DNV·GL

MARITIME

Machinery Planned Maintenance System

Guideline to the Survey Arrangement MPMS with DNV GL

01 September 2017

Give information / benefits

All necessary information about the arrangement as well as the benefits will be given.

Prepare

This guideline will help you to prepare your management and vessels for the survey arrangement MPMS.

Explain requirements

What do you have to do and what should you do before requesting an implementation survey.

Rules for Classification of Ships, Part 7 Chapter 1 Section 7, 3.2: Machinery planned maintenance system requirements There are several benefits for you as manager when operating your vessels on Survey Arrangement Machinery PMS:

- No Class attendance during normal maintenance or overhaul is required
- No Class due date of machinery items other than in the onboard software
- No 5-yearly opening up of machinery, only following the maker's recommendations for maintenance and intervals
- Planning security with regards to scope and timing of maintenance work

inform

The easy answer:

Documentation! We need information about:

- Carried out maintenance (on Class items)
- Planned maintenance (on Class items)

At the implementation survey this documentation will be verified by the attending surveyor in your onboard software.

The onboard software needs to be either

- Type approved
- or
- Case-by-case approved

Software setup

The CORE (information in the system):

- Following maker's recommendations for maintenance (scope and intervals)
- All Class machinery items to be included
- All relevant work related to Class machinery items:
 - Planned
 - Corrective
 - Postponed
 - Overdue

The FRAMEWORK (configuration of the system):

- Access rights
- Backup routines
- English language

prepare

The key to a successful implementation onboard is a thorough preparation. We recommend to have the system in operation for at least 6 months, also to create maintenance history for review.

<u>Before requesting</u> the implementation survey, please

- Make sure you have all Class machinery items (machinery list) tagged and presentable in your onboard system
- Make sure all relevant maintenance instructions and intervals are according to the maker's recommendations
- Make sure all relevant personnel can operate the system, especially applicable after a change of software

Before the surveys, please

> Make sure the crew is prepared (e.g. provide a user guide for MPMS survey)

> Utilize the provided owner's preparation note

During the <u>implementation survey</u> the surveyor will ask for: The **CORE**:

- A complete list of Class machinery items in the onboard software (machinery list)
- Maintenance instructions and intervals of Class machinery items
- Maintenance records (planned, corrective, postponed, overdue), corresponding with the instructions

The **FRAMEWORK**:

- Software certificate
- Access rights
- Backup routines
- Crew training / familiarity
- (planned testing of unmanned machinery space alarms)

The surveyor will also verify that the condition in the engine room is reflecting the maintenance information documented in the onboard software

Implementation survey successful with remarks - actions

explain

If the surveyor has verified the <u>correct implementation</u> of the survey arrangement Machinery PMS he will issue the certificate.

If some remarks remain after the survey:

- All remarks will be pointed out, explained and reported in the survey statement
- Possible actions to rectify outstanding items in the software will be discussed
- The surveyor will issue the certificate and Memorandum to Owner (MO)

Rectified remarks as mentioned in a MO may be closed remotely after documentation review

Implementation survey not successful - actions

explain

If the surveyor <u>cannot verify the correct implementation</u> of the survey arrangement Machinery PMS:

- All deficiencies will be pointed out and explained
- Possible actions to rectify outstanding items in the software can be discussed
- The survey will be invoiced regardless (standard fee)

> A new implementation survey can be requested once all remarks are cleared

During the <u>annual survey</u> the surveyor will ask for:

- An overview of active and historic maintenance tasks (planned, corrective, postponed, overdue)
 - Corrective work as a result to damages of Class machinery has to be verified by the surveyor at time of survey
 - Postponed and overdue work will require justification
- An overview of changes to the content of the software (CORE and FRAMEWORK) and/or of the software itself (upgrade / change)
 - Unresolved deficiencies can result in a Condition of Class / withdrawal of the arrangement

Main task of the surveyor is to verify that the condition in the engine room is reflecting the maintenance information documented in the onboard software

inform

The following pages will give some information about the most common topics with regards to the survey arrangement Machinery PMS:

- Changes to the survey arrangement
- Taking over vessels with MPMS
- Class related machinery items (machinery list)
- Maintenance scope, intervals and reporting

The vessel is sold:

- Change of Technical Management:
 - > The survey arrangement is cancelled by default (reverted to continuous)

Upgrade of existing- or installation of a new software:

- > Contact your Key Account Manager / DATE as soon as you have decided for it
- If the software is approved:
 - During the next annual survey the system will be reviewed more in-depth (scope of an implementation survey)

You change name:

- of your Management or Vessel:
 - Contact your Key Account Manager / DATE in order to correct the certificate or wait for the annual survey when the surveyor will update the certificate

explain

Taking over of a vessel with MPMS

In general a vessel cannot be taken over with the survey arrangement Machinery PMS active (survey arrangement = management specific).

You take over a vessel with survey arrangement MPMS in DNV GL:

- If you would like to retain this arrangement, please
 - Contact your Key Account Manager
 - Contact DATE

The survey arrangement can normally be continued with an initial survey at the next annual due date.

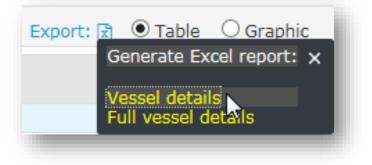
You take over a vessel with PMS from another Class Society (class entry):

- An initial survey has to be carried out in order to have the survey arrangement Machinery PMS with DNV GL (normally during class entry)
- If the software is not approved by DNV GL, further evaluation will be necessary.

Class related machinery items

prepare

- Class machinery items onboard your vessel can be found in the DNV GL machinery list.
- This list can be easily generated as an excel sheet from the vessel view on MyDNVGL (click "Vessel details"):



If you find discrepancies in this list compared to your onboard machinery items, please notify your Key Account Manager.

> Please make sure this list is updated before the implementation survey.

Maintenance – descriptions, intervals and reporting

- Good work instructions
 - enable the crew to carry out the intended work
 - encourage sufficient reporting
 - describe the maintenance task(s) to be carried out or refer to manuals
- Intervals for maintenance
 - Shall follow the maker's recommendations (calendar and running hours)
 - shall follow a good industry practice / operational experience (<u>in case of no</u> <u>maker's recommendations</u>), however, not more than 60 months
- Reporting of maintenance
 - The reporting and instructions have to 'fit together'
 - > good instructions can reduce reporting tasks significantly
 - > vague instructions require comprehensive reporting

explain

You need more information? Contact your Key Account Manager

You have a technical question? Contact us via DATE@DNVGL.com

Please contact us for the latest revision of these guidelines. DATE@DNVGL.com

www.dnvgl.com

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