



Process Heating Solutions Worldwide

Food Processing Industry Case History



Heating Whey Permeate and Lactose Slurry

Application

A US dairy and protein producer was using (2) indirect heat exchangers to apply heat to whey permeate and lactose slurry, which removes calcium and impurities prior to the drying process.

After running only 4-6 hours the heat exchangers would plug which dramatically reduced their efficiency and increased unnecessary downtime for maintenance. This became a bottleneck in the process.

Process Conditions

Whey Permeate

Product Flow Rate: 22,000 – 46,000 lbs/hr
Temperature Rise: 50-65°F
Steam Flow Required: 1,050 – 2,750 lbs/hr

Lactose Slurry

Product Flow Rate: 20,000 lbs/hr
Temperature Rise: 40-50°F
Steam Flow Required: 860 lbs/hr

Solution

A Pick Model SC25-3 In-line Sanitary Heater is used to instantly heat the whey permeate, and a Pick Model SC10-3 In-line Sanitary Heater is used to instantly heat the lactose slurry. Pick's specially designed injection tube is utilized in both units to minimize any plugging from precipitation of impurities. This permits longer run times before cleaning is required. Pick also supplied a single steam separator and filter assembly to ensure culinary quality steam is delivered to each heater.

Features and Benefits:

- Low ΔP Open Flow-Through Design
- Instantaneous Heat Transfer
- Quick and Easy to Clean
- Compact Design

Learn more at
www.pickheaters.com

Pick Heaters, Inc. — 730 S. Indiana Ave.
West Bend, WI 53095 USA
Phone: (262) 338-1191
Email: info1@pickheaters.com