BMR Thermal, Inc.
COMBUSTION | HEAT RECOVERY | POLLUTION CONTROL

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BMR Thermal Inc. Supplies SCR Pollution Control System for a Paper Mill's New Package Boiler

One of the oldest Paper Mills in New England making containerboard in Central Massachusetts needed to resolve a mismatch between their steam generating capacity and the steam consumption of the plant. The existing boiler, a used package with an ultra-low NOx burner, was oversized for the application.

This created a problem when having to meet the stringent NOx emission requirements for the state of Massachusetts; the burner system could meet the requirements at normal boiler ranges but could not be turned down sufficiently for plant requirements and still meet the emission limits.

A new boiler package was purchased after the old boiler was past its useful life and the plant had brought in a rental boiler for many months.

The new package would still need to meet single digit NOx emissions, but this time, the plan was to use a small back-end SCR system to reduce the NOx generated from a standard Low NOx burner to meet the state limits. This new SCR system would be based on safe and reliable urea reagent, rather than ammonia, simplifying the extensive safety and reporting requirements necessary with ammonia storage.

The SCR system would allow the plant to stay in NOx compliance throughout the operating range of the boiler and offered a number of other benefits over using a ULN burner. These included **a smaller required furnace, reasonable horsepower FD fan, lower excess air operation, minimal flue gas recirculation and no special draft or fuel/air controls as compared to the ULN system they had previously.**

The SCR provided by CECO CCA Combustion Systems included Umicore catalyst for NOx reduction designed for the lower gas temperatures typically found after modern package boilers and liquid urea reagent that can be directly injected into the hot gas stream without the need for prior vaporization.

Rather than the typical multi-element ammonia injection grid, the system operates efficiently with two urea injectors through each side of the breeching.

For more information and details, please contact

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