Are you familiar with the content of the Line Management Plan?

Short Question Text

Line Management Plan (LMP) implementation.

Vessel Types

Oil, Chemical, LPG, LNG

ROVIQ Sequence

Documentation, Cargo Control Room, Mooring Decks

Publications

OCIMF: Effective Mooring. Fourth Edition 2019

OCIMF: Mooring Equipment Guidelines. Fourth Edition 2018 (MEG4)

Objective

To ensure that mooring lines, mooring tails and joining shackles are always in serviceable condition and managed to avoid failure in service.

Industry Guidance:

OCIMF: Mooring Equipment Guidelines. Fourth Edition 2018 (MEG4) Chapter

5.4.2 Line Management Plans.

OCIMF: Effective Mooring. Fourth Edition 2019

2.6 Taking care of mooring equipment

Line and tail certificates

You need to know what kinds of lines are on board, where they are, and how to find their service records in the line management plan. All lines and tails used for mooring need a certificate.

- Label certificates clearly.
- Regularly check their condition.
- Keep certificates/inspection records in an easily accessible file.

Section 3.4 Synthetic fibre tails

- Keep a record of which tail is fitted to each mooring line, and when, and give this data to your supervisor so that the line management plan can be updated.

3.8 Care of mooring lines

- Guidance on mooring line care, use and replacement can be found in your line management plan.
- Do not move lines or tails from one winch to another without approval. Make sure records in the line management plan are updated with any approved change of position. Tracking a line's history is critical to know how used it is, as required by the line management plan.

TMSA KPI 6A.2.4 requires that procedures are in place for the inspection, maintenance and replacement of wires, ropes, tails and ancillary equipment. The procedures may include:

- Inspection methods and frequency
- Maintenance requirements.
- Retirement criteria
- Minimum spares
- Stowage requirements
- Record keeping

The records may include:

- Date of bringing rope/wires into service.
- Identification and tagging of all equipment.
- Certification for all ropes/wires/tails/joining shackles.
- Dates of end for ending.

IMO: ISM Code

10.1 The Company should establish procedures to ensure that the ship is maintained in conformity with the provisions of the relevant rules and regulations and with any additional requirements which may be established by the Company.

Inspection Guidance

The vessel operator should have developed a Line Management Plan (LMP) in alignment with MEG4 Table 5.2 which should give guidance on:

- Maintenance; including line installation, storage, repair, line maintenance and wear zone management.
- Inspection; including routine inspection and detailed inspection. (detailed in MEG4 5.4.3)
- Service life and retirement criteria; including determination of expected service life and planned retirement criteria policy. (it may also include residual strength testing, but this is not a required aspect of an LMP)
- General; including hazards and precautions, operator's SMS and ship HSE procedures, training and competence requirements, and roles and responsibilities.

The LMP can be a standalone tool, or it may be integrated into existing safety or maintenance management systems. It can be available as hard or electronic copy, or both. LMP information should be stored in a location that is easy for all users to access, e.g. on a computer system that can be accessed from both the ship and shore or compiled in a single physical location. It should be easy for the system users to access the LMP information from a single physical or virtual location. This is necessary for access by all officers and crew who will be involved in mooring operations.

The vessel should retain manufacturer's product certificates onboard which will be referenced to the location of each mooring line, mooring tail and joining shackle onboard, both in use and available as spares.

Suggested Inspector Actions

- Review the mooring line, mooring tail and joining shackle certificates and verify that the vessel has an effective process in place to identify each individual item and associate it with its location onboard and its manufacturer's product certificate.
- Review the Line Management Plan (LMP) and verify that, as a minimum, the four key categories and their subcategories identified in table 5.2 (MEG4) had been addressed and populated with the relevant information.
- Identify the stated service life criteria for mooring lines and mooring tails and verify that the lines and tails in service were within the company's stated service life criteria. This may be elapsed time or hours in service since being brought into service and will be defined within the LMP.

- Review the inspection history for the mooring lines and mooring tails and verify that inspections had been carried out as required by the inspection intervals defined within the LMP.
- Review the inspection history and where a line had parted in service verify that an incident investigation report was onboard that identified the causes of the line failure.
- Review the maintenance records and verify that mooring lines had been “end for ended” or moved to a different service in accordance with the LMP to meet the wear zone management expectations.
- Identify whether the vessel operator permitted the splicing of mooring lines and if so verify that the persons permitted to conduct the splicing had been identified within the LMP. Where specialist training was required verify that the identified persons had received the training.

- During the physical inspection: o Randomly inspect several accessible mooring lines, mooring tails and joining shackles and verify that they were in apparent good order and that they were tagged or marked to permit identification within the LMP and the associated retained product certificate.
    - Where the vessel was provided with mooring tails connected to the mooring lines verify that the connection method was in accordance with the LMP and MEG4 5.8.4, connection devices (MEG4 figure 5.20) or cow hitch (MEG4 Figure 5.21) and that these were correctly fitted.
    - Interview at least one rating involved in mooring operations and verify that they were familiar with the location of the LMP and, who was responsible for the splicing of the mooring lines or any other relevant item that would confirm familiarity with the LMP and its content.

Expected Evidence

- The Line Management Plan.
- The manufacturer’s product certificates for all mooring lines, mooring tails and joining shackles onboard.
- The SMS procedures that were referenced in the general section of the Line Management Plan.
- Incident investigation reports for any in service mooring line, mooring tail or joining shackle failures.

Potential Grounds for a Negative Observation

- The vessel was not provided with a Line Management Plan (LMP).
- The vessel had not retained manufacturer’s product certificates for all mooring lines, mooring tails and joining shackles onboard referenced against each item’s location.
- The LMP was not developed in alignment with the sections and subsections of MEG4 table 5.2, as a minimum.
- The accompanying officer was unfamiliar with the content of the LMP and how the information was to be recorded and managed within it.
- An interviewed rating who was involved with mooring operations was unfamiliar with the existence of the LMP or content relevant to their role onboard.
- The LMP had not been maintained accurately. (Inspection determined that lines, tails or shackles were in the wrong location or items were onboard which were not included in the LMP).
- Mooring line, mooring tail and joining shackle inspections had not been completed and documented in accordance with the LMP.
- Mooring lines, mooring tails or joining shackles in use or provided as spares were in a condition that indicated the inspection processes required under the LMP were ineffective.
- Joining shackles were fitted the wrong way around according to the shackle design.
- Mooring wires were connected to mooring tails using a cow hitch or an inappropriate shackle.
- A mooring line or mooring tail was in service beyond the stated company retirement criteria.
- A mooring line or mooring tail was in service which had suffered damage to such an extent that it should have been taken out of service for repair or retirement.

- Splicing of mooring lines had been undertaken onboard but the resulting splices were not in accordance with the line manufacturer's instructions.
- Mooring lines had not been "end for ended" or rotated in service in accordance with the line management plan wear zone management process.
- A mooring line, mooring tail or joining shackle had parted in service during the previous six months but there was no incident investigation report onboard to document the causes of the failure.