VIQ7 and Ship-to-Ship transfers

OCIMF's new VIQ, edition 7 will be implemented on 17th September this year.

There is a radical change as to how OCIMF approaches ship-to-ship transfer (STS) operations, as SIRE and TMSA auditors will be expected to look at a number of items related to STS issues.*

DYNAMARINe's STS specialists have analysed VIQ7 in relation to STS operations and have given an assessment and also added advice.

Paragraphs 8.51 to 8.55 outline the new requirements during vetting inspections for vessels. These requirements with the relevant records are expected to be available to the technical operators (DOC holders).

The qualitative information, as outlined in the new VIQ, will have to be supported by recorded processes within the Safety Management System (SMS) and also be depicted in the respective elements of TMSA.

Paragraph 8.51

- Senior officers should be familiar with the requirements and risks (hazards) during STS operations. This process may be satisfied during the familiarisation of new officers, similar to other company/ operational procedures of the SMS. Attention is drawn to knowledge of RISKS/ HAZARDS, which have to be in line with those of ANNEX K of the latest OCIMF guidelines.

Within the DYNAMARINe network, the following optional features were developed - STS drills, e-learning for seafarers and STS status gap analysis performed on board, which provide means for addressing hazards to senior officers for familiarisation and enhancement of their preparedness.

- New requirement for risk assessment of the STS location. This is currently implemented in PART B of DYNAMARINe's report. The company said it was also working towards supporting it with more information on the STS location on the basis of available data on OSIS. There is a process for the STS location assessment, already in place, according to the guidelines already set out by OCIMF in relevant publications, supported also by weather analysis.
- For consecutive STS operations, or similar circumstances, where work rest hours may exceed the required by STCW, the role of POAC would be expected to be transferred to either the Master or Chief Officer who should meet the requirements for POAC according to Manual on oil Pollution. In this respect an STS simulation course with relevant certification should be available to Masters and C/Os under these circumstances.

Paragraph 8.52

- Senior deck officers engaged in the assessment of the Joint Plan, as well as the information received by the STS service provider and POAC should have the capacity to assess that POAC qualifications comply with the requirements of MARPOL for ANNEX I cargoes.

Prior to the commencement of the STS operation, the identity(1) and POAC qualification should be made available to the master for verification of compliance.

- PART C of the risk assessment reporting provides the assessment of POAC qualification in relation to requirements, as well as an indication of past experience.

Paragraph 8.53

- Reference is made to the type of chocks used for the mooring lines. It is clearly stated that all lines should be led through closed type fairleads or chocks, for all tankers that are subject to SIRE vetting inspections.
- Attention is drawn with the relevant evidence available on board from the mooring plans, on the type of fittings used during past STS operations (see comments on Paragraph 8.54).
- PART A (Screening Report) of the onlineSTS.net service provides the compatibility analysis on the availability of closed chocks from both participating vessels, DYNAMARINe claimed.
- Open chocks should not be used without prior assessment of freeboard change, weather conditions, type of STS operation, assessment of the STS location and proposed mooring pattern. Such assessment should take place with the consensus agreement of technical operators.

Paragraph 8.54

- This paragraph outlines the STS information expected to be collected by the Master and/or technical operators.
- Crew experience is readily available for review under the onlineSTS.net platform.
- Master's feedback is also readily available through the onlineSTS.net platform.

ANNEX I – Extracts from VIQ7

8.51 Are the officers and crew familiar with the requirements and risks during ship-to-ship transfer operations?

Any oil tanker over 150 gt involved in STS operations shall carry on board a plan prescribing how to conduct STS operations (STS Operations Plan), which shall be approved by the administration. The STS operations plan shall be written in the working language of the ship (MARPOL Annex I Reg 41.1).

Notes: STS operations plans are not required for offtakes from FPSOs, FSOs, or for bunkering operations (see MARPOL Annex I, Reg 40 for full details). Operational plans shall be developed taking into account the information contained in IMO's 'Manual on Oil Pollution, Section 1,

Prevention' and the ICS/OCIMF/SIGTTO/CDI 'Ship to Ship Transfer Guide, for Petroleum, Chemicals and Liquefied Gases First Edition 2013'.

A risk assessment should be undertaken when considering the suitability of an STS transfer location. A further risk assessment should be made for the STS operation (STS Guide 1.4). All STS transfer operations should be conducted under the co-ordination and advisory control of one individual, who will either be one of the Masters concerned, an STS superintendent or the POAC.

To prevent fatigue during extended operations, the role may be formally transferred to another suitably qualified person (STS Guide 1.5.1). In case the vessel is equipped with permanent fenders and hoses, there shall be procedures in place to monitor and assess the condition of such equipment in accordance with manufacturer guidelines.

8.52 Does the POAC have the necessary qualifications and experience and are officers aware of these requirements?

For transfers involving MARPOL Annex I cargoes, the POAC should have at least the following qualifications or level of experience -

- An appropriate management level deck licence or certificate meeting international certification standards, with the International Convention on Standards of Training Certification and Watchkeeping for Seafarers (STCW) (reference 9), dangerous cargo endorsements up-to-date and appropriate for the ships engaged in the STS operation.
- Attendance at a recognised ship handling course.
- Experience in conducting mooring/ unmooring operations in similar circumstances and with similar vessels.
- Experience in oil tanker cargo loading and unloading.
- A thorough knowledge of the transfer area and surrounding areas.
- Knowledge of spill clean-up techniques, including familiarity with the equipment and resources available in contingency plans.
- Knowledge of STS operations plans (appendix A1.5) and associated joint plans of operation (Section 5.2).

For transfers involving cargoes other than MARPOL Annex I cargoes, it is recommended that the STS superintendent has similar qualifications and levels of experience to those detailed above, relevant to the type of cargo transferred (STS Guide 1.7).

8.53 Are closed fairleads and mooring bitts provided?

It is recommended that all fairleads used during STS transfer operations are of an enclosed type. Such fairleads should be strong enough to take the anticipated mooring loads and large enough to allow the mooring line (plus any soft rope and tackle) to pass through comfortably (STS Guide 9.3). It has been found that full strength enclosed fairleads and bitts for spring lines need to be positioned no more than 35 m forward and aft of the cargo manifold (STS Guide 9.3).

It is recommended that all tankers be fitted with an array of mooring bitts of sufficient strength on each side of the ship (STS Guide 9.3). In addition, it is recommended that provision be made for securing fender lines (STS Guide 9.3).

8.54 Are officers aware of the requirements of the ship-to-ship transfer checklists and are there records of STS operations maintained?

The checklists should be used not only at the time of transfer but also when the operation is being planned. Adherence to check list procedures will ensure that the most important aspects of an operation are covered.

The checklists are:

1. Pre-fixture information;
2. Before operations commence;
3. Before run-in and mooring;
4. Before cargo transfer;
5. Before unmooring (STS Guide 3.4 and Appendix E).

Note: STS records which should include, but not limited to the following:

1. STS Checklists as per latest ICS/ OCIMF/SIGTTO/CDI guidelines edition 2013.
2. The JPO (Joint Plan of Operations) as provided by the service provider.
3. Risk assessment as submitted by the service provider.
4. Detailed Mooring Plan of participating vessels.
5. Copies of certificates of fender and hoses.
6. Notification to coastal authorities.
7. Details of drills associated with the specific STS operation.
8. Records of crew experience.

Post feedback/ assessment by the Master -

If the vessel has been engaged in STS operations in the past 12 months then records should be spot checked for compliance.

8.55. If a ship-to-ship transfer was in progress during the inspection, was it conducted in accordance with the recommendations of the OCIMF/ICS STS Transfer Guide?

To eliminate the potential for incendive arcing between the two ships, when presenting the hose string for connection, one of the following arrangements should be used:

- A single insulating flange fitted at the manifold of one ship or within each hose string and all hoses in the string electrically continuous.
- A single length of electrically discontinuous hose fitted in each hose string.
- Hoses that are specially constructed to prevent static build-up and limit electrical conductance to an inherently safe level. Where an insulating flange is used, it is important that no part of the conducting hose outboard of the insulated flange comes into contact with the ship to which the insulating flange is fitted, for example from the use of non-insulated hose saddles, as this could cause a spark (STS Guide 3.10.4).

Synthetic moorings passed through shipside fairleads may be subjected to chafing from cyclical loading due to the vessel's motion. Lines can be protected with suitable chafing covers. The covers may be lubricated to minimise the potential for them being damaged.

Additional lines should be readily available to supplement moorings if necessary, or in the event of a line failure (STS Guide 6.6.2).

Footnote: [1] CDI/ICS/OCIMF/SIGTTO STS guidelines, 2013 edition, paragraph 4.3.

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