

Steam Heat Exchanger



Description

During well test operations, the steam heat exchanger is used to increase the temperature of the well effluent to prevent hydrate formation, reduce fluid viscosity, breakdown emulsions, and assist the separation of fluids in the separator. A steam generator feeds hot steam into the shell side of the heat exchanger. Well effluents flow through the process coils and picks up heat from the steam.

Applications

Well Testing, Well Clean-ups, and Heating Fluids.

Features & Benefits

- A midstream choke assembly to control the well flow to the steam exchanger.
- An inlet manifold to control the fluid flow and to by-pass the steam exchanger is necessary.
- A temperature regulator with an automatic control valve (ACV) on the steam inlet to maintain a preset flowing temperature.
- Double safety relief valve to protect the vessel from overpressure.
- A thermal relief valve is mounted externally for the expansion coils.
- Insulation and an aluminium covering.



Operating Specification

DESCRIPTION	Horizontal Steam Heat Exchanger			
HEAT CAPACITY	4.2 mmbtu/hr.	4.2 mmbtu/hr.	5.4 mmbtu/hr.	6.0 mmbtu/hr.
WORKING PRESSURE	5,000 psi	10,000 psi	10,000 psi	15,000 psi
SERVICE	H2S	H2S	H2S	H2S
UPSTREAM COIL	3 in.	3 in.	4 in.	3 in.
DOWNSTREAM COIL	3 in.	4 in.	4.5 in.	3 in.
HEATER SHELL (OD x S/S)	42 in. x 15 ft.	42 in. x 15 ft.	48 in. x 18 ft.	54 in. x 18 ft.
VESSEL WORKING PRESSURE	250 psi	250 psi	250 psi	250 psi
CHOKE	3 in. Adj.	3 in. Adj.	4 in. Adj.	2 ea. 3 in. Adj.
INLET CONNECTION	3 in. 602 Weco	3 in. 1502 Weco	4-1/16 in. 10K API Flange	3-1/16 in. 15K Flange
OUTLET CONNECTION	3 in. 602 Weco	3 in. 602 Weco	4-1/16 in. ANSI 1500	3-1/16 in. 5K Flange
STEAM INLET	2 in. 206 Weco	2 in. 206 Weco	3 in. ANSI 300	3 in. ANSI 300
STEAM OUTLET	2 in. 206 Weco	2 in. 206 Weco	2 in. ANSI 300	3 in. ANSI 300
SAFETY	SRV, HPP	SRV, HPP	2 ea. PSV, 1 Thermal PSV, HPP	2 ea. PSV & Thermal PSV, HPP
RELIEF SET PRESSURE	PSV 1 250 psi PSV 2 250 psi	250 psi 250 psi	250 psi 250 psi	235 psi 235 psi
TEMPERATURE CONTROL	Thermostatic Controller on /Outlet Flow Line actuates Steam Inlet Control Valve			
INLET MANIFOLD	With By-pass	With By-pass	With By-pass	With By-pass
SKID DIMENSIONS L x W x H	20 ft. x 6 ft. x 8 ft.	20 ft. x 6 ft. x 8 ft.	24 ft. x 6 ft. 6 in. x 8 ft.	25 ft. x 8 ft. x 8 ft.
WEIGHT	28,000 lbs.	29,000 lbs.	36,000 lbs.	44,000 lbs.