

NEW MICRO-NOx A SUCCESS

SITUATION

With plans to expand and diversify their operation, **Da Vinci Textile** required two new industrial grade burners/boilers that could withstand continuous 24-hour operation. Da Vinci's parent company, CKM Industries, was very satisfied with a previous purchase of a Coen Micro-NOx/Hurst boiler package. After competitive bidding and numerous technical presentations, Da Vinci followed CKM's lead and ordered two new Coen Micro-NOx/Hurst boiler packages. **Da Vinci's main objective was reliable burner operation, high turndown and compliance with strict California air quality regulations.**

Name: *Da Vinci Textiles*

Location: *Vernon, California*

Boiler: *Hurst Series 400 3-Pass Firetube*

Capacity: *400 HP*

Burner: *New Micro-NOx*

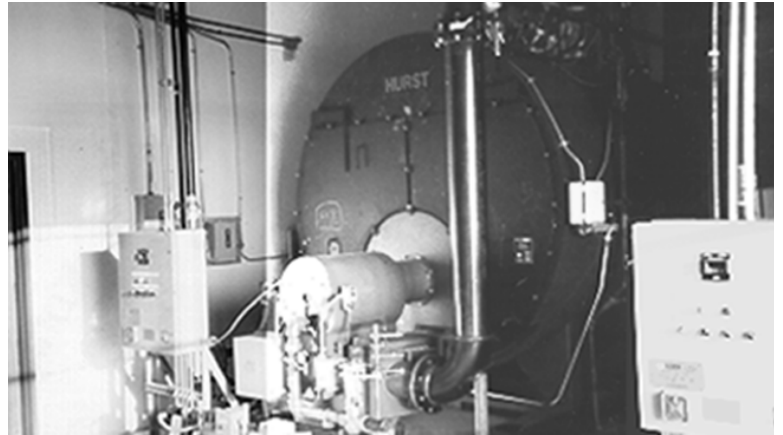
Fuels: *Natural Gas*

Limits: *30 PPM NOx*

SOLUTION

Previous success with the Coen/Hurst package convinced Da Vinci Textile to contact Coen's representative, A.H. Merrill & Associates, and request two more Coen Micro-NOx /Hurst packages. A.H. Merrill provided Da Vinci Textile with a complete boiler/burner package, including a Hurst 400 HP Series 400 3-Pass Firetube Boiler, a New Coen Micro NOx gas only burner, Fireeye BMS-1000 Flame Safeguard, and Hurst Boiler Auxiliary equipment.

The burner was shipped directly to Da Vinci for mounting on the Hurst boiler. Portor Boiler Service, Coen's authorized contractor with years of experience servicing the Micro-NOx burner line, was called in to perform the startup and testing. Upon completion of the system check-out, **the actual startup and setting required only one day per burner.**



Micro-NOx Burners on a Hurst Boiler

RESULTS

The combustion data speaks for itself as to what Coen can provide on these applications. Because of the design flexibility, the Micro-NOx burner can be adapted to any firetube boiler to achieve the same or better performance results shown below. **The New Micro NOx's superior performance and improved packaging made this project a success.**

LOW NOx: NOx was below 26 ppm throughout the firing range at 3% O₂.

LOW CO: CO was 26 ppm at maximum firing rate at 3% O₂.

LOW FGR: FGR remained below 12% at all firing ranges.

HIGH TURNDOWN: A turndown of 7.5:1 allowed a wide range of operating conditions while still meeting NOx emission limits.

SOURCE TESTING RESULTS:

Firing Rate	Max	Min	50%
O ₂	2.5%	7.6%	3.6%
NOx @ 3% O ₂	26	18	22
CO @ 3% O ₂	26	101	-
% FGR	9.2%	11%	12%