De-Oiling Filtration Systems

Applied Systems nutshell filtration systems are utilized as a water treatment solution for the pretreatment of water softening equipment. The equipment utilizes a closed circuit recirculation of both treated water and air, along with the addition of a proper chemical dosage to provide an oil/water/air interface for effective separation and oil removal.

Systems can be custom engineered dependent on water quality, flow and pressure.

Contact Applied Systems for system selection, sizing or technical questions.

OPERATIONAL PROCESS

Chemically treated oily water enters the unit and a mixture of air and gas is introduced within the vessel to produce a stream of water/oil and fine bubbles. Oil, which by chemical treatment has an affinity to the air, floats to the top as a froth where it is skimmed off for disposal processing. De-oiled water exits through the outlet in the bottom of the vessel and is subsequently transferred to alternative downstream processing equipment.

MATERIAL CONSTRUCTION

- Carbon steel
- Stainless steel
- Fiberglass reinforced plastic (FRP)

FEATURES

- Skid mounted
- Recirculation pump
- Sample cocks for water testing
- Viewports to verify operation levels
- 316 stainless steel non-lined wetted materials
- Class 1, Division 2, Group C or D area usage
- External scrub tube
- 316 stainless steel lateral assemblies
- ASME U stamp on carbon and stainless steel vessels
- Solenoid operated automatic valves actuated by local programmable controller
- Inlet, outlet and gas pressure gauges
- External polyurethane paint
- Internal epoxy coated

OPTIONS

- Seismic and wind loads
- High pressure
- Corrosion allowance
- Epoxy lined piping
- Polymer injection system
- Oil analyzer
- Oil skim pumps
- Distribution pumps

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