and other emission guarantees across the load range.**
- 3 - Reliable Operation - New VISION-ULN burner operated flawlessly across the turn down range and responded well to fast load changes without any issues.**