A Guide to Compliance – Chapter 8 to Marpol and Annex I



– prevention of pollution during transfer of oil cargo between oil tankers at sea

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Overview of Marpol

Ship-to-Ship Transfer is now being regulated under Marpol and a revised Ship-to-Ship Transfer Guide. These new regulations came into force fully from April 1st 2012.

The new regulations can be broadly separated into a number of aspects:

1 Notification
2 Personnel (POAC)
3 Equipment
4 Contingency Planning
5 STS Procedures
6 STS Planning
7 Maintaining Records of Compliance

This high level guide provides a quick reference to the main areas where recommendations contained in the ICS OCIMF STS Guides have become mandatory for vessels carrying Annex 1 petroleum based cargo.

The checklist enclosed provides a simple reference document for the Master to ensure that a comprehensive record of compliance is maintained by the vessel.

Records of compliance can be requested at any time for up to three years after the operation takes place. In addition to port state Inspections, Sire and Vetting Inspectors may pay close attention to ensure that vessels are complying with their plans in line with their ISM system procedures.

All extracts are from the IMO Manual on Oil Pollution unless otherwise stated

1 Notification;

6.2.3.1 / Each oil tanker subject to Regulation 42, of Chapter 8, MARPOL, Annex 1 as amended, that plans STS operations within the territorial sea, or the exclusive economic zone of a Party to the present Convention shall notify that Party not less than 48 hours in advance of the scheduled STS operations.

Where, in an exceptional case, STS operations are to take place within less than 48 hours' notice, the oil tanker shall notify the Party to the present Convention at the earliest opportunity.

The notification specified in paragraph 1 of regulation 42 shall include at least the following:

1 *Name, flag, call sign, IMO Number and estimated time of arrival of the oil tankers involved in the STS operations;*
2 *Date, time and geographical location at the commencement of the planned STS operations;*
3 *Whether STS operations are to be conducted at anchor or underway;*
4 *Oil type and quantity;*
5 *Planned duration of the STS operations;*
6 *Identification of STS operations service provider or person in overall advisory control and contact information; and*
7 *Confirmation that the oil tanker has on board an STS operations Plan*

If the estimated time of arrival of an oil tanker at the location or area for the STS operations changes by more than six hours, the master, owner or agent of that oil tanker shall provide a revised estimated time of arrival to the applicable national maritime authority.

Notes for the Vessel Master

The responsibility for the notification is with the Masters of the ships.

Irrespective of an STS Service Provider carrying out the service, the Master should ensure that he has a copy of the Notification (or permission if such permission is required) to carry out the operation.

Potential Risk

A vessel conducting an operation without notifying the proper authorities could itself be in breach of Marpol and her Owners/Managers ISM System.

2 Personnel;

6.2.1 / Person in Overall Advisory Control

6.2.1.1 / A ship-to-ship transfer operation should be under the advisory control of a designated mooring/unmooring Master, who will either be one of the Masters concerned or an STS Superintendent. It is not intended that the person in overall advisory control in any way relieves the ships' Masters of any of their duties, requirements or responsibilities.

6.2.1.2 / The person in overall advisory control of STS operations shall be qualified to perform all relevant duties, taking into account the qualifications contained in the best practice guidelines for STS operations identified by the Organisation. The Administration, cargo owners or oil tanker's operators should agree and designate the person in overall advisory control who should have at least the following qualifications:

1 *An appropriate management level deck license or certificate meeting international certification standards, with all STCW and dangerous cargo endorsements up to date and appropriate for the ships engaged in the STS operation;*
2 *Attendance at suitable ship-handling course;*
3 *A knowledge of spill clean-up techniques, including familiarity with the equipment and resources available in the STS contingency plan*
4 *Conduct of a suitable number of mooring/unmooring operations in similar circumstances and with similar vessels;*
5 *Experience in oil tanker cargo loading and unloading;*
6 *A thorough knowledge of the geographic transfer area and surrounding areas;*
7 *Thorough knowledge of the STS Plan.*

Notes for the Vessel Master

The appointment of the Person In Overall Advisory Control is a legal requirement of the vessels Flag Approved STS Plan. The qualifications of this person are as a minimum those stated above.

The STS Service Provider should be requested to provide evidence of the POAC's qualifications.

1 CV
2 Copy of valid COC with DCE up to date and appropriate
3 Recognised Oil-Spill Response Training Qualification

If there is a local area plan, the master should be given a copy in order to ensure it is in line with his vessels approved STS plan.

Potential Risk

A vessel conducting an operation without appointing a qualified POAC will be in breach of vessels Flag Approved STS Plan and her Owners/Managers ISM System.The vessel may also carry a contingent liability for non-compliance to her Flag Approved STS Plan for up to 3 years.

3 Equipment;

6.2.6 / Equipment

6.2.6.1 / Prior to starting the ship to ship transfer operation, the Masters of the oil tankers should exchange information concerning the availability, readiness and compatibility of the equipment to be used in the operation.

Fenders

6.2.6.2 / The oil tanker(s) should be provided with fenders (primary and secondary). These fenders should be capable of withstanding the anticipated berthing energies and should be able to distribute the forces evenly over the appropriate area of the hulls of both oil tankers. It is recommended that fenders constructed to ISO 17357 should be used. Industry best practice is that the safety valve on pneumatic fenders is inspected at intervals not exceeding two years and a certificate provided to demonstrate this.

Hoses

6.2.6.6 / The hoses used for the STS transfer of crude oils or petroleum products should be specially designed and constructed for the product being handled and the purpose for which they are being used. Hoses used should comply with EN1765 (or latest equivalent) with regard to specification for the assemblies and with BS1435 (or latest equivalent) and OCIMF guidelines with regard to their handling, inspection and testing. Hoses should bear the following durable indelible markings:

1 *The manufacturer's name or trademark;*
2 *Identification of the standard specification for manufacture;*
3 *Factory test pressure (Note: equal to rated working pressure, maximum working pressure, maximum allowable working pressure);*
4 *Month and year of manufacture and manufacturer's serial number;*
5 *Indication that the hose is electrically continuous or electrically discontinuous, semi-continuous or anti-static; and*
6 *The type of service for which it is intended e.g. oil or chemical.*

Notes for the Vessel Master

The master should request certificates for the primary fenders that show they have been tested in line with manufacturers guidance (Usually every 2 years). Secondary fenders are not equipped with a safety valve and do not require testing.

OCIMF require hose testing annually after being brought into service.

Potential Risk

A vessel conducting an operation without checking the certificates and test dates are valid could itself be in breach of Marpol and her Owners/Managers ISM System. The vessel may also carry a contingent liability for non-compliance for up to 3 years.

4 Contingency Planning

6.2.9 / Contingency planning and emergency procedures

6.2.9.1 / Although STS transfer operations can be carried out safely, the risk of accident and the potential scale of the consequences require that organisers develop contingency plans for dealing with emergencies. Before committing to an STS transfer operation, the parties involved should carry out a risk assessment covering operational hazards and the means by which they are managed. The output from the risk assessment should be used to develop risk mitigation measures and contingency plans covering all possible emergencies and providing for a comprehensive response, including the notification of relevant authorities. The contingency plan should have relevance to the location of the operation and take into account the resources available, both at the transfer location and with regard to nearby back-up support.

6.3 / Risk Assessment

6.3.1 / STS operations should be subjected to a risk assessment, the scope of which should include confirmation of the following:

1 *Adequate training, preparation or qualification of oil tanker's personnel;*
2 *Suitable preparation of oil tankers for operations and sufficient control over the oil tankers during operations;*
3 *Proper understanding of signals or commands;*
4 *Adequate number of crew assigned to controlling and performing oil transfer operations;*
5 *Suitability of the agreed STS plan;*
6 *Adequate communications between oil tankers or responsible person(s);*
7 *Proper attention given to the differences in freeboard or the listing of the oil tankers when transferring cargo;*
8 *The condition of transfer hoses;*
9 *Methods of securely connecting hose(s) to the oil tanker(s) manifold(s);*
10 *Recognition of the need to discontinue oil transfer when sea and weather conditions deteriorate; and*
11 *Adequacy of navigational processes.*

Notes for the Vessel Master

The vessel will have a risk assessment in place to cover STS Transfers anywhere in the world. However the STS provider should be requested to supply a local area risk assessment and contingency plan with particular reference to regional notifications and additional resources available in the area, which would be mobilised in the event of an emergency occurring.

Potential Risk

In the event of an incident a co-ordinated response may not be achieved.

5 STS Procedures

6.4 / Preparation for Operations

6.4.1 / Prior to the STS operation, the Masters of both oil tankers and, if appointed, the STS Superintendent, should make the following preparations before manoeuvres begin:

1 *Carefully study the operational guidelines contained herein and in the industry publication 'Ship to Ship Transfer Guide – Petroleum', as well as any additional guidelines provided by the ship-owner and cargo owner;*
2 *Ensure that the crew is fully briefed on procedures and hazards, with particular reference to mooring and un-mooring;*
3 *Ensure that the oil tanker conforms to relevant guidelines, is upright and at a suitable trim;*
4 *Confirm that the steering gear and all navigation and communications equipment is in satisfactory working order;*
5 *Confirm that engine controls have been tested and the main propulsion plant has been tested ahead and astern;*
6 *Confirm that all essential cargo and safety equipment has been tested;*
7 *Confirm that mooring equipment is prepared in accordance with the mooring plan;*
8 *Fenders and transfer hoses are correctly positioned, connected and secured;*
9 *Cargo manifolds and hose handling equipment is prepared;*
10 *Obtain a weather forecast for the STS transfer area for the anticipated period of the operation;*
11 *Agree the actions to be taken if the emergency signal on the oil tanker's whistle is sounded; and*
12 *Confirm completion of relevant pre-operational check lists (see examples in Appendix B).*

6.4.2 / Communications with the master of the other oil tanker should be established in accordance with 6.2.5 at an early stage to co-ordinate the rendezvous and the method and system of approach, mooring and disengaging.

6.4.3 / When the preparation of either oil tanker has been completed, the other vessel should be so informed. The operation may proceed only when both oil tankers have confirmed their readiness.

Notes for the Vessel Master

The requirement is for the ships to follow their Flag State Approved STS Plan. The plans need to be reviewed to ensure they are compatible. Transmission of such large documents by email may present difficulties.

The Master should familiarise himself with his own vessel's plan and identify if there are any differences between his vessel / company requirements and the Industry Standard OCIMF ICS STS Guide.

Potential Risk

Refinement of the guidance provided within the OCIMF STS Guide is commonly incorporated into the Flag State Approved STS Plan.

As a minimum, particular attention should be given to the following;

1 Weather limitations
2 Berthing restrictions (such as night time berthing operations)
3 Special considerations for same size vessels
4 POAC Qualifications

6 STS Planning;

6.4.4 / A Joint Plan of Operation in alignment with the STS plan established for each ship should be developed on the basis of information exchanged between the two oil tankers, including the following:

1 *Mooring arrangements;*
2 *Quantities and characteristics of the cargo(s) to be loaded (discharged) and identification of any toxic components;*
3 *Sequence of loading (discharging) of tanks;*
4 *Details of cargo transfer system, number of pumps and maximum permissible pressure;*
5 *Rate of oil transfer during operations (initial, maximum and topping-up);*
6 *The time required by the discharging oil tanker for starting, stopping and changing rate of delivery during topping-off of tanks;*
7 *Normal stopping and emergency shutdown procedures;*
8 *Maximum draught and freeboard anticipated during operations;*
9 *Disposition and quantity of ballast and slops and disposal if applicable;*
10 *Details of proposed method of venting or inerting cargo tanks;*
11 *Details of crude oil washing, if applicable;*
12 *Emergency and oil spill containment procedures*
13 *Sequence of actions in case of spillage of oil;*
14 *Identified critical stages of the operation;*
15 *Watch or shift arrangements;*
16 *Environmental and operational limits that would trigger suspension of the transfer operation and disconnection and unmooring of the tankers;*
17 *Local or government rules that apply to the transfer;*
18 *Co-ordination of plans for cargo hose connection, monitoring, draining and disconnection; and*
19 *Unmooring plan.*

Notes for the Vessel Master

Having a structured plan with completed and signed checklists provides a documented record of the conduct of the operation.

Potential Risk

The Joint Plan of Operations is the terminology for the working plan which will be followed by both vessels. The STS Checklists contained in the STS plan supplemented by the Ship-Shore Tanker safety Checklist provides a structure to follow to ensure that the plan is complete.

7 Maintaining Records of Compliance;

RESOLUTION MEPC.186(59) Adopted on 17 July 2009

Regulation 41 / General Rules on safety and environmental protection.

Records of STS operations shall be retained on board for three years and be readily available for inspection by a Party to the present Convention. Revised Annex I of MARPOL chapters 3 and 4 (resolution MEPC.117(52)); requirements for recording bunkering and oil cargo transfer operations in the Oil Record Book, and any records required by the STS operations Plan.

We have inserted a handy checklist for the Master to use to ensure a comprehensive record of compliance is maintained.

Please keep this checklist in a safe place and fill in when appropriate.

Notes for the Vessel Master

Sufficient information to prove compliance should be retained and appropriate entries made in the Oil Record Book.

Potential Risk

Records of compliance are important to ensure that the basic principle of ISM is followed.

"Say what you do
Do what you say
Record it"

Not keeping comprehensive records will potentially expose the vessel to deficiencies and non-conformances under both Marpol and ISM Systems. This could have serious consequences for the vessel up to three years after the operation is completed even if no incidents occur.

Notes


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