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Atmospheric Gauge Tank

Nonpressurized vessel for measuring low flow rates, calibrating metering devices, and temporarily storing oil

Applications

- Measures low liquid rates from a separator
- Calibrates oil meters mounted on the separator oil lines
- Measures large volumes of oil at atmospheric pressure
- Determines the shrinkage factor

How it improves wells

- Quantifies volume in low flow rates with accuracy and reliability
- Stores oil temporarily when flow rate is too low to efficiently drive oil to the burners
- Samples dead oil in large volumes

How it works

The atmospheric gauge tank, a nonpressurized vessel, is used to measure low flow rates or to calibrate metering devices on the separator oil lines in a testing system. When the flow rate is too low to efficiently drive oil to the burners, the tanks can temporarily store the oil.

These skid-mounted units have two compartments. As a transfer pump empties one compartment, the other is filled. A sight-glass level built into each tank is used to calculate the change in volume based on the physical dimensions of the tank.

Features

- Sight-glass level available on each tank compartment
- Flame arrestors on each gas vent line
- Overpressure tank shearing roof
- Ground strap

The takeaways

Safety features include flame arrestors on each vent from the tank, a grounding strap, and a shearing roof that opens at 0.5 psi- [3.45 kPa-] burst pressure in the event the vessel is accidentally overpressured. The grounding strap attached to the tank prevents a static charge buildup.

The atmospheric gauge tank is frequently part of the standard equipment for well testing.

Atmospheric gauge tank.

Atmospheric Gauge Tank

Specifications				
Model	**FGTS-BA**	**FGTS-C**	**FGTS-DA**	**FGTS-EA**
Type	Dual compartment	Dual compartment	Dual compartment	Dual compartment
Height, ft [m]	9.0 [2.71]	9.68 [2.95]	8.75 [2.67]	9.48 [2.90]
Footprint, ft [m]	16.6 × 7.2 [5.05 × 2.2]	25.6 × 7.9 [7.8 × 2.4]	19.9 x 8 [6.06 × 2.44]	19.9 × 8 [6.06 × 2.44]
Capacity, bbl [m^3]	2 × 50 [2 × 8]	2 × 100 [2 × 16]	2 × 50 [2 × 8]	2 × 100 [2 × 16]
Weight, lbm [kg]	9,921 [4,500]	17,527 [7,950]	19,842 [9,000]	29,762 [13,500]
Working pressure	Atmospheric	Atmospheric	Atmospheric	Atmospheric
Temperature, degF [degC]	32 to 212 [0 to 100]	32 to 212 [0 to 100]	32 to 212 [0 to 100]	32 to 212 [0 to 100]
Connections				
Inlet	3-in, Fig 602, female	3-in, Fig 602, female	3-in, Fig 602, female	3-in, Fig 602, female
Outlet	3-in, Fig 602, male	3-in, Fig 602, male	4-in, Fig 602, male	4-in, Fig 602, male
Documentation	Quality File and load test	Quality File and load test	Quality File and load test	Quality File and load test
Standards	ANSI B31.3	ANSI B31.3	ANSI B31.3, DNV 2.7-1	ANSI B31.3, DNV 2.7-1

All specifications are subject to change without notice

Not recommended for operations with H_2S

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