

This year the ADN 2023 was published and it was stated at 7.2.3.20.1 that is allowed to fill the cofferdams under certain conditions. Unfortunately, some incidents occurred because the filling of cofferdams is not the same procedure as the filling of the double hull tanks. The venting openings of the Cofferdams are secured with flame arresters and they are not useful for water. If a Cofferdam is filled with water and the pressure in the Cofferdam may rise above 0,1 bar (ADN 9.3.x.23.2), it could lead to a serious damage to the structure of the Cofferdam, as visible on pictures below (outer cofferdam bulkhead). Especially when the cofferdam would be overfilled it will obligatory lead to such incidents.

## POSSIBLE DANGERS

- Personal injuries or even fatalities
- Significant defect to the structure of the Cofferdam and the barge
- See pictures for details: heavily deformed outer cofferdam bulkhead in forward engine room. Electrical cabinets have fallen over as a result of the heavily deformed outer cofferdam bulkhead

## MEASURES

- Have a toolbox talk before all ballast operations.
- Open the hatch of the cofferdam to control the filling process. That also make sure that the venting related to filling is adequate. Please note that the forced ventilation is fitted with flame arresters which are not intended for the purpose to let water pass the arresters.
- Before filling, make sure that the atmosphere within the cofferdam is safe, meaning free from Ex/Ox or Tox, because when the hatches are opened, the Ex-protection is not present anymore.
- Use the minimum possible filling rate, be aware that a cofferdam is significant smaller than a ballast tank.
- Monitor the filling process closely.
- If the filling pipe system is connected to the ballast tanks as well as the cofferdams, open additional tanks to spread the pressure.
- Double cross check to make sure that the line setting and the hatches are open before the starting of the ballast pump.
- Know the diameter of your filling pipe.
- Know the diameter of your venting opening.
- Only fill cofferdams under the conditions mentioned in ADN 7.2.3.20.1.

