



BACK TO BASICS!

A Danish-developed filtration system for cleaning of lubricating oil on engines on board ships, has proved far cheaper and at least as effective as the purifiers often used. The company behind the filtration solution, GreenOil, has - in cooperation with several shipping companies - tested the filter systems with great success. GreenOil's filtration systems today are permanent equipment on board many Danish ships. The benefits are so great for the end user that they cannot be ignored.

As long as there have been engines on board ships, crews have fought hard to keep the lubricants as clean as possible. The cleaner the oil, the less wear on the engine parts. And that's also the way it is today.

In historic view, oil has been cleaned in different ways. Some of the more used ways have been gravity separation by use of a purifier. An effective, but also very expensive and technically demanding way to keep the oil clean.

GREENOIL IS CHANGING THAT

- We are now on the market with filtration systems, but in a new and much more effective and simple version than before, says Sales Manager Rune Hjortnæs Pedersen.

- Firstly, our filter systems clean the oil more efficiently than even the best centrifuges. Secondly, our system is far cheaper in operation. If we retrofit our equipment on a ship, the repayment period - even with a very conservative calculation - is only 6-10 months. If you buy a GreenOil solution for your ship, you start making money quickly, says Rune Hjortnæs Pedersen.

- And finally, our equipment is incredibly easy to work with. I have a 6-year-old son who can change a filter in our equipment. So, it does not require any technical knowledge to change the filters.

SHEEPS WOOL

The impressive results are achieved using old-known technology, optimized for today's tasks.

- Our filter material is sheep's wool that is compressed and woven together, and in that way, we can actually determine the fineness of the particles we are going to catch. This ensures the same oil quality - every time, says Sales Manager Rune Hjortnæs Pedersen.

- When using a very fine filter, it removes all combustion residues, protects the machines and prolongs the life of the oil, and it also saves money.

- In addition to on board ships, we have conducted several tests in cooperation with engine suppliers, among them MAN Diesel & Turbo in Holeby. Here the conclusion was, that GreenOil's equipment complies with



MANs recommendations and requirements for lubricating oil treatment. So, their customers can freely use our equipment on their engines. We see this as great news, says Rune Hjortnæs Pedersen.

High content of insoluble, varnish, soot and low Total Base Number (TBN) are some of the well-known challenges for the technical staff today. Using GreenOil's filtration system ensures that insoluble, varnish and soot are maintained at a very low level. The oil is kept clean for contaminants that will reduce TBN, therefore, TBN is maintained over a long period of time, despite limited oil change.

GREEN ENVIRONMENT IS ALSO OUR RESPONSIBILITY

GreenOil is a co-player that helps ships to be more efficient and minimize CO2 emissions. This is achieved through limited energy consumption, fewer oil replacements and minimized wear. The use of GreenOil also ensures a better working environment so the operator does not come into direct contact with the oil and avoids heavy lifting - without the use of aids.

EAL BIO OILS

New rules demand ships to use EAL (Environmental Acceptable Lubricant) bio-oil for Stern

tube and thruster applications. The goal is that the oil - in case of a leak - does not harm the ecosystem.

EAL oils are very expensive - and bind water very efficiently. So efficiently that only few oil filtration systems are able to effectively remove the water again.

- Water is very harmful to these systems. Water reduces lubricity, thus increasing wear on machinery. We have a solution that can separate this water," says Rune Hjortnæs Pedersen.

GreenOil has conducted several tests on EAL bio oils with a number of oil suppliers, and the tests has shown, that GreenOil's water separation can remove the water from the bio-oil. GreenOil's patented water separation is the only one on the market that can effectively remove all three types of water: free, emulsified and bound water.

The water separation is completely maintenance free, and operation only requires a power consumption of 120 watts. GreenOil's combined particle and water separation system ensures the oil an extended life span, while minimizing wear.

To achieve the highest oil filtration standard and the most attractive return on your filtration investment - partner up with GreenOil.

SUMMARY OF BENEFITS OF GREENOIL FILTERS:

- Low energy consumption.
- Easy installation – carried out by the crew itself.
- Same secured performance at every time.
- Water separation - patented solution.
- Less time and technical demanding.
- Filter element changed in few minutes, without spillage and without physical contact with the oil – require no special skills.
- No oil consumption and hence sludge disposal.

GREENOIL-STANDARD APS

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