Special screening saves European cheese operation.

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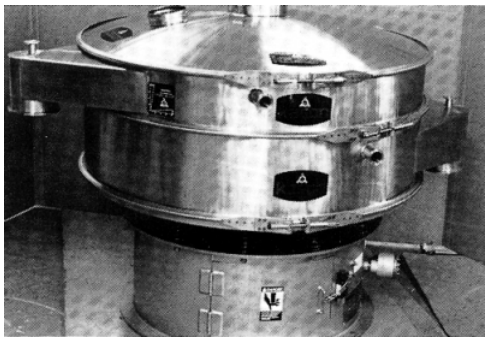
Sanitary screener from Kason Corporation gave MD Foods Cremo Cheese, Denmark, an effective way without failure to reprocess dried cheese and provide easy cleaning.

When European Economic Community (EEC) regulators threatened to shut down a cheese processing operation because of foreign materials in the cheese and frequent screen failures, managers at MD Foods Cremo Cheese Division in Glamsbjorg, Denmark, decided to find a better way to reprocess cheese. Their operation had relied on an old rotary pressure sifter. Unfortunately, its screens would sometimes fail between zero and five times a day, resulting in costly lost batches.

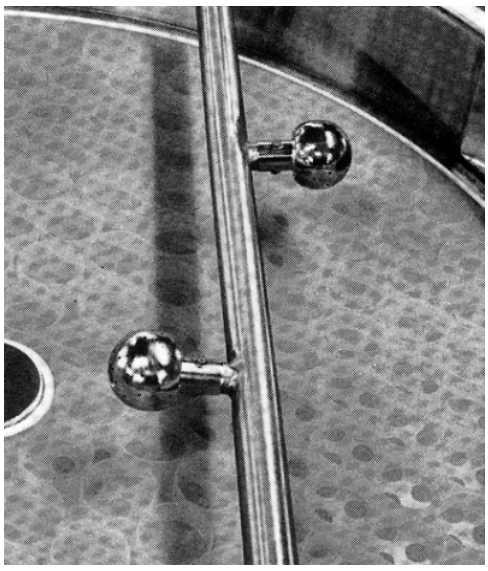


The pipes that extend outward from near the top edge of the two frames have flanges to ensure a leak free seal with hoses that bring cleaning solution to the spray balls

The overall operation consists of taking out-of-date cheese from retail shelves, melting it, drying it and preparing it for repackaging as a powder. The company sells it to other food processors who use it for products such as cheese sticks.

As with all food processing operations, sanitary handling is essential and quality threatening foreign materials must be removed. With old cheese, the company found that foreign materials such as plastic and metal pieces posed a problem to meeting these goals. Screening was the solution. The managers found, though, that not just any screener will suffice for this task.

The company requirements centered on these needs: Nearly all debris must be removed, screens should not fail and the screener should be able to be cleaned quickly and thoroughly. In addition, the process should permit a rate of 4 tons per hour while the screens and other equipment must withstand cheese at 230 F and caustic soda washing for 15 minutes and washing with nitric acid for 10 minutes. These last two procedures are used for sanitizing the screener interior. Furthermore, the slurry of melted cheese, salt, water, lactose and casein has a viscosity of about 30,000 cp, and the screen mesh required to capture virtually all the foreign materials remaining is 88 tensile belting cloth which has 200 micron openings.



Clean in Place Spray Balls permit quick and effective cleaning of circular screen separator interiors.

Kason Europe accepted this challenge and manufactured two 48-inch diameter Vibroscreen units constructed of 316 stainless steel. The units are equipped with a Kleen Screen Ring Assembly. It helps knock the gooey cheese from the screen.

To allow for quick and thorough cleaning, these separators are equipped with strategically located Clean-In-Place(CIP)stainless steel spray balls. They permit 360 discharge of caustic soda and nitric acid. They sanitize the entire interior of the Vibroscreen unit, even the spout areas since the CIP balls are located in the spouts. Each ball has a capacity of 20 to 30 gpm with a pressure from 8 to 22 psig.

To prevent lodging of edge of the two cheese particles in the separator, its welds are polished to Ra 0.6. All moving parts are protected by safety microswitches. Thus, these special separators are certified to stringent EEC regulations as of Jan. 1,1995.

Other custom features include the use of flexible couplings made of silicone, and gaskets composed of

materials approved for use in the food industry .Victaulic connections enable plant personnel to change quickly from the 144 hour long batch processing to the 25-minute cleaning mode. Cleaning the rotary pressure sifter required disassembly, a 1 to 2 hour laborious task. Now, the process is much more efficient and profitable since the installation of the Kason Vibroscreen units. Plant personnel are freed from the disassembly and re-assembly procedures. In addition, splash covers on the Vibroscreen units also minimize housekeeping chores.

After the cleaned cheese leaves these separators, it flows to storage vats from which it moves to a spray dryer and then to packaging. Cremo Cheese was able to continue its operation by relying on Kason technology.