Cottage cheese production line
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Technological description

After repasteurization, milk is cooled down to the processing temperature and pumped into a coagulation vat. The coagulation process takes place upon the addition of starter and acid. The resulting curd is cut by vertical and horizontal harps, which are part of the vat. Thermal curd treatment is done using a membrane heated with water inside the heating jacket. When the grains are properly set, the curd is pumped via a membrane pump to the whey-draining belt.

The separated curd is immersed in the rinsing water inside the buffer tank and then pumped to the rinsing-cooling tower. Inside the tower, the hydrodynamic rinsing of the remaining whey and cooling of the grains take place. The cooled grains are separated from water on the draining belt and conveyed to the creamer for the creaming process. The amount of curd and cream is determined by tensometric scales which are built into the creamer.

The cottage cheese production line consists of the following equipment:

- pasteurizing systems: for milk(1), for technological water(2)
- processing equipment for curd production: coagulation vat(3), whey-draining belt (4), rinsing-cooling tower(5), water drainer(6), creamer(7)
- storage tanks: for cream(8), for technological water(9)

All line equipment is automatically controlled to enable easy operation, industrial safety and repeatability of the technological process.

All equipment is adapted for C.I.P. cleaning.

The advantages of the OBRAM new cottage cheese production line

- Reduction in the technological water consumption during the process
- Improvement of the microbiological quality of the product by using closed equipment adapted for C.I.P. cleaning
- Repeatability of the technological process
The coagulation vat is a horizontal closed processing tank used in the production of cottage cheese grains. Inside the vat there are mixers and harps for mixing and cutting the curd. The vat is also equipped with a whey-draining system.

The coagulation vat also offers a pneumatic lifting system with which the vat can be easily emptied.

Construction and equipment of the vat enables the following technological operations:
- filling with milk
- cutting the curd
- mixing the curd
- heating and thermal treatment of the curd
- whey draining
- emptying
- C.I.P. cleaning

OBRAM offers coagulation vats with capacities of 12,000 l, 15,000 l and 18,000 l.
The technological line for cottage cheese production may be optionally equipped with an open coagulation vat. This is an economical solution, but it requires manual cleaning and stricter hygienic standards inside the technological rooms.
whey-draining belt
The whey-draining belt consists of a drip chamber, a draining belt system with a drive, a belt positioning system and a buffer tank for the separated curd. The buffer tank is equipped with nozzles to enable the addition of process water to the curd which is to be pumped to the rinsing tower.
rinsing-cooling tower
Inside the rinsing-cooling tower, small amounts of whey are hydrodynamically separated from the curd with technological water and the curd is cooled down before its final creaming.
The water-draining belt is used to gently separate water from the curd pumped from the rinsing tower. The separated curd is transferred to the creamer.
The creamer is a process tank used for mixing the curd with cream. The construction and fittings of the creamer permit the following technological operations:

- mixing the curd with cream using specialised mixers
- curd storage
- measuring the weight of curd and cream
- curd cooling (cooling jacket)

OBRAM offers creamers with capacities of 2500 l, 3500 l and 4500 l.