

Applied Systems trailer mounted portable flotation units utilize a combined system of a flotation unit followed by a nutshell filter. The equipment is utilized to remove oil by separation followed by filtration of the water to polish the effluent from the flotation cell. 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.

During the filtration process water enters the vessels through the inlet manifold and traverses through

the media bed and exits the outlet manifold. As the media becomes fouled it will require backwashing by automatic automation or manual operation. During a backwash event the media is reverse flowed to hydraulically lift the media bed to release entrapped particulates resulting in the backwash water exiting the backwash manifold. Our systems operate on the basis of remaining on line while an external scrub tube is serviced resulting in no loss of production or processed water. If plugging occurs a scrub tube screen allows for quick service.

FEATURES

- Skid and trailer mounted system
- Pumps
 - 20 hp, 225 gpm @ 127 ft. head, 460/3/60 flotation pump
 - 15hp, 400 gpm @ 46 ft. head, 460/3/60 filter backwash pump
- Sample cocks for water testing
- Viewports to verify operation levels
- 316 stainless steel lateral assemblies
- Class 1, Division 2, Group C or D area usage
- ASME U stamp on carbon and stainless steel vessels
- Manual valves or automatic solenoid operated automatic valves actuated by local programmable controller
- Inlet, outlet and gas pressure gauges
- Level gauge with low level pump protection and level control for the flotation unit

OPTIONS

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