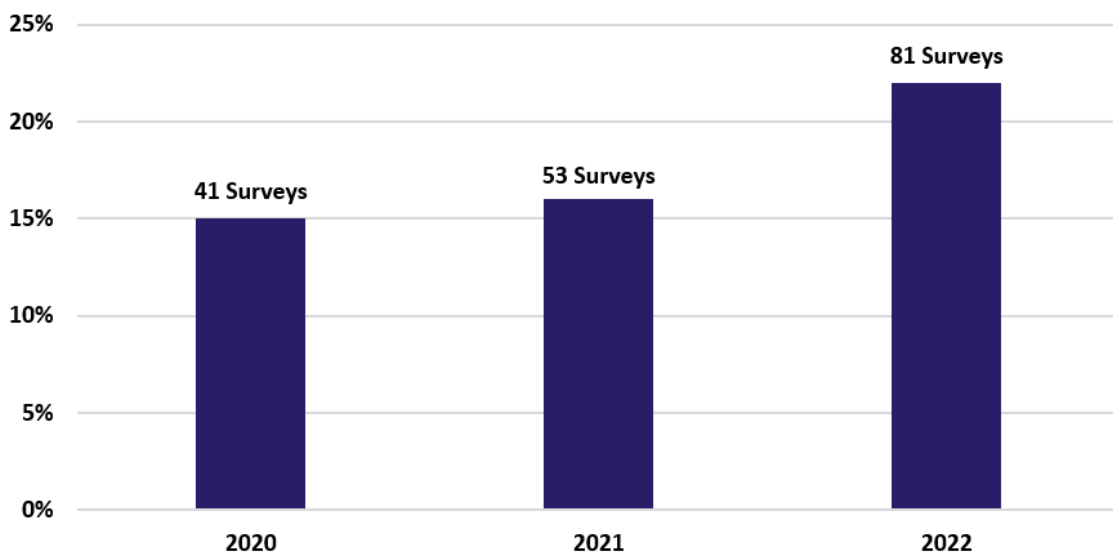


## Risks associated with dirty engine room bilges

The Club would like to highlight to our Members, the potential hazards associated with oily engine room bilges and the checks and steps that a ship's crew should undertake to assist mitigate the associated possible issues.

It is common for bilge water to accumulate during the routine operation of machinery in the engine room spaces. However, engine room bilges contaminated with oil can pose hazards if not managed properly and could indicate a wider problem on board. A recent analysis of the Club's [Condition Survey Programme](#) showed a rise in vessels reported as having occurrences of contaminated engine room bilges.

### Condition Survey Programme - Percentage of vessels with contaminated engine room bilge defect



*Total surveys performed in 2020: 276, 2021: 373, 2022: 388*

Bilge water can accumulate due to air condensation in the machinery space, condensation from air systems (such as air conditioning equipment, air compressors, compressed air vessels etc.), and the routine cleaning of the surrounding and connected areas. However, if the machinery, associated pipelines, and valves are not well-maintained, the associated leakage may seep into and contaminate the bilges.

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A bilge filling up with oil or water could also be a tell-tale sign of a more significant problem, such as a leaking propeller shaft, stern seal, or cracks in the hull or tank bulkheads.

## Associated Risks

- Fire – While an oily bilge may not be the immediate source of a fire, any fire that arises in an engine room or machinery space can escalate and spread rapidly. The presence of oil accumulated in bilges or drip trays acts as additional fuel to sustain burning and increases the likelihood of the fire reaching other areas. Rags that may be used to clean oily bilges if not disposed properly may further increase this risk.
- Pollution – Bilge water can be contaminated from various sources, such as oil leakage from machinery, sediments or cleaning agents used for machinery space cleaning. Contaminated bilge water, if not appropriately managed, can pose a pollution risk if the international/ local requirements on the discharge of bilge water are not complied with.
- Detention and fines – Port State Control officers increasingly classify oily bilges as a detainable deficiency. Illegal discharge of bilges may subject the vessel to heavy fines and the potential for the crew to face charges, including imprisonment.
- Machinery breakdown – Various leakages in the machinery, pipelines and valves may be signs of poor maintenance or an inherent failure which may lead to machinery/equipment breakdown.

## Best Practices

- Engine room bilges should always be kept clean and free of oil.
- Engine room bilges should be painted in a light colour to visually assist in identifying a fresh leak.
- Chemical cleaning should be carried out periodically. On vessels fitted with an Oily Water Separator (OWS), the chemical used should be confirmed as compatible.
- Any identified source of any oily water in the bilge should be thoroughly investigated.
- Machinery, equipment, pipelines and valves should be periodically inspected and maintained as per Planned Maintenance System (PMS) and Manufacturer's Instructions.
- The OWS overboard discharge valve should be secured in the closed position with an appropriate notice clearly posted to warn against unauthorised opening.
- Proper recordkeeping of the transfer, discharge, or disposal of bilge water should be maintained.
- The Safety Management System / ship-specific procedural system should allow for periodic checks on the engine room bilges and written procedures regarding oily bilge transfer and discharge operations.

We trust Members find these recommendations useful and if further assistance is required please contact the [Loss Prevention Team](#)