

MEG4 MBLsd and LDBF Identified Misalignment & Path Forward

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Introduction

Publication of the 4th edition of Mooring Equipment Guidelines (MEG4) by OCIMF introduces new guidance pertaining to the strength alignment and management of the mooring system. Understanding that a majority of ships today were built prior to MEG4, it is to be expected that mooring line strengths may not align with tolerances as described in the new guidelines.

The methodology of this approach is outlined on page V of MEG4:

- *“If new build ships under construction or existing ships are unable to follow the recommendations in the publication, they should, as a minimum, develop a mooring system management plan (MSMP) and a Line Management Plan (LMP) that will:*
 - *Remain on the ship through its life as part of the management of change records,*
 - *Identify a timeline and measures needed to follow the recommendations of this publication.*
 - *Detail interim measures taken to address the recommendations in this publication, with reasons given for why the changes have not been implemented yet.*”

The Shift to MBLsd and LDBF

Per MEG4, the line design break force (LDBF) of the mooring line shall be within 100%-105% of the ship design MBL (MBLsd), and the tail design break force (TDBF) shall be 125%-130% of the MBLsd. The LDBF of a line is defined in MEG4 terminology to be a spliced rope strength specification. However, ships designed and built in accordance with MEG3 (or earlier) guidance may be utilizing lines/tails with strength specifications for un-spliced rope (ex., derived via ISO 2307 test method). Adjusting the existing line specifications to report in terms of an LDBF definition may result in the mooring equipment falling below the vessels MBLsd as, due to the spliced termination, test methods for un-spliced rope do not account for strength losses.

To determine if there is a misalignment:

1. Determine your MBLsd. Industry guidance has been provided in alignment with OCIMF MEG4 page V as well as Intertanko’s *Guidance of Mooring System Management Plan* section B1 and B2.
2. If LDBF/TDBF is not published on the certificates of the ropes, consult the manufacturer to understand what the LDBF/TDBF value of the rope is.
3. Perform a gap analysis to understand if a misalignment exists.

If a misalignment is identified the following items should be documented in the vessels MSMP B.9 “Exceptions” section:

1. Document a successful historical track record with the current product(s), thus proving that the lines have already been safely integrated into the ship/fleet’s operations.
2. Plans and methodology for accounting for strength misalignment in the vessels LMP.
3. If the lines will eventually be replaced with lines that align with guidelines, document a plan for when the lines will be replaced.
4. If there are no plans to correct strength misalignment during the next change out of ropes, this should be documented with reasoning (i.e. steps 1 and 2 above).

It is assumed that proper documentation and rationale per page V of MEG4 introduction should allow for operators of existing ships to be prepared for possible questions in accordance with VIQ7. Crews should reference such documentation and rationale when resolving any related observation.