

WALWA SHIRALA CO. OP. DAIRY LTD.

A/P. RATHARE DHARIN, TAL- WALWA, DIST. SANGLI

MILK PROCESSING PLANT 5000 LPH

Total Project Approx. Cost RS. 16, 80,000/-

(Included GST Total Cost)

SECTION - I	: PROCESS SECTION
SECTION - II	: HOT WATER SYSTEM
SECTION - III	: UTILITY SECTION
SECTION - VI	: ERECTION & COMMISIONING

I)	Process Section	
01.	<p>HTST pasteurizer -capacity-5000 LPH Alfa Laval (with skid mounted SVE) The plant will be HTST type and will be used for pasteurization milk & chilling it.</p> <p>Make : Alfa Laval</p> <p>Design parameters:</p> <p>Milk Consistency : 7.0% Fat And 9.0% Snf</p> <p>Temperature program : 6/48/60-72/75-80-4/6</p> <p>Heat Regeneration Efficiency : 90%</p> <p>The supporting frame for the Pasteurizer will be of a self-supporting design. The frame and pressure plate and interconnecting plate will be of mild steel cladding with stainless steel. AISI 304 grades and will be of multi bolt lightning design with six points. The PHE plates will be of AISI 304 quality. Will be of sanitary design. The Pasteurizer will have sections-heating, generation I, II and</p> <p>Chilling plates will be AISI-316 quality. The frames will be capable of accommodating the additional plates for the expanded capacity.</p> <p>The sealing gaskets will be food grade rubber nitrile quality and will ensure complete sealing and prevent any cross leakage between product and service liquids. Gaskets will be of sanitary type. And will be continuously bonded to the heat transfer surface. The gasket materials will be withstand a water sterilization temperature of 100° C and 2% caustics solution at 80° C. Gasket material will be nontoxic, fat resistant, non-absorbent and will have smooth surface.</p> <p>The holding tube will be supplied for holding the milk for 20 seconds at the pasteurization temperature. The tube will be fabricated from SS pipe will be supported on stand.</p> <p>Inlets/Outlet: Thermo Wells: Ball Feel: Tools:</p>	1 No.
A.	<p>Holding tubes in S.S. 304</p> <p>Holding tube will be designed for the specified holding time 20 sec. considering the CIP clean ability and fastest particle velocity. MOC is SS304. Holding tube up of pipes and fittings to match the internal surfaces get the best hygienic construction.</p>	1 No.
B.	<p>PHE Electric Panel</p> <ul style="list-style-type: none"> · MOC: SS 304, Duly pre-wired and tested, & consists of the following Instruments and Controls: · Temperature Indicating Controller, · Alarm/Hooter with · 4 Nos. Start/stop push buttons with indicating lamps for process pump (milk pump, hot water pump etc.) & motors · 1 No ON/OFF lockable switch with indicating lamp for Incoming supply from `Mains`. 	1 No.
C.	<p>Float Balance Tank</p> <p>The tank will be fabricated form SS sheets of AISI 304 quality of 2mm-thickness. The tank will be of welded construction. Welding done by argon arc welding process. All the welds will be ground smooth and will be subject to</p>	1 No

	dye penetrate test. The dye will be tested with water fill up test. All the SS surface will be well reduced. The tank will be provided with following. 1 No SS milk inlet/outlet 4 Nos SS legs fitted with SS ball feet Mechanical float assembly.	
D.	Simplex filter The SS single having pore SIZE S.S. Mesh required for continuously filtering the milk will be supplied. The set consist of 1 no SS filter, air vent, sampling cock etc. The unit will be self-supported and will be completed within filter stand, SS mesh etc.	1 No
E.	Milk Transfer pump cap. 5000 LPH. Centrifugal pump, SVE Make, all wetted parts in SS316L, SMS connections with single shaft seal with motor.	1 No
F.	FRV valve at the outlet of Milk Pump PLUG valve.	1 No.
G.	Interconnecting ss pipes & fitting SS pipes and fittings for interconnection of float balances tank, milk pump and PHE, filter finished pasteurized milk outlet and diversion system back to float balances tank. All interconnecting pipes with necessary fittings for product side will be supplied the fittings will be SMS STD.	1 Lot.
H.	Skid frame All the above components will be installed on SS 304 skid frame incompact aesthetic modular construction except PHE pasteurizer. Make-SVE	1 No.
I.	Operating tools	1 set.

II.	HOT WATER SYSTEM:-	
01.	HOT WATER GENERATOR (boiler) Wood fired hot water generating set default set shall be capable of generating 100,000 Kcal/hr heat output suitable for heating the water required for pasteurization heat transfer. The hot water generating set shall be working on wood and shall consist of the shell assembly, blower assembly, and control panel with panel box. Hot water pump, and pressure gauge etc. The hot water generating set will be suitable for producing hot water at 85° C.	NO 1
02.	CHIMNEY & DUCTING The chimney will be fabricated from M.S. sheets and will be of self-supported. One flange to be provided with dummy flange in case extension has to be done at site	NO 1

III. UTILITY SECTION

S.NO.	EQUIPMENTS	QUANTITY
1.	SS INTERCONNECTING PIPES & FITTINGS SIZE 38 MM SS pipes and fittings for interconnection of pasteurizer, and storage tank. All interconnecting pipes with necessary fittings for will be supplied the fittings will be SMS STD 304.	1 Lot.
2.	CHILLED WATER PIPE & FITTING 50 mm Chilled water G.I. "B" class pipes and fitting comprising butterfly valve and pipes for interconnection of milk Pasteurized.	1 Lot.
3.	CHILLED WATER PIPE INSULATION Pipe section Thermocol insulation for chilled water pipes (24 SWG. Aluminum Claddings will be done by you).	1 Lot.
4.	HOT WATER PIPE AND FITTINGS 50mm G.I. 'B' class pipes and fittings comprising of bends, butterfly valve will be provided for interconnection of hot water generation. Hot water pump ad heating section of pasteurizer	1 Lot.
5.	HOT WATER PIPE INSULATION Glass wool & equivalent insulation material for insulating the hot water pipe line & be covered with aluminum cladding.	1 Lot.
IV.	Erection And Commissioning	1 Lot.