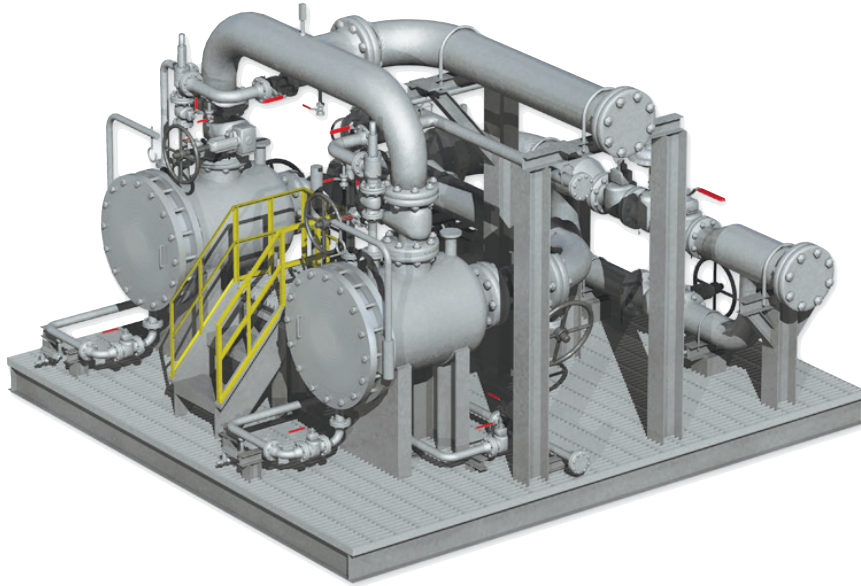


P-Klone™ Hydrocyclone

Primary Produced Water Deoiling



The P-Klone™ Hydrocyclone is a highly efficient and economic approach to processing oil-laden water. It is a well-proven method for taking water from the production separator with oil concentrations up to 5% and readying it for secondary treatments such as induced gas flotation or filtration. The hydrocyclone can be designed to handle any flow volumes and output pressures you require. P-Klone is small, lightweight and insensitive to orientation or motion, making it an ideal solution for offshore and space-constrained onshore applications.

HOW IT WORKS

P-Klone converts the velocity of water flowing from the production separator into centrifugal force. The shape of the unit causes the water to form a vortex, much like a whirlpool. The water moves faster as the sides taper in, causing a reverse-flowing low-pressure area in the center. The heavier water moves to the outside wall of the unit, while the lighter oil concentrates in the center. Water exits at the clean-water outlet and the oil exits at the opposite end. This entire separation process happens in less than two seconds.

KEY BENEFITS

COST SAVING

- Cost-effective, efficient way to reduce oil concentration prior to secondary de-oiling
- Eliminates the cost of a feed pump by using existing process pressure
- Easy to ship, install and start up, making it ideal for temporary and long-term projects

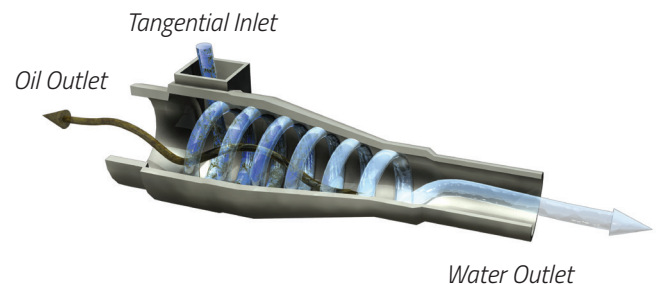
BETTER PERFORMANCE

- Low risk technology, with nearly 30 years of proven performance and thousands of units in service
- Easy to maintain with no moving parts, no failure-prone mechanisms, and no fugitive emissions

HIGH FLEXIBILITY

- Works flawlessly regardless of orientation or pitch and roll motions offshore
- Wide turndown range allows flow rates ideal to your operation.

HYDROCYCLONE



STANDARD FEATURES

- ASME code pressure vessel, vertical or horizontal orientation
- Flanged liner access
- Complete process review

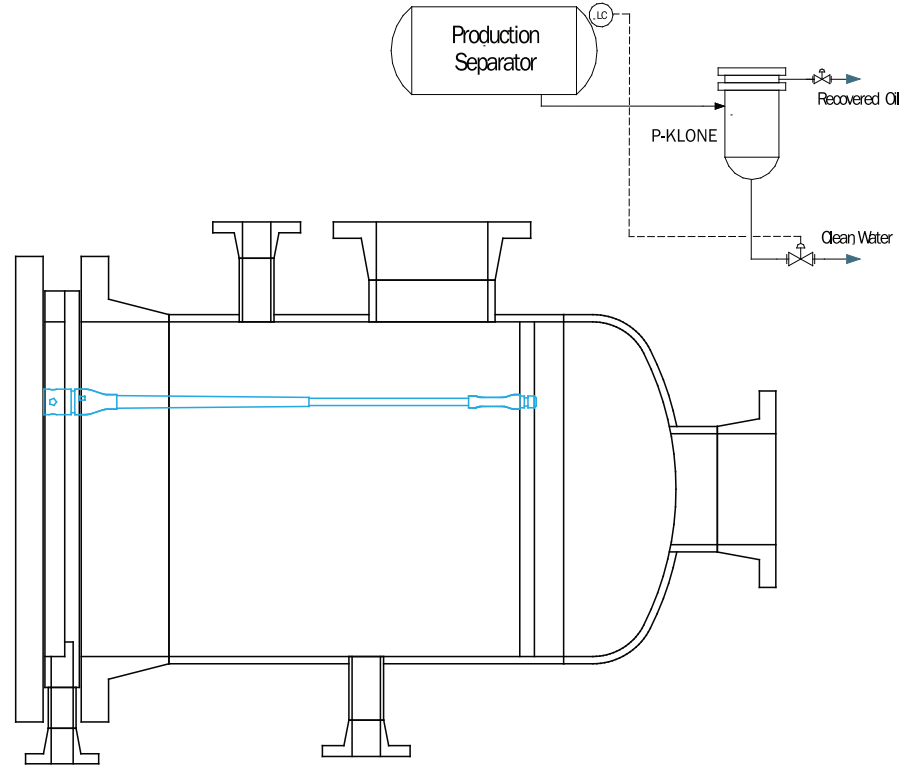
MATERIALS OF CONSTRUCTION

- Pressure vessel: internally coated carbon steel
- Support plates: coated carbon steel
- Internals: Duplex 2205

STANDARD OPTIONS

- Blanking liners to adapt for low-flow conditions
- Pump-driven system
- Skid, piping, instrumentation and controls
- Water characterization services
- Chemical selection and supply
- Upgraded materials for vessels, internals, valves, instruments, piping (Duplex SS, Hasteloy)
- Ancillary equipment such as transfer pumps and chemical injection
- Cold-weather protection such as skid enclosure and insulation
- Other options as required to meet your specifications

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NOTES

This brochure is intended for general information purposes only and is not intended as a representation or warranty of any kind, or as a statement of any terms or conditions of sale. The information herein is believed to be correct, but is not warranted for correctness or completeness, or for applicability to any particular customer or situation.

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