

Oil Water Separation.

An over-view.

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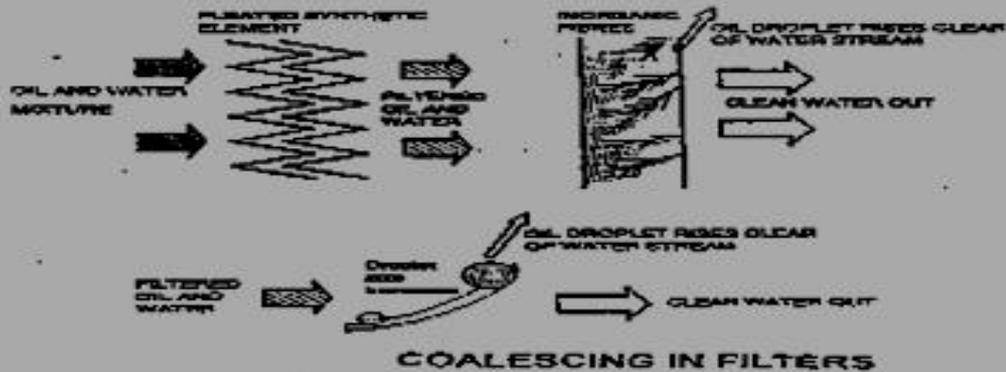
Principles of Separation / Coalescence

- *First, oil and water are not soluble in each other. Even the so called soluble oils*
- *are really an emulsion not a true solution.*
- *Second, water is denser than oil or petroleum based solvents.*
- *Naturally, unless other factors interfere, oil tends to separate and float on water –*
- *if given sufficient time.*
- **Separation**
- *Separating oil or solvents from water by mechanical means involves the*
- *application of some basic physical principles.*
- *-by making the oil droplets larger (rises faster),*
- *- by making the flow slower(get more time to separate), or*
- *- by making the tank shallower (shorter average distance to rise to the surface).*
- *All this assumes the flow in the tank is non turbulent to prevent remixing the oil*
- *and water.*
- **Coalescence**
- *Coalescence means coming together.*
- *It refers to small oil droplets coming into contact with other droplets and*
- *combining to form larger drops. In the dense coalescing media used in OWS the*
- *process is speeded up and oil separated out quickly.*

Coalescing



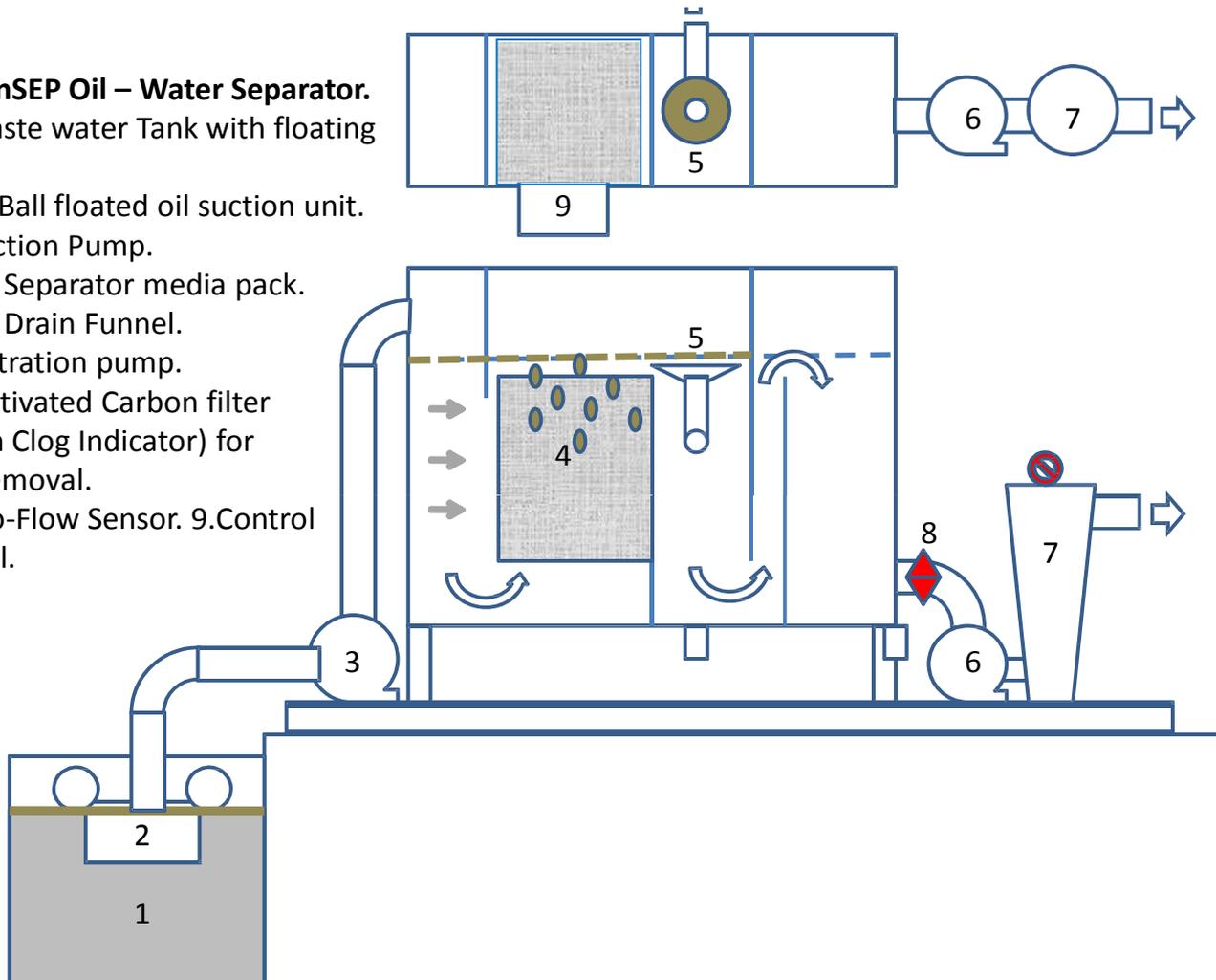
COALESCING IN BAFFLES OR GRILLS



COALESCING IN FILTERS

KleenSEP Oil – Water Separator.

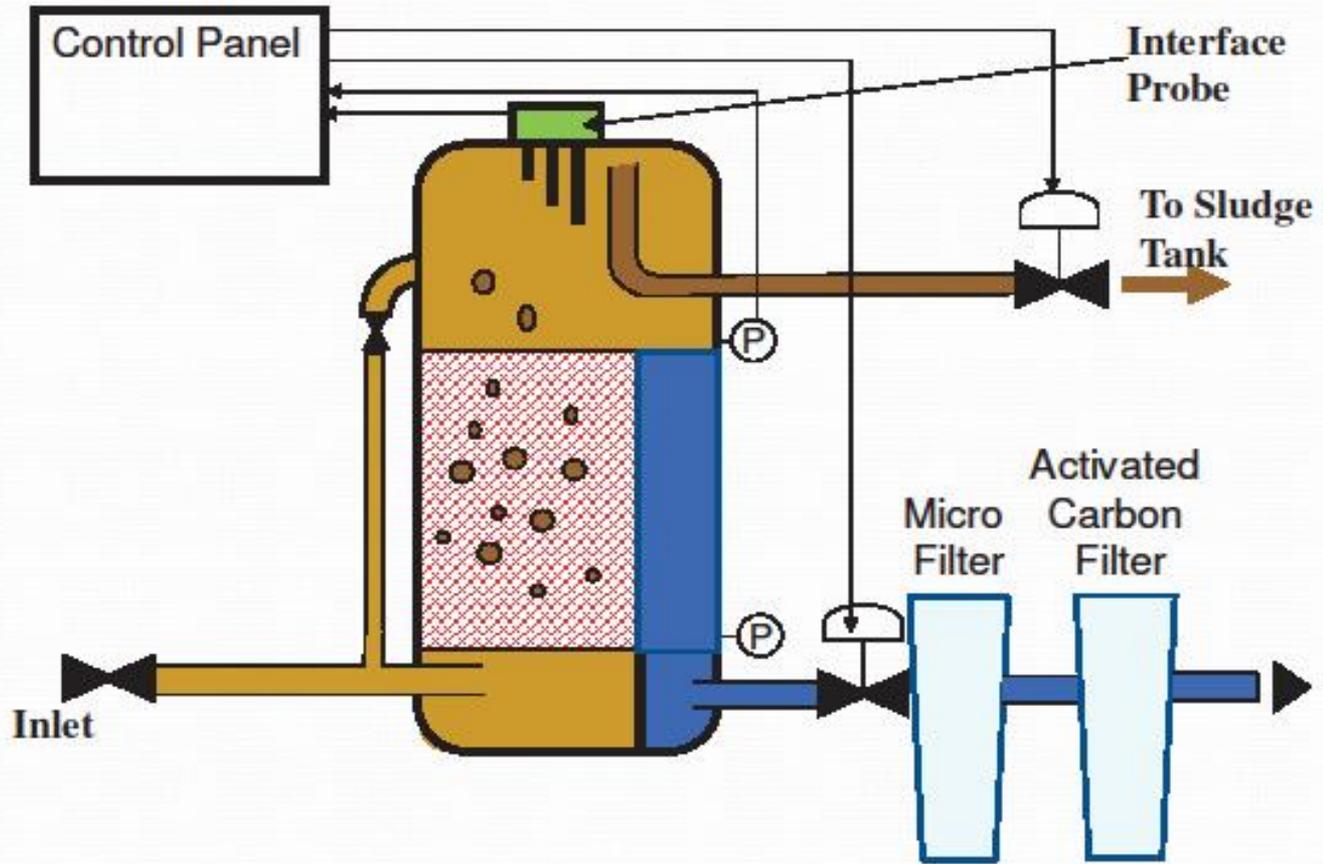
1. Waste water Tank with floating oil.
2. SS Ball floated oil suction unit.
3. Suction Pump.
4. Oil Separator media pack.
5. Oil Drain Funnel.
6. Filtration pump.
7. Activated Carbon filter (with Clog Indicator) for oil removal.
8. No-Flow Sensor.
9. Control Panel.



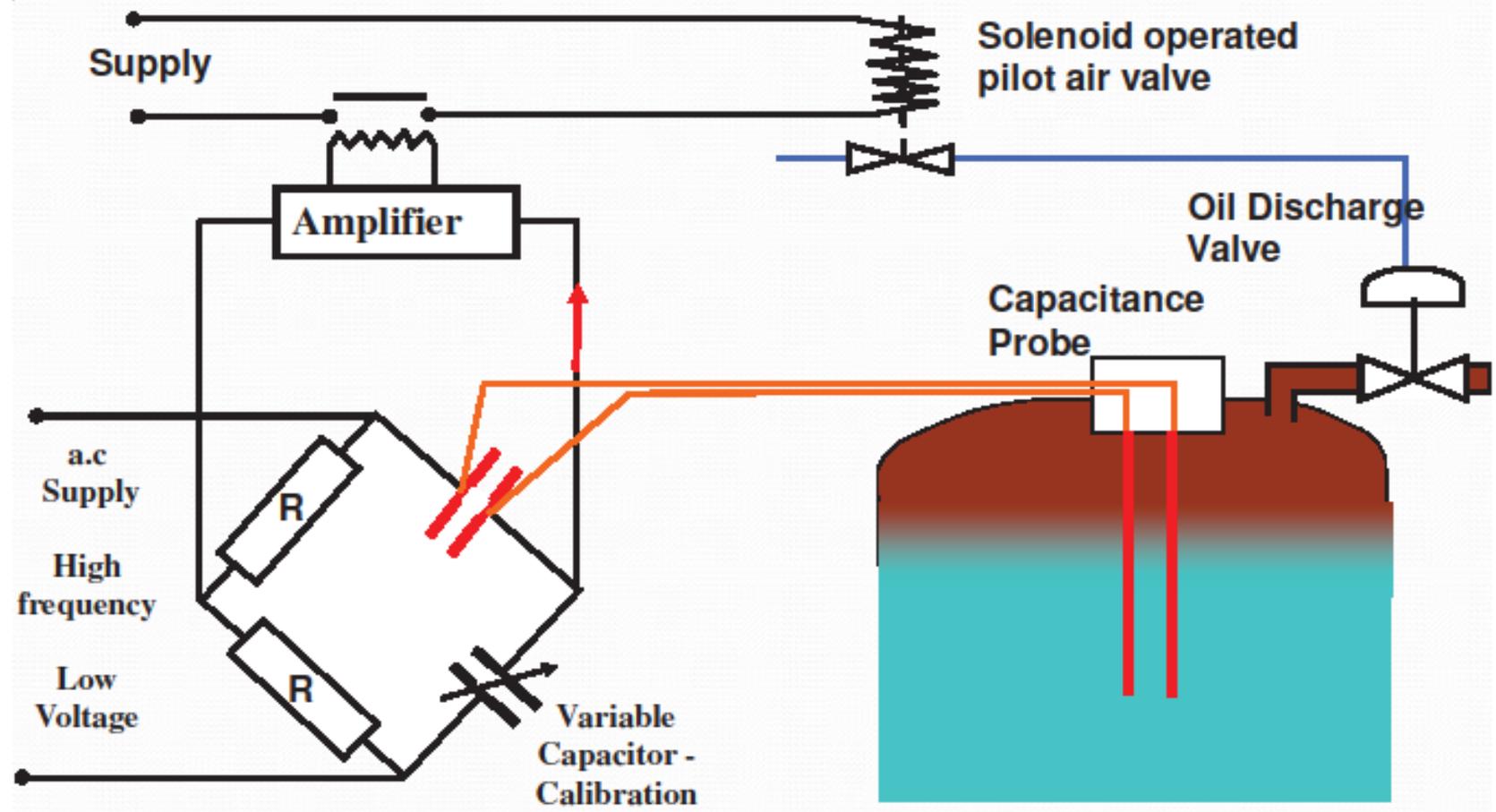
Technology.

- *Oily water is pumped into the system by a centrifugal pump/air operated*
- *diaphragm pump, using a self leveling floating suction device that pulls in*
- *large amounts of floating oil along with water.*
- *The oily water travels through the Oil-Water Separator where oil is separated*
- *by coalescing media.*
- *The oil rises to the top of the separator and starts floating on water surface while oil-free*
- *water moves down to the next chamber.*
- *Clean water rises up and flows down into the last chamber from where it exits.*
- *Clean water that flows out of the separator will have less than 10PPM of oil.*
- *The separated oil can be drained out through the PP Funnel by opening the oil drain valve.*
- *Optional Micro fiber and Activated Carbon filters for polishing of output water*
- *and On-line OIL-IN-WATER Monitor also are provided.*
- **Applications:**
- ***Coolant tank tramp oil removal/Component washing solution***
- ***cleaning/Compressor condensate water cleaning/Ship bilge water***
- ***recycling/Rolling mill waste water.***

KleenSEP Oil Water Separator



Capacitance Type Interface Detector



A few installations of
KleenSEP
Gravity and Pressurised OWSs.

