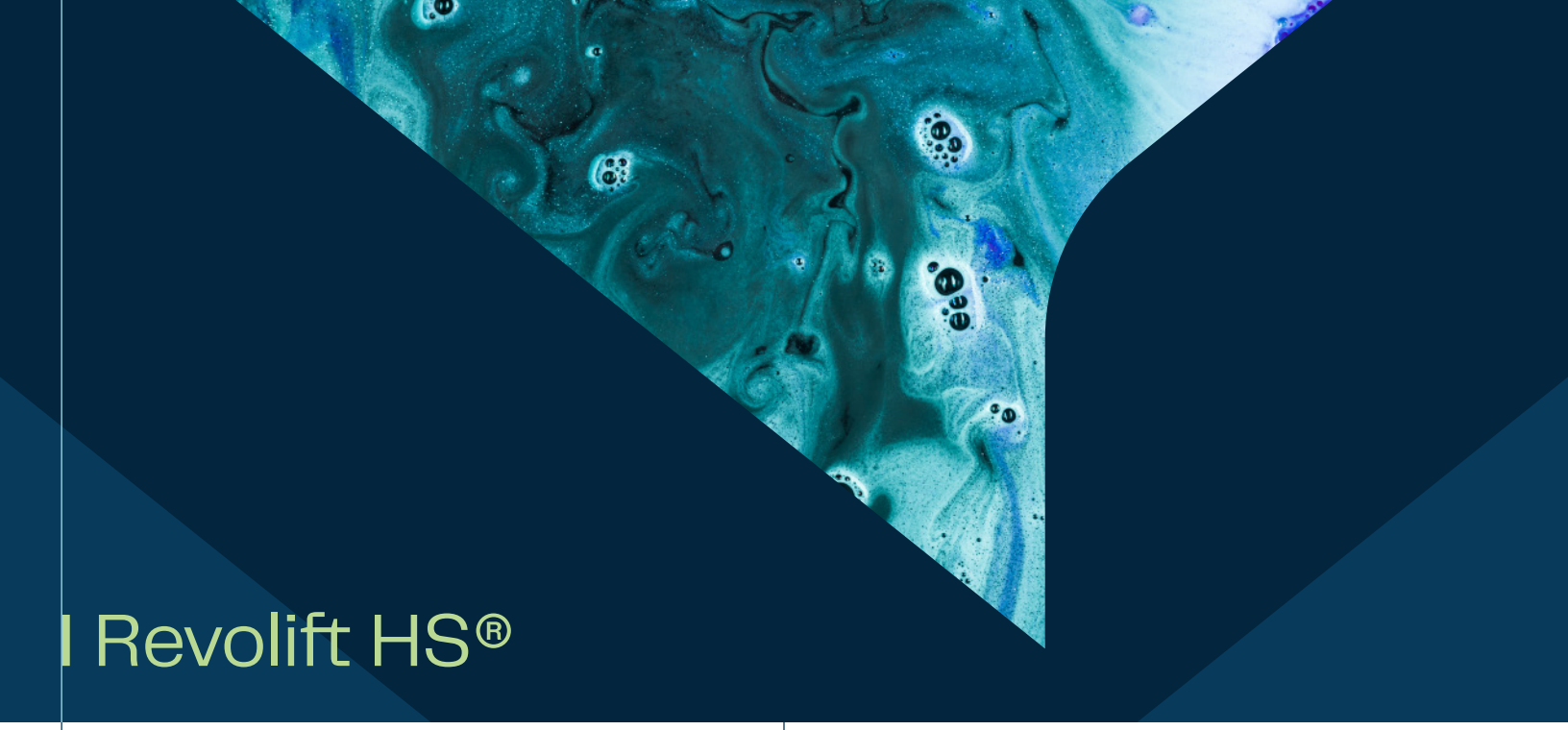


Revolift HS®

Secondary Produced Water Deoiling

The Revolift HS® takes oil separation performance far beyond typical induced gas flotation (IGF) systems. As produced water moves continuously through multiple chambers, microbubbles are introduced to lift the smallest suspended oil particles to the surface where they are skimmed off, resulting in clean outputs. This multi-chambered, sequential treatment design handles variable flows and upsets without performance impact or short-circuiting. The system provides continuous, trouble-free separation at rates up to 150,000 BWPD in a single vessel.

How It Works

The Revolift HS uses hydrodynamics coupled with Microbubble Flotation (MBF®) to optimize oil-in-water (OIW) separation. This multi-chambered design has no internal moving parts and requires no mechanical adjustments. 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 targets as low as <10 ppm.

Key Benefits

Cost Saving

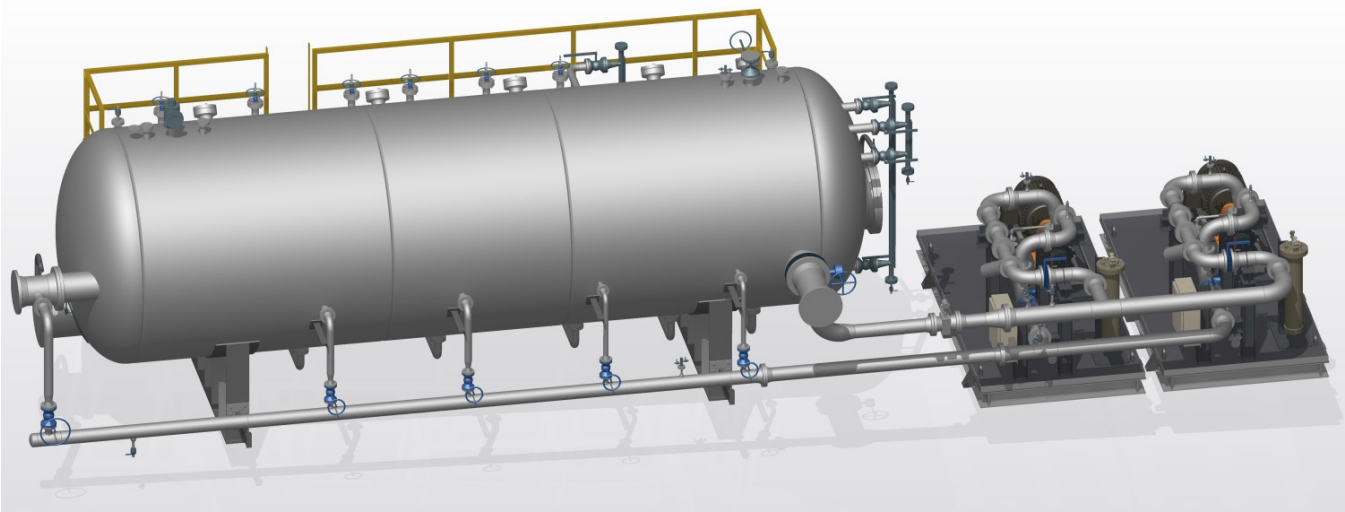
- Efficient pre-engineered design reduces capital costs
- Robust adjustable weirs are the only moving parts, reducing costly failures and delay

Better Performance

- Sequential treatment ensures thorough oil removal
- MBF technology ensures cleaner water in the most challenging processes
- High tolerance for upsets due to multi-chamber design with no short-circuit paths
- No rotating seals, thus eliminating fugitive air emissions

Flexibility

- High-quality, wide operating range makes this treatment system a long-term asset
- Wide turndown range handles variable flows without performance loss



Standard Features

- ASME code pressure vessel
- Hydraulic skimming
- MBF technology via Onyx® Pump
- Fully automated controls
- Complete process review

Materials of Construction

- Vessel: internally coated carbon steel
- Piping: internally coated carbon steel
- Onyx Pump: Duplex SS

Standard Options

- Skimmings collection tank
- Skimmings transfer pump
- Water characterization services
- Chemical selection and supply
- Upgraded materials for pumps, valves, instruments piping, and vessel
- Ancillary equipment such as transfer pumps and chemical injection
- Insulation

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