LO System Essay, Research Paper

ME Lube Oil System

Cleanliness of the lube oil is very vital in the Main Diesel Engine Lube Oil System. A strainer is a device that is usually made up of a single layer of course gauze, and a very course wire mesh. This setup is used to filter out large objects that could cause blockage or damage to the lube oil system. A filter is used to filter out much smaller particals. The filtering elements in a lube oil filter has a more complex make-up. Aboard our ship, we have self cleaning lube oil filters along with the standard lube oil filters.

The size of the cartridges in these filters usually range from 3-12 mm. Our ship has two full flow filters per engine. The plates inside of a strainer corrode and erode very easily. Special attention must be given to these plates when cleaning them. Make sure that a gap has not formed at the end of the plate. If there is a gap, rags and other particles may pass right by. If in doubt of the condition of the plate, it should be renewed. The cost of a single plate is much cheaper than the cost of cleaning out an entire clogged system.

All gasket surfaces must be checked closely to ensure a proper seal. Our ship has a high pressure lube oil system. Because of this, basket type strainers are used. Lube oil systems are equipped with a wide variety of strainers. It is important to operate these strainers at all times to prevent clogging. Aboard our ship, we have Hayward Plug-type Duplex Basket Strainers. All of these types of strainers are one way. The liquid to be strained enters to the top and filters through the bottom.

Both strainers and filters clean lube oil using a similar process. The components of the strainer element, also known as a basket, consists of a spring, a pleated perforated screen, and a handle. There is a metal to metal seal between the basket and the inlet port. The cover of the strainer applies a downward pressure on the basket which allows for a tight seal on the top of the basket. The strainer element must be cleaned periodically to avoid high pressures accross the strainer.

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