# Two phase separator

Contents



The two-phase separator is a device that uses a rotating centrifugal force to filter out gas from liquids present in oil wells. The working process of the separator contains two-phase separation movement and a forceful spinning flow in three dimensions [1]. The horizontal separators' precision makes them vital tools in the oil and petroleum industry.

## Horizontal two phase separator

Two-phase separators are mechanically designed to separate the gasses and the liquids from the hydrocarbons at a specified pressure and temperature. The separator triggers the fluid valve to maintain the liquids at the required levels [1]. The horizontal separator is designed to retain liquids for a few minutes to allow the gasses to separate from the liquid. On the other hand, the level controller controls the oil separated from the other liquids and leaves through the dump valve. The two-phase basic design consists of the bottom and top valves whereby the gas escapes from the top, leaving behind fluid residues that are deposited on the bottommost valve [1]. The gas flows over the inlet and flows horizontally above the liquid through the gravity setting.

## Horizontal Heater Treater

A heater treater is used to break up the oil and water solution to enable the oil to be easily transported to the consumers. The vessel uses gravity, thermal, mechanical, and in some cases electrical or chemical processes in breaking up the oil-water emulsion. Horizontal heater-treaters use heat to

quicken up the separation of oil from water. The vessel is equipped with horizontal electrodes known as Chem-electric or Electrostatic Coalesces that mostly desired because they treat at low temperatures, hence saving on oil gravity and fuel [2].

REFERENCES

[1] Manning, F. and Thompson, R. Oilfield Processing of Petroleum: Crude oil. Tulsa, Oklahoma: PennwWell Books, 1995.

[2] M. Steward and K. Arnold. Emulsions and Oil Treating Equipment: Selection, Sizing, and Troubleshooting. Oxford: Gulf Professional Publishers, 2009.