

Chapter 25

BUNKERING OPERATIONS

Spillages and leakages during bunkering operations are a primary source of oil pollution. Experience has shown that many of the bunker overflows and spillages that do occur can be attributed to human error.

This Chapter provides guidance on the planning and execution of bunkering operations and includes an example of a pre-transfer safety Check-List.

25.1 General

All bunkering operations should be carefully planned and executed in accordance with applicable regulations.

Personnel involved in the bunkering operation on board should have no other tasks and should remain at their workstations during topping-off. Generally, bunkering during cargo operations is not considered to be best practice owing to the need to avoid conflicts of interest for operational personnel. Spillages often occur when crew members are distracted by another task.

When bunkers are being delivered by barge, reference should be made to Section 11.9.2.

25.2 Bunkering Procedures

Companies should require that all bunkering operations are controlled under procedures that are incorporated in a Safety Management System.

These procedures should ensure that the risks associated with the operation have been assessed and that controls are in place to mitigate these risks. The procedures should also address contingency arrangements in the event of a spill. The Company should consider the following items when producing the procedures:

- Determining that there is adequate space for the volume of bunkers to be loaded.
- Establishing maximum loading volume for all tanks.
- Controls for the setting of bunker system valves.
- Determining loading rates for the start of loading, bulk loading and topping-off.
- Special precautions when loading into double bottom tanks.
- Arrangements of bunker tank ventilation.
- Overflow arrangements.
- Verification of gauging system operation and accuracy.

- Alarm settings on overfill alarm units.
- Bunker overfill protection (in general, the bunker overfill protection is an emergency stopping device only. It should not be used as a standard method of stopping bunkering).
- Communication between the supplier and receiver must be established before bunkering can be undertaken, including communication procedures for the bunkering operation and emergency stop.
- Manning requirements to execute the operation safely (including e.g. deck watch).
- Monitoring of the bunkering operation and checking it conforms to the agreed procedure.
- Changing over tanks during bunkering.
- Containment arrangements and clean-up equipment to be available.

Once the procedure is produced, it should be implemented by use of a check-list, an example of which is included in Appendix 5.

25.3 The Bunkering Operation

Prior to commencing the operation, all pre-loading checks should be carried out and communication systems verified as working.

The loading rate should be checked regularly.

When changing over from one tank to another, care should be taken to ensure that an excessive back pressure is not put on the hose or loading lines.

When topping-off tanks, the loading rate should be decreased to reduce the possibility of air locks in the tank causing mist carry over through the vents, and to minimise the risk of the supplier not stopping quickly enough.

On completion of bunkering, all hoses and lines should be drained to the tank or, if applicable, back to the delivery bunker supplier, prior to disconnection. The practice of blowing lines with air into bunker tanks has a high risk of causing a spillage unless the tank is only part full and has sufficient ullage on completion of loading.

25.4 The Bunkering Safety Check-List for Bunker Delivery to Inland Ships

25.4.1 General

Responsibility and accountability for the safe conduct of bunker operations is shared jointly between the receiver and the supplier. Before the bunkering operation commences, the Responsible personnel should:

- Agree in writing the handling procedures, including the maximum transfer rates.

- Agree in writing the action to be taken in the event of an emergency during transfer operations.
- Complete and sign the Bunkering Safety Check-List for Bunker Delivery to Inland Ships.

An example of a Bunkering Safety Check-List for Bunker Delivery to Inland Ships is contained in Appendix 5. The Check-List is primarily structured for loading bunkers from a barge, a jetty or when loading bulk lubricating oil or gas oil from a road tanker.

25.4.2 Guidelines for Use

The following guidelines have been produced to assist receiver and supplier personnel in their joint use of the Bunkering Safety Check-List.

The Bunkering Safety Check-List uses statements assigning responsibility and accountability. Ticking or initialling the appropriate box, and finally signing the declaration, confirms the acceptance of obligations. Once signed, it provides the minimum basis for safe operations as agreed through a mutual exchange of critical information.

Responsible personnel completing the Check-List should be the people carrying out the bunkering operation.

The receiver's Responsible personnel should check all considerations lying within the responsibility of the receiver. Similarly, the supplier's Responsible personnel should check all considerations that are within the responsibility of the supplier. In fulfilling their responsibilities, Responsible personnel should assure themselves that the standards of safety on both sides of the operation are fully acceptable. This can be achieved by means such as:

- Confirming that a competent person has satisfactorily completed the Check-List.
- Sighting appropriate records.
- By joint inspection, where deemed appropriate.

For mutual safety, before the start of operations, and from time to time thereafter, both parties involved should verify that their obligations, as accepted in the Check-List, are being effectively managed.

The Bunkering Safety Check-List for Bunker Delivery to Inland Ships contains the following items:

1. Bunkers to be Transferred

A joint agreement on the quantity and grades of bunkers to be transferred, together with the agreed transfer rate.

2. Bunker Tanks to be Loaded

An identification of the tanks to be loaded with the aim of ensuring that there is sufficient space to safely accommodate the bunkers to be transferred. Space is provided to record each tank's maximum filling capacity and the available volume.

3. Safety Checks by Both Parties Prior to Bunkering

The safety of operations requires that all relevant statements are considered and the associated responsibility and accountability for compliance accepted.

The joint declaration should not be signed until all parties have checked and accepted their assigned responsibilities and accountabilities.

25.4.3 Bunkering Safety Check-List for Bunker Delivery to Inland Ships

(See Appendix 5)

