



Frac and produced oilwater clean up

One of the largest problems both for the oil industry that also transpire into the common well being of society is the usage of freshwater used or wasted in this sector.

This problem has now been resolved to the point where we have a very cost effective process to clean all frac and produce water so it can be used or reused to whatever the specification is. Re use for fracking, irrigation and even drinking water. Yes, the system developed is capable of that if needed.

In the last months we have re engineered an existing patented system and filter mass to fully cope with the high level of contamination of fracwater. The heaviest polluted fracwater was then shipped from Texas to our facilities in Sweden where we tested it through the machine. One of Scandinavia's premier testing facilities (Eurofinns Environmental Services AB, Swedac Accreditation) then tested the samples. Samples disclose that we have the capability to purify to whatever level that is needed.



Metal filtration

The filter system is based on processed peat as the main adsorbent of heavy metals. Peat has surface-active properties that render it capable to adsorb ionized compounds such as metal ions and ammonium. It is also capable of adsorbing oil compounds in water. The great advantage of peat as a filter material is the broad spectrum of compounds adsorbed ranging from inorganic ions to oil molecules. Processing of peat has made it better, lighter and easy to work with.

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Filter mass absorber and its oil adsorbing capacity

Science Absorber has a well-documented capacity to adsorb oil in dispersed (total 100% adsorption) and un-dispersed forms (>99,3% adsorption). Its total adsorption capacity is about half a liter of oil per liter of Science Absorber (or up to three times its own dry weight), which has been confirmed by different testing facilities in Sweden using the system to separate oil fractions from water

Pictures from inside the actual filter



Key features that makes this patented system stand out is:

- You can run the filter 24hours a day
- Only needs a 30 min manual control/checkup per day
- 6 hour of filter replacement per month
- Capacity around 1500/2200/4500 Barrels a day
- Operating cost is just about X Dollars/M3 of water + Electric (7,5Kw)
- Fits in 1or 2 40 foot container / Easy to move (Mount/dismount)
- Totally portable system is available upon request
- Filter is reusable to a degree
- 6 weeks building process from order

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Furter information

None (or minimal) of the water is lost in this process. Only the weight of the pollutions is filtered away. Used filter mass is placed on your own disposal location.

The know-how of the disposal method will be taught to you by our technical reps. This way you can reuse the same filter a couple of times. The right disposal method starts the biological breakdown of the chem/petroleum products/particles. This process will take between 6-9 months. All that is left in the filter after this is the heavy metals.

But, the filters will be filled up quicker by the petroleum then by the heavy metals. So you can reuse the filters more times before you need to rinse the filter free from metals and residues. This heavy metal disposal will also be your know-how.

The filters absorption weight is 70% of its own weight.

Weight of the filter mass is 142% of absorbed weight.

We have 3 different possibilities to construct the machines.

For an even more mobile solution we can pre-fab systems for that purpose. But even with the normal system the “upload” and “download” of the system is very easy and will not take more then 1-2 hours, so they are very suitable for the fracking phase where you can swiftly move the system from site to site.

1. 10,5m³/h (this comes in a 40 fot container) = 1400-1600 Bls per day
2. 16M³/h (this also comes in a 40 fot container) = 2100-2300 Bls per day
3. 30M³/h (this comes in 2 40 fot containers) = 4200-4600 Bls per day.

We have different methods to operate these systems: Lease (cost per barrel), Sale, franchise/distributorship. Whatever suits the client/end user/distributor.

When machines are bought we train client/distributors all operational aspects. We only have a small fee per barrel to replenish the filter when needed + tech support.

Depending on different variables the cost would be around 1 USD per cleaned barrel. All numbers are naturally dependent on the output and pollutants of the water which is changeable.

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