PASTEURIZATION PILOT WITH CHAMBERING, TUBULAR EXCHANGERS

DELTA LAB · SMT
ÉQUIPEMENTS PÉDAGOGIQUES & TECHNIQUES

REFERENCE : MP312

Non contractual photo

SERVICE : WATER SUPPLY: DN15 - 2 BAR / PERMANENT EVACUATION IN WATER; 15 KW - 380 V
DIMENSIONS : 1200 X 850 X 1800 MM

- Study of the efficiency of heat transfer in a crushed tube heat exchanger and its
- properties for pasteurization
- Study of the operation of heat exchangers
- Study of parameters: flow rate, pasteurization temperature and holding time
- Calculation of the pasteurizing value
- Study of the operation of a temperature controller

Technical specifications :

Pilot planned for the pasteurization of 10 to 100 L / h product at 85 ° C Pasteurization of product with a viscosity lower than 20cP.

Le pasteurisateur se compose de trois zones d'échange thermique en inox 304L :

1. Preheating approx. 0.5m²: tubular heat exchanger incoming / outgoing product,
2. Pasteurizer 1,0m² approximately: tubular exchanger product / water,
3. cooling about 0.5m ²: tubular product / water exchanger.

The circuit is made of 304L stainless steel and in the SMS standard, it includes:

- a rooming area,
- 30L 30L stainless steel launching tank with lid and drain valve
- A stainless steel centrifugal pump 4bars 250L / h
- a stainless steel needle flow meter (0-160 L / h), on the product supply circuit,
- a flow meter for cold water (60-600 L / h)
- a flow meter for hot water (150-1500L / h)
- a diversion valve at the outlet of the pasteurization zone,
- 5 Pt 100 temperature probes, 3 thermometers,
- a diversion valve depending on the temperature measurement at the pasteurization
- outlet
- external connections: SMS standards
- a hot water production group
- an electrical box with pump control and protection, temperature controller,
- integrated touch screen temperature display and USB data logging.
- Communication with the PC, software for calculating the pasteurizing value

OPTIONS :

Option 1: pasteurization of viscous products (max viscosity: 1500 cPo.): A 3 bar max impeller pump, on a drive, used for the process and

for cleaning in place, an electromagnetic flowmeter for measuring the feed rate Option 2: Pasteuristic Value Calculation Software