

Food Processing



Ultra Low NOx Boilers Meet Peak-Season Needs and Steam Plant Expansion

Background

Two large food processing companies required boilers for very different reasons. One needed to augment its capacity for process steam during the peak tomato canning season, only. The other company, which specializes in producing maraschino cherries, required additional steam capacity, as well. However, its need was for a permanent capacity increase.

Problem

Both food processors were faced with strict air quality regulations. The tomato processor operated in California's San Joaquin Valley Unified Air Pollution Control District, one of the most stringent in the country. NOx emissions had to be controlled using the best available control technology. The Bay Area Air Quality Management District in which the cherry processor operated has very strict NOx emission limitations,

Summary

- Temporarily augment steam generating capacity with an ultra low NOx boiler
- Replace facility steam plant with an Ultra Low NOx, high-efficiency boiler

as well. But in this case, since a permanent boiler and accompanying feed water system was needed, fuel efficiency was also a major consideration.

Solution

The tomato processor rented a 70,000 lb/hr trailer-mounted package boiler to meet the peak season demand. It was equipped with a CataStak™ selective catalytic reduction system.

The cherry processor selected a high-capacity, XID firetube boiler out-fitted with an ultra low NOx burner and an EconoStak™ economizer. To meet the additional demand for feedwater, a deaerator system was also installed.

Results

The equipment supplied to both companies easily met the 9 ppm ultra low NOx emission requirements for their respective sites. This was accom-

plished through the use of best available control technology, simple controls, and fast start-up. The tomato processor kept the temporary unit on line throughout the peak canning season. The cherry processor integrated the XID boiler, EconoStak and deaerator system in the existing facility.

Equipment Used

- A 70,000 lb/hr, trailer-mounted boiler with CataStak SCR
- A 50,000 lb/hr XID firetube boiler with EconoStak economizer
- Deaerator and feedwater package

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