



Enhanced Gas Flotation Tank (EGFT®)

Primary Produced Water Deoiling

The Enhanced Gas Flotation Tank (EGFT®) is designed to handle marginal wells with up to 200,000 ppm OIW. Capacities range from 50,000 to 750,000 BWPD with achieved OIW outlets as low as <20 ppm using Microbubble Flotation (MBF®). The high-loading nature of this tank is unique in its capability to replace multiple pieces of primary and secondary treatment equipment within a single tank while achieving secondary treatment results. Combining these processes allows for reduced costs (CAPEX and OPEX) and footprint. The EGFT can be designed with an integrated skimmings tank in which oil can be removed with low BS+W's versus the high water cuts typically seen in flotation device skimmings.

How It Works

The EGFT is divided vertically into six water process chambers and one skimmed oil chamber. Produced water enters the chambers sequentially as microbubbles are introduced. Oil is lifted upon the bubble layer and is skimmed off by overflowing an oil weir. The water then flows into the next chamber where more microbubbles are introduced, and more oil is separated. The process drives itself hydraulically through all chambers, and water exits the system at a target as low as <20 ppm. The internal skim oil chamber collects skimmed oil via a v-notch skimming weir from the six water process chambers and provides residence time for further oil and water separation. The recovered water from the internal skimmed oil chamber is pumped through the MBF source and recycled to the EGFT feed stream header while the oil stream with reduced BS+W is pumped to the location determined by the client.

Key Benefits

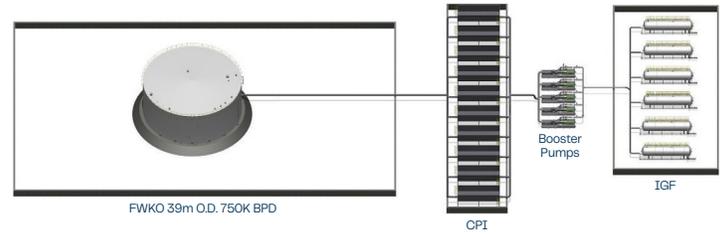
Cost Saving

- Integrated skimmings tank eliminates need for another tank
- Reduced footprint
- Significant CAPEX reduction by eliminating the need for FWKO, CPI's and IGF's
- Less equipment and easier tie-in results in lower install costs
- Fewer pumps, valves and chemical requirements lead to lower operating costs and high performance MBF technology reduces chemical treatment costs

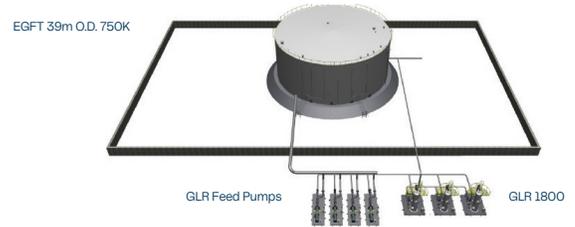
Better Performance

- Better oil separation through microbubble technology and sequential treatment
- Integrated skimmings reduce BS+W in the oil stream and overall skimmings as well as the overall skimmings fluid volume to handle
- Multi-chamber design provides excellent buffering against variations in flow rate and oil concentration
- No internal moving parts means higher reliability
- No rotating seals, thus eliminating fugitive air emissions
- Guarantee your performance results with our design validation and characterization services

Traditional Layout



Enerflex Solution



Flexibility

- Ability to treat difficult fluids such as heavy oils, emulsions, high viscosities, and polymer applications
- Wide turndown range allows virtually any flow rate
- Reduce your risk with a turnkey installation, or we can simply provide design and microbubble equipment
- Wide operating range handling variations in inlet water qualities
- System can be standardized for duplicated facility design across your company's locations

Standard Features

- Microbubble technology via Gas Liquid Reactor (GLR®)
- API or EN tank design code
- Full automation with various control philosophy options
- Hydraulic skimmings tank
- Hydraulic skimming

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Materials of Construction

- EGFT: internally coated carbon steel
- Piping: internally coated carbon steel
- GLR vessel: internally coated carbon steel

Standard Options

- New-build or retrofit to existing tanks
- Water characterization services
- Chemical treatment selection services
- CFD modeling of proposed tank design
- Upgraded materials for pumps, valves, instruments, and piping
- Ancillary equipment such as transfer pumps and chemical injection
- Cold-weather protection such as skid enclosure and tank insulation
- Other options as required to meet specifications

