Steam Generator Assists in Program Against Salmonella

Posted: August 6, 2008

An almond-pasteurizing system from FMC FoodTech incorporates a steam generator from Clayton Industries to provide steam needed for the process.

When an outbreak of salmonella was traced to almonds, investigation determined that the nuts were subjected to the bacteria during harvest. The nuts were shaken to the ground at the orchards and exposed to salmonella when they came in contact with the fertilizer spread at the base of trees.

The solution was to pasteurize the almonds, but the Almond Board of California needed help in identifying the proper process. The board turned to JBT FoodTech (formerly FMC Foodtech), a segment of Chicago-based JBT Corp., to develop a pasteurizing machine for the job.

While the pasteurizing machine did its job, the process was an added expense for growers. One almond grower -- Dale Alquist, owner of Going Nuts in Madera, Calif. -- chose to view it as an opportunity.

To contend with the problem, growers had two choices, reasoned Alquist: install the equipment in their own orchards, or pay a processor to handle the pasteurization step. Alquist acquired one of the early FoodTech pasteurizers for almonds and other nuts, and growers began sending their nuts to Going Nuts for pasteurization.

While the original nut-pasteurizing system worked effectively, its manufacturer determined that the almond-processing machine would have more appeal if it was coupled with a unit that was more efficient than a conventional boiler in supplying steam. The “better way” was introduced to them by Mike Sabol, senior sales engineer for Clayton Industries, City of Industry, Calif.

For test purposes, the food processing equipment maker rented a 100 BHP SigmaFire steam generator from Clayton Industries and teamed it with its JSP-1 pasteurizer. The Clayton unit contributed steam of consistent high quality. According to the company, moisture content was optimal and the proper temperature was maintained.

Additionally, the Clayton system was energy efficient. The steam generator came up to operating pressure quickly and maintained pressure despite demand fluctuations. And, the unit complied fully with California air quality regulations. Overall, the results were successful enough that the FoodTech and Clayton units together gained approval from the Almond Board of California’s technical expert review panel and the FDA.

With approval in hand, Going Nuts installed the SigmaFire in its pasteurization process. Alquist says the unit is thrifty with water, occupies little space and delivers high performance. This makes his customers happy because they know their nuts will be safely processed for a fair price.