Schlumberger

Advanced Media Polisher

Oil-in-water polishing filters

APPLICATIONS

- Upstream oil and gas produced water
- Industrial and commercial wastewater applications

BENEFITS

- Removes free, dispersed, and emulsified oil to low levels (down to <1-um droplet size)
- Occupies a small footprint in comparison with conventional technologies
- Treats emulsions without the use of chemicals
- Ensures no hydrocarbon sheen for overboard discharge of produced water
- Removes oil in the presence of water-soluble polymers used in chemical enhanced oil recovery (CEOR)

FEATURES

- Robust stand-by configuration to ensure processes are maintained even during upsets
- Delivered as dry cartridge units
- Easy to handle, install, and operate

The advanced media polisher oil-free water technology instantly and permanently removes or reduces oil, suspended solids, and highly emulsified oils from water. Built on this technology, the advanced media polisher polishing filters provide enhanced stand-by protection against upset conditions and underperformance of conventional treatment equipment upstream of polishers. The filter technology is a simple cartridge filtration system with a patented thin film polymer deposited on filter fibers that is surface specific for hydrocarbons.

The polishing media removes oil and grease without desorption and minimal to no saturation with water. The polishing filters achieve critically low discharge levels (less than 1 ppm) or the system can be customized to meet required discharge limits. Conventional polishing filters are normally used to target oil droplets smaller than upstream equipment can handle at high efficiency, typically less than 10 um in diameter.

Water passes through a standard set of three vessels, skid-mounted in series, which house consumable cartridge filters, typically with a length of 40 in and diameter of 2.5 in. The vessels are sized according to flow rate and can hold up to 210 filters at the top end of the range. As the process stream passes through each vessel, oil droplets contact the filter surface, enabling the instantaneous and permanent removal of the hydrocarbons.

The polishing filters provide the highest flow capacity with the smallest footprint compared with conventional tertiary treatment technology. This technology is used by many sites across the oil and gas industry for final treatment before discharge to marine offshore, nearshore, and inland bodies of water.

Advanced media polisher oil-in-water polishing filters.

Skid-mounted Schlumberger advanced media polisher filter unit ready for delivery.