Vertical Separator
Two & Three Phase / Low Pressure

Application

Two phase separators are utilized to separate the gas from the liquid in a wellstrem. This allows liquid free gas to be diverted to gas sales and/or to be utilized as fuel. Relatively gas free oil is then dumped to storage or to a treating system for removal of water.

Two Phase- Low Pressure

The wellstream enters the separator and immediately strikes the inlet deflector. This diverts the liquid and gas around in a circular pattern which tends to “throw” the heavier liquids to the shell of the separator where it travels downward to the liquid section.

The gas expands and starts to travel upward at a low velocity which allows more and more heavier liquids to fall out. After adequate retention time, the gas goes through the wire mesh mist extractor for final scrubbing of the gas.

The liquid section is sized to hold the liquid long enough for a maximum portion of the gas in solution to break out and travel up through the gas section.

As liquid builds up in the bottom section of the separator it lifts a float which, through linkage, dumps the fluid by means of a mechanical dump valve. A baffle protects the float and reduces liquid turbulence.

Three Phase- Low Pressure Application

Operation is essentially the same as the two phase except that the separator has an internal inlet flume which carries the liquid down into the settling section. The three phase also has a larger liquid section allowing more retention time for the oil and water to separate.

At the oil/water interface there is a pneumatic displacement type level control which actuates the water dump valve. The oil which rises is then dumped by a mechanical float operated oil dump valve.

The capacity is a function of the gravity difference in the oil and water, and retention time. Oil and water must be present as free liquids. The three phase separator will not “break” an emulsified liquid stream.

LIDE INDUSTRIES

Providing Quality Storage Tanks Since 1976

Vertical Separator

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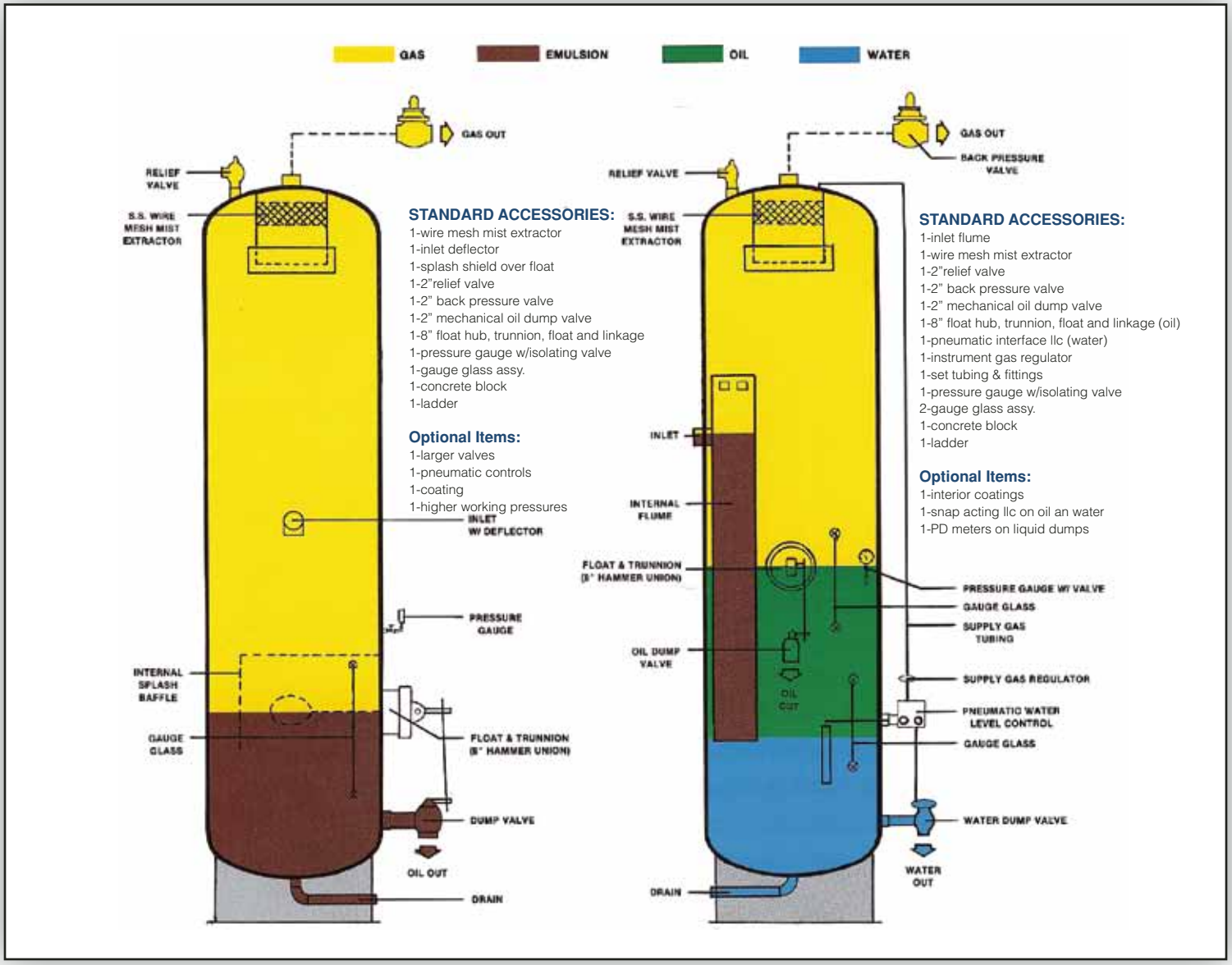

TWO PHASE

SIZE S.S	INLET & GAS OUT CONN	LIQUID OUT CONN	STD LIQUID & GAS VALVE SIZE	NOMINAL CAPACITIES		
				LIQUID B/D	GAS MMSCF/D	
					50 PSIG	100 PSIG
24" x 10'	3"	3"	2"	600	2.3	3.1
30" x 10'	3"	3"	2"	1400	4.2	5.7
36" x 10'	3"	3"	2"	2700	6.1	8.2

THREE PHASE

SIZE	INLET & GAS OUT CONN	LIQUID OUT CONN	STD LIQUID & GAS VALVE SIZE	NOMINAL CAPACITIES			APPX. WT. LB.
				LIQUID B/D	GAS MMSCF/D		
					50 PSIG	100 PSIG	
24" x 10'	3"	2"	2"	700	1.9	2.8	850
30" x 10'	3"	2"	2"	1100	3.8	5.3	1100
36" x 10'	3"	2"	2"	1800	5.0	7.1	1300

Liquid capacities are based on 45 API liquid at 1 minute retention time – 2 phase(3 minute retention -3 phase) with an even 24 hour flow rate. Allowance must be made for slugging, gravity differences, and valves and lines sized for operating pressure differential.