Waukesha Cherry-Burrell
A United Dominion Company

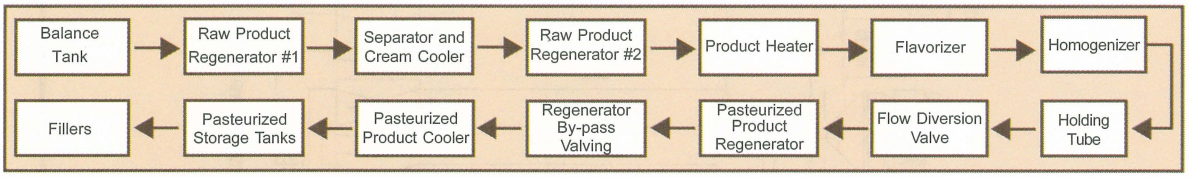
Process Technology
Bullet 9816 8-98

DAIRY HTST (ALL OPTIONS)

PROCESS DESCRIPTION:

Raw product from the balance tank is transported by a booster pump through the raw regenerator section where it is pre-heated by hot product in the pasteurized regenerator. The milk flows to an optional separator where cream is removed, and the butterfat content of the milk is standardized. The product then flows to the timing pump, which maintains a constant system flow rate. Raw product enters the heater section from the timing pump, is heated for pasteurization and flows through a holding tube to the Flow Diversion Valve (FDV). When pasteurization temperature is reached, the FDV directs flow of the pasteurized product to the pasteurized regenerator section. In the pasteurized regenerator section, pasteurized product is pre-cooled by raw product in the raw regenerator. A portion of the pasteurized milk can be by-passed around the pasteurized regenerator to yield higher outlet temperatures. Product enters the cooler section from the pasteurized regenerator where it is cooled to packaging or storage temperature. From the cooler section, the pasteurized product is either routed by a recycle valve to storage or recycled to the balance tank. A second valve is provided to permit flow to drain for start up and CIP functions.

BLOCK DIAGRAM:



PROCESS SYSTEM FEATURES:

- Utilizes compact, efficient plate and frame heat exchangers for process duty.
- Direct regeneration for up to 96% heat recovery.
- Homogenizer used as timing pump. Also available with meter based timing for maximum system flexibility.
- Warm milk separator/standardization system insures proper product butterfat.
- Optional steam injection flavorizer removes off flavors and odors for a pure tasting product. The flavorizer can also be used to achieve pasteurization temperatures in an HHST configuration.
- Can be configured for ice cream mix, shake mix and other byproducts.
- Regenerator bypass and extended holding tube allows higher outlet temperatures and longer holding time for cheese milk, yogurt base and other products.
- Can be configured to meet US Pasteurized Milk Ordinance and other regulations.
- Various control systems configurations (manual to fully integrated automatic) available.

EQUIPMENT REQUIRED:

- Balance Tank
- WCB Centrifugal Pumps
- Separator
- Cream Balance Tank
- WCB Positive Displacement Pump
- Plate Heat Exchanger(s)
- Optional flavorizer
- WCB Homogenizer
- WCB Holding Tube & Extended Holding Tube
- WCB Flow Divert Valve
- Miscellaneous Valving
- WCB Hot Water Set
- Control System

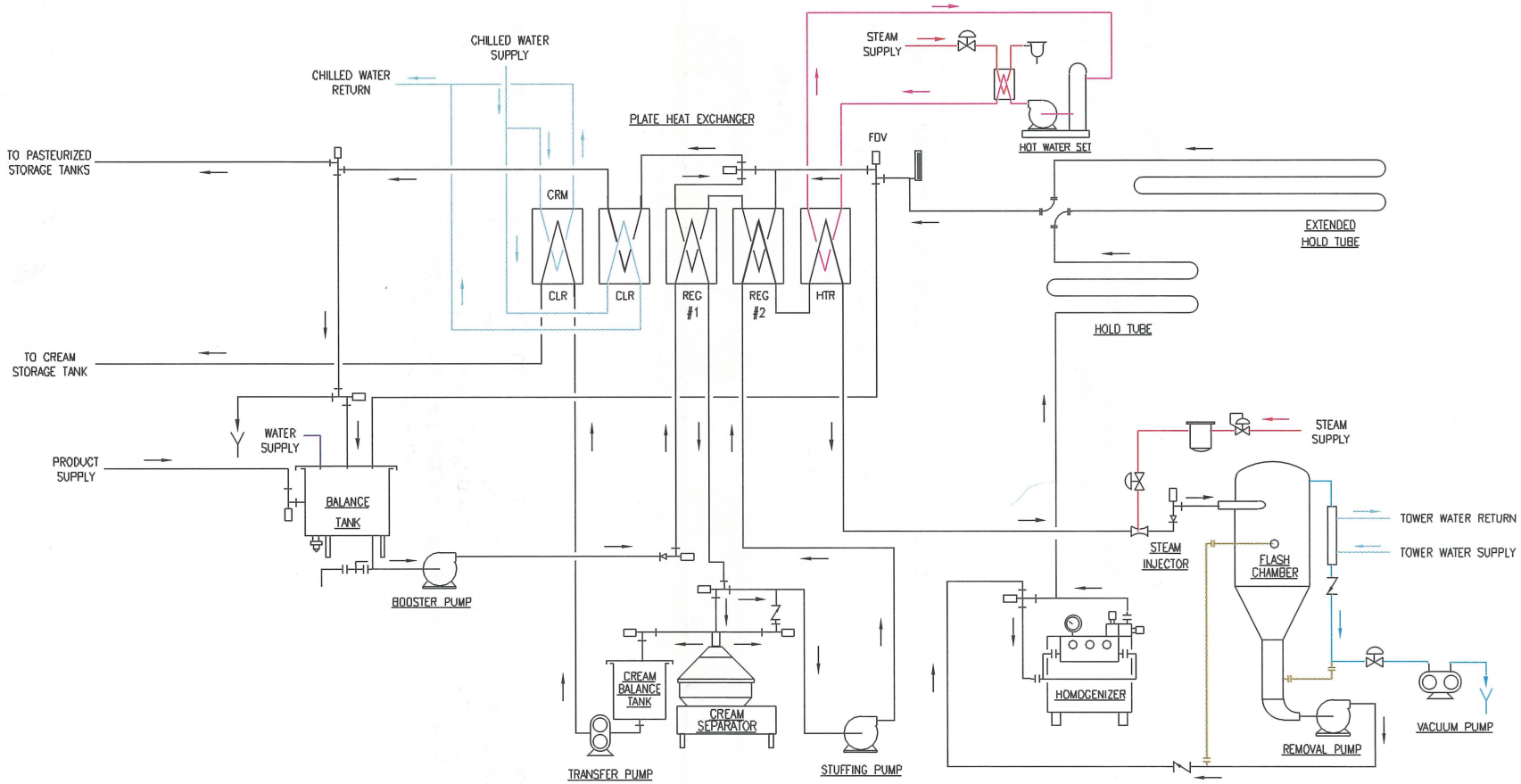
PROCESS PARAMETERS:

- Capacities: 1,000 to 45,000 GPH
- Process duty: 40°F to 170°F to 40°F

INFORMATION REQUIRED FOR QUOTATION:

- Products _____
- Configuration options required _____
- Product flow rate _____
- Product viscosity _____
- Product specific gravity _____
- Product pH _____
- Product inlet temperature _____
- Desired product outlet temperature _____
- Desired holding time _____
- Desired fill temperature _____
- Regulatory requirements _____
- Electrical service available _____
- Steam service available _____
- Cooling media service available _____

Dairy HTST - (All Options)



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ENGR.	CHECK BY	DATE
SERIAL NO.		SIZE B

FOR TYPICAL HTST PASTEURIZING SYSTEM SHOWING ALL OPTIONS

DRAWING NO. PB-9816

CHERRY-BURRELL CORP. 10300 BUNSEN WAY LOUISVILLE, KY. 40299 USA (502)491-4310

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