

System Description

The Vertical Heater Treater breaks emulsions in crude oil using heat and retention time. Treater helps to effectively remove water and emulsion from crude oil well streams. Flow enters the internal heat exchanger for pre-heating. Preheated Crude Oil enters the top of the treater into a gas separation section and strikes the inlet diverter to create centrifugal action. This allows gas to separate from the liquid and flow upward through the mist extractor to the gas outlet. Oil and water flow through a downcomer to the base of the treater. Free water continues downward to be discharged from the bottom part of the treater.

Oil and entrained water rise around the firebox to a coalescing section where sufficient retention time is provided to allow the small water particles in the oil continuous phase to coalesce and settle to the bottom. Treated oil flows out the oil outlet. Any gas, flashed from the oil due to heating, flows through the equalizing line to the gas space above. Oil level is maintained lever operated dump valve. Water is removed from the bottom part of the treater through an externally adjustable water siphon and lever operated dump valve.



Properties

- Sand blasting, internally (fenolic epoxy) and externally (epoxy) coating.
- Thermal insulation with rockwool and aluminum plates.
- The separator is designed by PV Elite and are built according to ASME VIII Div. 1 (ASME Code Version 2013).
- CE Certificated as per PED 2014/38/EU (Module G) by 3rd Party Company.

Standard Accessories

- Removable firebox (U-Tube)
- Burner
- Stack
- Heat Exchanger (pre-heater)
- Siphon System
- Thermostat w/thermowell
- Thermometer w/thermowell
- Pressure gauge w/isolating valve
- Pressure transmitter
- Level gauge
- Relief valve
- Shutoff valve
- Oil and water dump valves
- Gas backpressure regulator
- Sample points
- Vortex breaker
- Inlet diverter
- Mist extractor
- 18" manways
- Baffles sections
- Access ladders
- Firebox working platform
- Top mounted platform w/ safety rails
- Mg. Anodes
- Anchor Chairs & Anchor Bolts

