

Brine Solution

*Burnett Dairy,
Grantsburg, Wis.,
has eliminated its
excess brine disposal
problem by instal-
ling a new salt brine
concentrator from
Niro Filtration Inc.*

Getting rid of excess brine isn't as easy as it used to be, and it's bound to get even harder under federal and state wastewater regulations, according to Dale Olson, plant manager at Burnett Dairy in Grantsburg, Wis. Burnett used to haul out its excess brine, but Mr. Olson figured there must be a better way.

That's when Mr. Olson took up the problem with one of the plant's suppliers, Niro Filtration, Hudson, Wis. Niro's solution was a new innovation in Italian cheese processing, which has been working full-time at the Burnett plant for about a year now. The unit is a salt brine concentrator, designed to continually remove excess moisture from the brine.

"(Niro) brought in a rough draft, went through it with me, sized it for our plant," says Mr. Olson. "They built it and brought it in.... It's taken a little bit of fine tuning, like any new piece of equipment, but all in all it's run very well. Now we don't have to haul brine out anymore."

The Burnett plant processes bulk mozzarella and provolone, as well as some string cheese. Altogether, Burnett makes about 40,000 pounds of cheese a day, serving foodservice customers nationwide and some local retail customers.

"Most of the time we operate seven days a week," says Mr. Olson.

Like other cheesemaking operations that use a brine bath to salt the

cheese curd, Burnett experienced a common problem before installing the new Niro concentrator. That is, a continual increase in the brine volume as the cheese expresses more water and whey into the brine than it picks up. This situation creates a severe disposal problem for the cheesemaker, because wastewater regulations restrict the level of chloride (present in the brine) that can be routinely dumped. Most cheese plants either truck out the excess brine to a municipality that can handle the chloride, or spread it on land — though this requires a large area of land, according to Mr. Olson.

The new concentrator, made of fiberglass, eliminates the problem simply by removing excess water from the brine in the form of vapor. Once the excess water is removed, the increased concentration brine is returned to the brining system, and re-used to salt cheese.

The Burnett unit evaporates about 300 gallons of excess water each day. Vapor is released from the plant through a vapor stack.

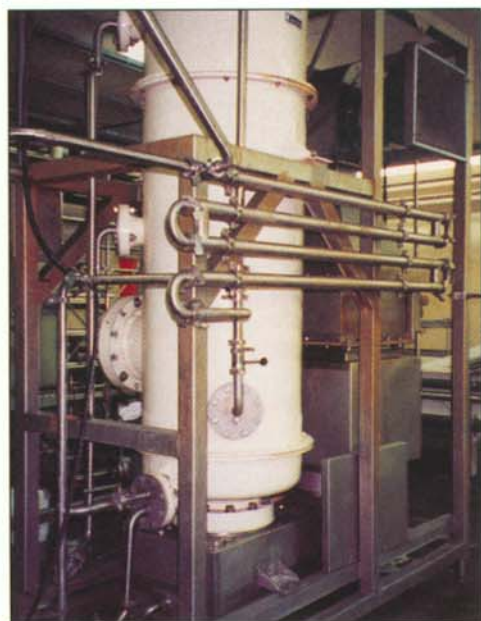
Installing the unit was straight-forward. "We didn't have to shut down the line at all — we got it in, placed it and piped it into our system. The piping took about a day."

Mr. Olson's been happy with the condition of the brine, and says the plant is probably saving money in salt costs.

Meanwhile, he says, the unit is saving Burnett from a problem that won't go away soon for many cheesemakers.

"Chlorides are going to be hard to deal with," he says. "Down the road it's going to get tougher and tougher to get rid of (the brine)."

Adds Dave Johnson, sales engineer, "This new salt brine concentrator represents a commitment by Niro and Damrow to further develop new process technologies to assist the cheesemaker. Other recent developments include the patented process for processing salty whey or salty mozzarella cooker/extruder water, salt brine microfiltration, and N.C.R. (Niro Chemical Recovery) system." ●



*Because of the new unit,
Burnett no longer needs to
haul out brine.*

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