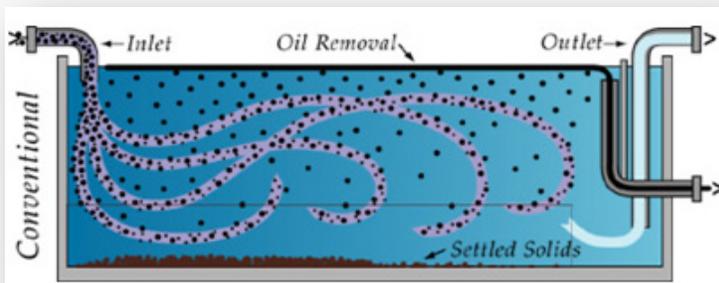


An oil water separator (OWS) is a piece of equipment used to separate oil, sludge and water mixtures into their separate components that would be harmful to our environment if not treated. The basic premise under which oil water separators work is density. Oil is less dense than water, which is why it floats on the surface of water.

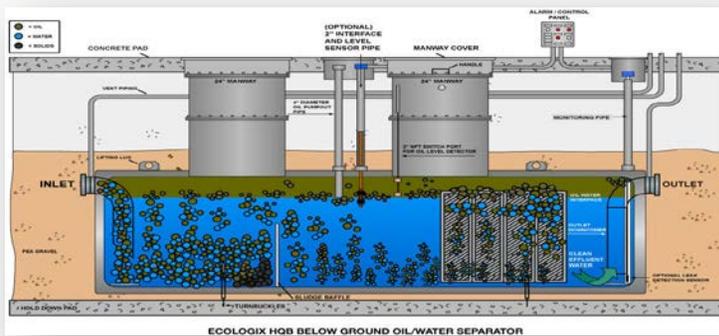
Two types of oil water separator systems exist today in varying types of design, but all are dependent on these two types of design.

Gravity Separation vs. Coalescing Design

Gravity Separation. The first and oldest type is gravity, decanting or conventional separation, and simple separation via gravity (density differential between two immiscible liquids leads to one of them rising above the other). This design, when designed properly (or even improperly) provides a certain tank length, width and depth that provide a wide, quiet spot in the pipeline to give oils time to rise. This design (also known as an API separator) generally provides a discharge oil concentration of 100 ppm based on a 150 micron droplet size. The API type design relies on a large water volume. This correlates to a tank size that can be 5 times the size of an equally sized coalescing separator. (Example below)



Coalescing Design. The coalescing design is known by many names, i.e. Parallel plate, corrugated plate, slant rib coalesce so on and so forth. However, the concept, operation and design are generally the same. The coalescing concept is based on having a large surface area in contact with the waste stream (coalescing plates). The more surface area provided, the more enhanced the separation process will typically be. By using the coalescing media, the size of the tank is reduced and a higher performance is attained than by gravity separation. (Example below)



Servicing & Maintenance



Servicing & Maintenance. Oil water separators (OWS) can be costly to maintain if not properly managed, and can be very expensive conduits of pollution. When cleaning is required, it should be performed by an experienced HAZWOPPER and OSHA certified OWS Maintenance Company.

The following guidelines are appropriate for determining when to clean if manufacturer's recommendations are unknown:

1. When sludge accumulates to 25% of the wetted height of the separator compartment; or
2. When oil accumulates to 5% of the wetted height of the separator compartment; or
3. When 75% of the retention capacity of the OWS is filled; or
4. Annually or sooner as needed
5. A spill or release has occurred

All material removed from a pretreatment device shall be disposed of in accordance with NYSDEC Part 360 & 364 guidelines.

Have you taken steps to minimize the effects and consequences on your operating cost?

- 1) When was your facility's last OWS maintenance performed?
- 2) Is your employee's attitude, don't worry we have an Oil Water Separator?
- 3) What is your company's last local, state, or EPA inspection?

A typical maintenance schedule for an OWS properly sized and maintained with moderate to light loads should be quarterly,

YES quarterly!

Not many Oil Water Separators can handle large amounts of sludge or oil without becoming impaired or even worse completely non effective, passing the oil straight through the system into your outflow. The effectiveness and/or removal rates can be significantly reduced or all together stopped. Most Oil Water Separators have detection for high oil/hydrocarbon collection, but provide no warning if the collection/treatment process is not happening.

Just because the system is not backed up, doesn't mean it is still working. Ultimately the time between maintenance/cleanings is directly related to the separator's ability to handle solids and oil while maintaining function, and for a majority of facilities, this is 3-4 times a year. Function is the key.

If oil is staying emulsified/suspension then the outcome will simply be the contamination will remain within the storm water and the Oil Water Separator becomes a very expensive conduit for the pollution to continue into a local stream, river, or lake.

The scariest part is this is a silent failure that can go undetected by all except the Local, State or EPA Officer who is performing a random outfall test just behind your facility.

Contact us today for a confidential evaluation and estimate to properly service your inlet drains and treatment system.