

## TCHS Series Horizontal Clean Steam Generator Specification

General: Furnish factory packaged horizontal steam-to-steam horizontal generator, tested on steam service ready for installation and startup.

Unit shall produce \_\_\_\_\_ lbs/hr of \_\_\_\_\_ psig clean steam .95% dry certifies when supplied with \_\_\_\_\_ lbs/hr of \_\_\_\_\_ psig saturated plant steam.

The steam-to-steam generator shall be ASME Code constructed and stamped with the "UB" stamp, Section VIII for unfired vessels.

The shell shall be constructed of 316L stainless steel with 100% X-Ray of all seam welds per ASME Code and factory insulated with 2" of high-density fiberglass removable insulation jacket.

The internal heating coil shall be .049- wall seamless 316L stainless steel construction, and shall produce clean steam instantaneously without lag.

The tube sheet shall be a 2 pass configuration and constructed of 316L stainless steel.

The plant steam supply head shall be ASME CODE Stamped fabricated steel.

Clean Steam Outlet fitted with impingement internal steam separator and internal drain

Clean Steam Generator shall be furnished pre-piped, wired and tested with the following:

- Automatic TDS blowdown control system complete with 316L internal quill, NEMA 1 control panel and automatic surface and bottom blowdown valve sin 316L stainless steel w/ jet after cooler, self-acting cooling valve and thermometer to cool blowdown.
- Double tandem 316L stainless steel manual bottom blowdown valves
- ASME Section I safety relief valve with stainless steel wetted construction set for full rated capacity of plant steam at 3% overpressure.
- 316 Stainless steel vacuum breaker
- Electronic Operated "Fail Closed" pressure V Ball stainless steel control valve with strainer and main drip steam trap. Control valve shall be fully modulating ball type for dead tight Class 6 shutoff service.
- High Capacity Main Coil Float and Thermostatic steam trap complete with strainer and isolation valve.
- Visual Sight Glass. 316 Stainless Construction fitted complete with isolation valves and internal checks mounted on stilling well
- NEMA 4 UL Listed Main Control Panel with Full PID Control of Clean Steam Pressure and Level with LED Readout and Alarms
- Makeup water level control system with full PID Modulating feed water level V Ball Control valve 316 stainless steel fail safe, high and low level alarms (bell), independent high high level to shutdown all feed water, plant steam shutoff system and Building Alarm and Automation Interface. Level controls shall be 316 stainless steel stilling well fail safe type with digital differential pressure transmitter.
- Unit shall by hydro tested and steam quality tested prior to shipment with test papers furnished
- U-1 ASME Code Date Sheets furnished on shipment, factory startup provided. **lean Steam Generator shall be model: THCS-H Horizontal "Clean Pak" as manufactured by Thermaflo Engineering, Inc.**