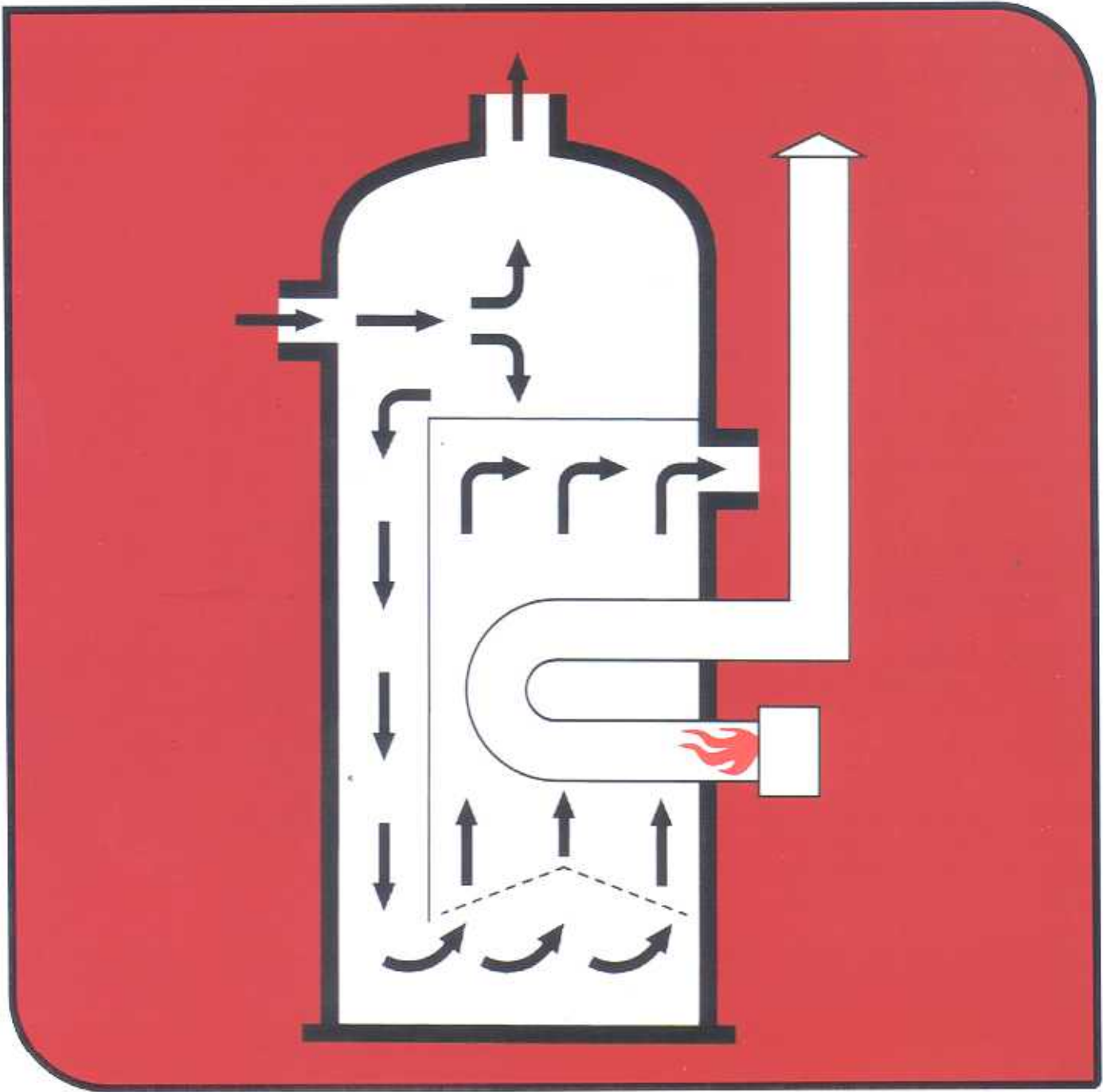


Vertical Treater



- Large gas separation section
- Adjustable external water siphon
- High efficiency removable firebox
- Complete burner safety shutdown system



EMULSION TREATERS

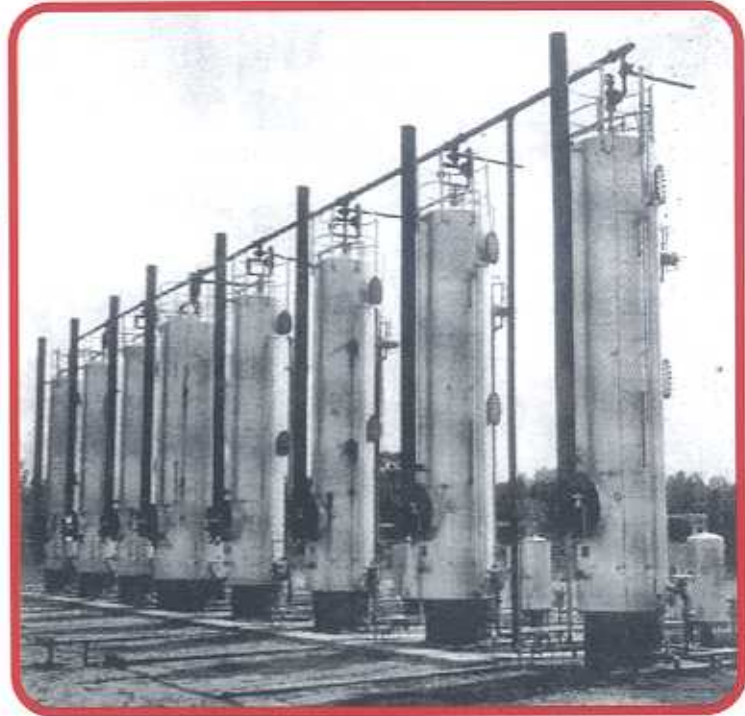
BS&B EMULSION TREATERS

As pioneers in the art of treating oilfield emulsions, BS&B has introduced many innovations in emulsion treating equipment. The present BS&B line of Emulsion

Treaters is the most complete available, and is the product of continuing research and engineering in this important field.

FEATURES

- **Large full-diameter gas separation section** utilizes the full cross sectional area of the vertical treater to separate entrained and solution gas from the liquid.
- **The gas cycle conserves API gravity** by assuring that hot vapors from the Settling Section are mixed with the cool gas in the Gas Separation Section to condense the valuable heavier fractions and return them to liquid. This produces stable oil of higher API gravity.
- **Large full-diameter free water knockout section** assures quick and easy removal of "free" water without unnecessary heating.
- **Efficient perforated tray oil spreader** with deflector plate located below the emulsion downcomer, eliminates rolling of the water in the Free Water Knockout Section and assures even dispersion of the crude.
- **The removable immersion firebox** is the most efficient and trouble-free unit of its type in the field. The smooth exterior surface reduces deposits and burnouts.
- **Dependable and trouble-free burner and temperature control equipment** is furnished with each firebox. This equipment is carefully matched to the firebox to assure top efficiency.
- **Large full-diameter filter section** efficiently removes the last small quantity of water from the oil. A selected grade of gum-free excelsior is used, and has been proven to be the best material available for this service.



- **Large settling section** permits a longer settling time for efficient water removal.
- **Adjustable outside water siphon** reduces heat loss, corrosion and deposition. Easily adjusted to proper gravity settings.
- **Mist eliminator in gas separation section** to assure dry outlet gas.

OPTIONAL ACCESSORIES

The following items are available, in addition to the standard items listed with each model treater:

- External heat exchangers.
- Gas back pressure valves.
- Fuel gas safety scrubbers.
- Control house on cold weather units.
- Fuel gas regulators.
- Safety heads.
- Safety rails for top (standard on certain models).
- Higher vessel working pressure.
- ASME Code construction.
- Equipment deductions for atmospheric operation.
- Upending at location.
- Oil and water valve substitutions.
- Cone bottoms.
- Firebox platforms and stairways.
- Foundation pads.
- Flame arrestors.
- Sand jets.
- Interior coatings.
- Anodes.

EMULSION TREATERS

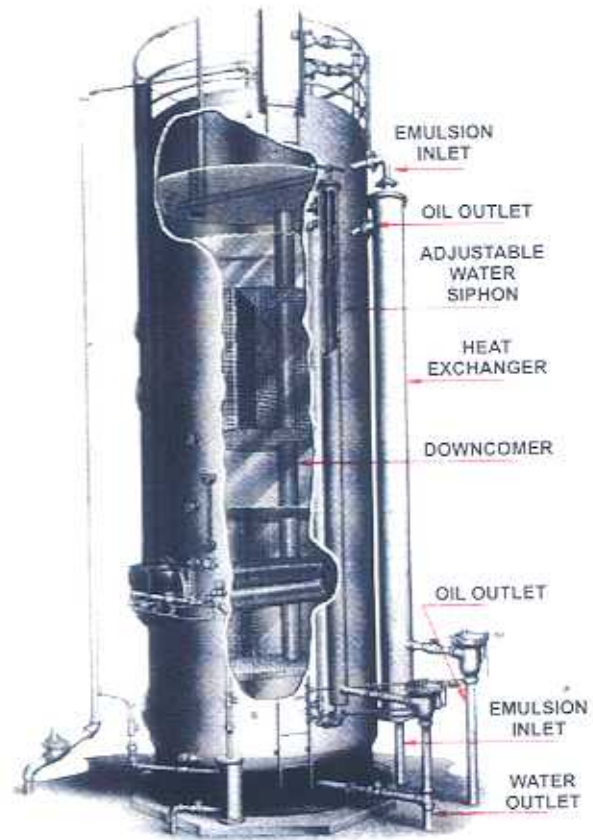
TYPE "J" VERTICAL TREATERS (Double Filter Section)

OPERATION

The oil, emulsion, free water and gas enter the gas separation section at the top of the treater. The entrained gas separates from the incoming liquid and leaves the top of the treater. The liquids pass downward through the downcomer to the perforated spreader plate located directly beneath the firebox. The oil and emulsion are broken up into small streamlets by the spreader plate, and pass upward through the hot water surrounding the firebox, and then through the extra-large filter section. The emulsion is broken, and the water settles to the bottom of the treater. The last traces of water in the emulsion are removed in the filter bed. The treated oil is removed from near the top of the settling section, and is discharged to the stock tanks.

Hot vapors from the settling section are conducted by means of internal equalizer piping to the gas separation section, where they are mixed with the cooler inlet gas. The heavier and more valuable fractions are condensed and returned to the oil so that a high API gravity is maintained. The gas passes through a mist eliminator, where entrained liquid is removed and returned to the oil, assuring a dry outlet gas.

Water leaves the bottom of the treater by means of an adjustable outside water siphon.



STANDARD ACCESSORIES

- | | | |
|--|--|--------------------------------------|
| 1 - Stack with brace. | 3 - Sets gauge glasses complete with cocks and guards. | 1 - Outside adjustable water siphon. |
| 1 - Immersion type removable firebox. | 1 - Pressure gauge. | 1 - 2" Oil discharge valve. |
| 1 - Burner assembly complete with gas-air mixer and pilot light. | 1 - Safety relief valve. | 1 - 2" Water discharge valve. |
| 1 - Temperature controller with strainer and plug cock assembly. | 1 - Set equalizer tubing and needle valves. | 4 - 16" Manways with covers. |
| 1 - Thermometer. | 1 - Double filter section complete with excelsior. | 1 - Outside ladder. |
| | | 1 - Set safety rails with posts. |

Specifications

Model Number	J-428	J-628	J-828	J-1028
Nominal Size (O.D. X Height)	4' X 28'	6' X 28'	8' X 28'	10' X 28'
Nominal W. P. Psi	50	50	25	25
Relief Valve Size	2"	2"	3"	3"
Nominal Heating Capacity BTU Per Hour Immersed In	Fresh Water	600,000	915,000	1,545,000
	Salt Water	400,000	610,000	1,030,000
	Oil	140,000	214,000	360,000
Oil Treating Capacity-BBLS/Day	100-700	400-1200	600-2400	900-3600
Liquid Capacity-BBLS/Day	400-1800	800-5200	1500-9400	2300-13,000
Gas Capacity-MMSCFD	2-3	3-5	5-7	7-12
Heating Capacity through a 100°F Temperature Rise-BBLS/Hr.	27	41	69	87
Fuel Consumption at Salt Water BTU Rating-SCFH	616	939	1585	2000
Nominal Shipping Weight-Lbs.	8800	12,300	16,200	20,900

*Oil treating capacities depend on emulsion characteristics, amount of water produced, oil gravity, oil viscosity, and treating temperatures required. Fluid capacities depend on amount of free water, difference in specific gravities of oil and water, viscosity and inlet temperature. Specifications subject to change without notice.

