

The purpose of filters in sea suction lines & its maintenance?

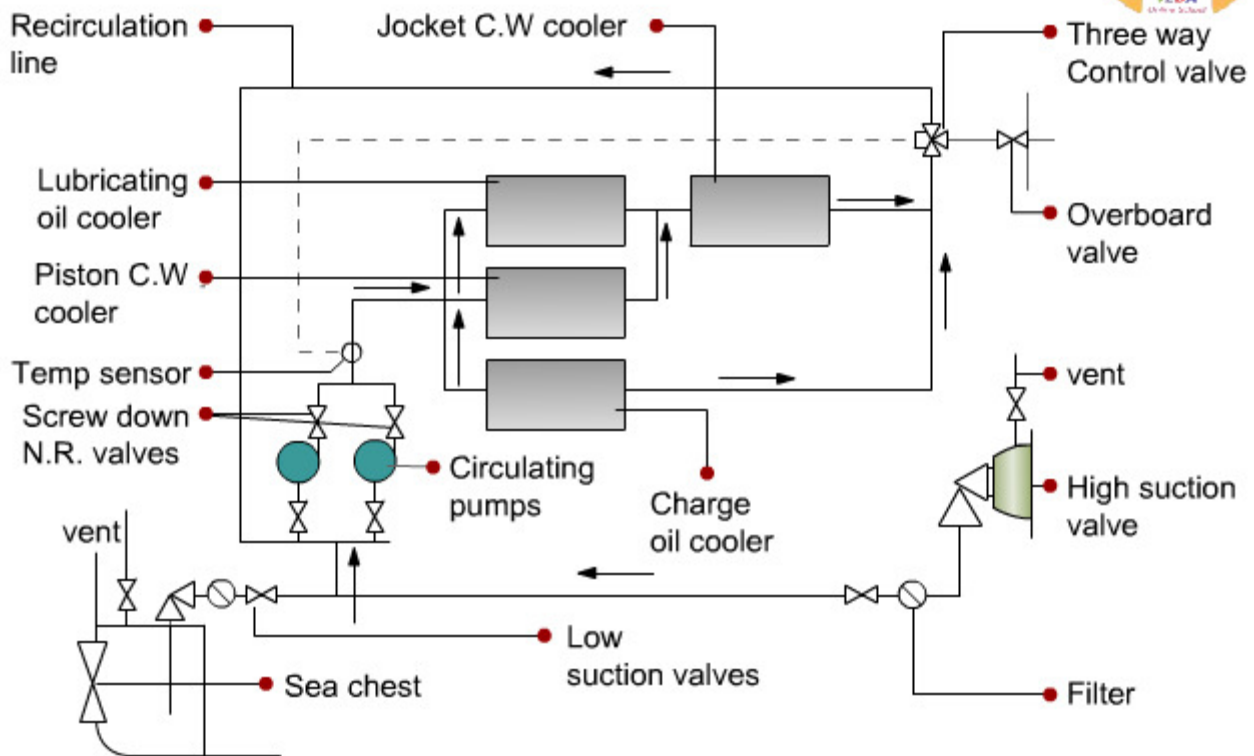
Sea chest Strainer: It is fitted in the main suction line of the sea water inlet system to the ship. The filter casing is normally fitted with marine growth preventive system. Normally a strainer is used in the sea chest so that the flow of water in the sea line is always maintained. : The sea water and fresh water systems on board ship are provided with line filters in order to trap the solid impurities flowing in the system.

Before cleaning the strainer, the change over sea suction high or low to make the other strainer work. A strainer should be cleaned manually.

Sea Chest Filter Cleaning

Sea chest filters should be opened and cleaned periodically to clear collected sediments and debris. This ensures smooth flow of sea water through cooling passages. Clogged or choked filters will result in drop in pressure or carry over of dirt particles that will lead to drop in heat transfer efficiency of the Condenser or the Heat Exchanger and create deposit related problems like corrosion and erosion of the pipelines and the equipment.

Sea chests



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Procedure:

- Put the unused sea chest in use by opening the inlet isolating valves.
- Purge the sea chest out of air by keeping the vent open.
- When all the air is purged, as sea water comes out of the vent, close the vent valve and open the outlet isolating valve from the chest and bring the sea chest in use.
- Now isolate the other sea chest by closing inlet/outlet valves from the chest on which the maintenance is to be carried out.
- Open the vent and drain valve on the sea chest.
- Ease up the sea-chest cover screws and loosen the cover from the chest body – the jointing between the cover and the body may stick.

- Take out the cover using lifting tackles and chain block.
- Withdraw the filter element and remove all debris like fish, shell, sea weeds, barnacles etc.
- Put back the filter element and properly close the top cover with a new joint. Tighten the cover nuts by progressively tightening the diagonally opposite nuts in sequence.
- Now, shut the drain valve and keep the vent open and bring this chest under operation by opening the isolating valves and purge the air out of the sea chest.
- After purging, shut the vent and close the isolating valves for this chest and keep this cleaned chest as stand-by.