CASE STUDY: Cereal Mfgr.
Industry: Food Processing

CEREAL MANUFACTURER

LOCATION
California

PROFILE
Emission regulations require manufacturers to reduce emission to 7 ppm.

CHALLENGE
Recommend a cost-effective solution to meet the requirements of their current equipment.

SOLUTION
Install a Cleaver-Brooks retrofit kit to allow the end user to be compliant to the 7 ppm NOx requirement.

RESULTS
Achieving sub 7 ppm NOx and meeting local air pollution regulations.

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Food Manufacturer Readily Meets California's Strict NOx Requirement

Emission requirements in certain air districts in California have become more stringent over the past decade. In 2005, the San Joaquin Valley Air Pollution Control District (APCD) mandated the NOx emission level at 9 ppm, and in 2010, the agency tightened the regulation to 7 ppm. As a result, one large cereal manufacturer in the area was required to make two emissions upgrades to its boiler system within five years.

In 2005, Bob Murr, senior project engineer for the food manufacturer, consulted with his local boiler maintenance partner, R.F. MacDonald in Modesto, Calif., regarding the 9 ppm NOx mandate. R.F. MacDonald recommended that the manufacturer install Cleaver-Brooks ProFire NTI low-emission burners on its two Cleaver-Brooks model CBLE 700 hp firetube units. The ProFire low and ultra-low emission series of burners are engineered to match the geometry and aerodynamic parameters of all types of combustion chamber configurations.

Murr did not anticipate any further emission-driven equipment upgrades. He explained, "In the area meetings, APCD said 9 ppm was as low as they were going to go." However, in 2010, environmental conditions caused the regulatory agency to tighten its NOx requirement from 9 ppm to 7 ppm. Again, Murr contacted the company's boiler partner for their recommendation. They suggested that the food manufacturer install Cleaver-Brooks 7 ppm retrofit kit and the integrated PLC-based boiler/burner Hawk touch screen control panel on both CBLE units.

There was a scheduled plant shutdown at the cereal manufacturer in June 2010, and Murr wanted the boiler system upgrade to be handled during that time. R.F. MacDonald worked double shifts to get the job done, and Murr complimented the installation technicians for their expediency and the equipment and controls for their reliability. He said, "The equipment worked out to be exactly what we needed. R.F. MacDonald really raised the bar. They had the parts that they needed to put in, and they were well trained. They knew which adjustments had to be made and how to make them." Since installing the Cleaver-Brooks retrofit kit, the cereal manufacturer is achieving sub-7 ppm NOx.

Murr said the Cleaver-Brooks equipment is dependable, and he credits the company's engineers for continuing to design components to meet stricter environmental regulations. He concluded, "I have all the confidence in the world that R.F. MacDonald and Cleaver-Brooks will continue to help us meet the air requirements."

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—Bob Murr, Senior Project Engineer

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