

## **EXPLANATION (1)**

### **The risk**

To prevent containers from falling overboard, containers on deck of a sea-going vessel are secured by means of so-called twist locks (to each other) and lashing bars (to the deck). Twist locks have a weight of approximately 6-8 kg; lashing bars approximately 20-25 kg. The semi-automatic twist locks are released using long hollow aluminium rods which also weigh a few kilos each. For all these pieces of equipment, there is the risk of them accidentally falling overboard. History shows that this can also happen with containers. This often happens because the containers are still connected to each other, or because they get stuck behind something during a crane operation, creating an imbalance.

Often there is a bunker barge alongside the ship. (A bunker barge is a tanker that is used for bunkering sea-going vessels in ports). Being on deck of a bunker barge that is moored alongside a container ship is therefore not without risk. Particularly at places where a container crane or a lashing team is active on deck of the sea-going vessel, it can be dangerous.

The incidents described above can, in principle, always happen, meaning that guidelines are required to limit the consequences as much as possible to material damage.

## **EXPLANATION (2)**

### **Acceptance of the risk**

It is very common for operating materials to be bunkered during the loading and unloading of container ships. These simultaneous operations shorten the time of the container ship spends in the port. Because the bunker barge lies partly in the loading zone of the container ship, there are risks for the ship as well as for the crew. From a nautical perspective, it would be irresponsible to moor along a sea-going vessel other than lengthwise.

Due to the loading and unloading activities of the **stevedoring company** or the loosening or fitting of the lashing rings of the containers by a **lashing company**, objects can fall from the container ship with all possible consequences; from serious damage to the bunker barge to the fatal outcome for crew members. However, the **bunker shipping company** or the **owner of the bunker barge** comes alongside on behalf of the **container ship** to deliver the bunker oil. This concerns the involvement of "multiple employers at one work location".

### **Legal**

The term "multiple employers at one work location" comes from the Working Conditions Act. Article 19, first paragraph, states:

*"If in a company or an institution various employers have work carried out, they shall cooperate effectively to ensure compliance with the stipulations of and pursuant to this Act."*

The individual employers (the stevedoring company, the lashing company, the bunker shipping company and/or the skipper/owner of the bunker barge operator and the shipping company and/or captain of the container ship) must include these risks in their risk inventory and evaluation and jointly take measures to bring the risks to an acceptable level.

This Protocol does not indemnify anyone from his or her legal obligations. It serves as a reminder when drawing up a risk inventory and evaluation of an individual employer involved in the bunker safety during container operations. As specified in Article 2 of the Protocol, the parties declare their readiness to include the content of this Protocol in their own procedures and practices and to comply with the agreements made.

Individual employers are not only obliged to make agreements but also, to the extent possible, to check whether these agreements are being met by the other employers. However, every employer remains liable for the working conditions of its own employees, also if the safety, health or well-being is harmed because another employer has not complied with an agreement.

## **EXPLANATION on some articles**

### **Article 3 Working method of lashers**

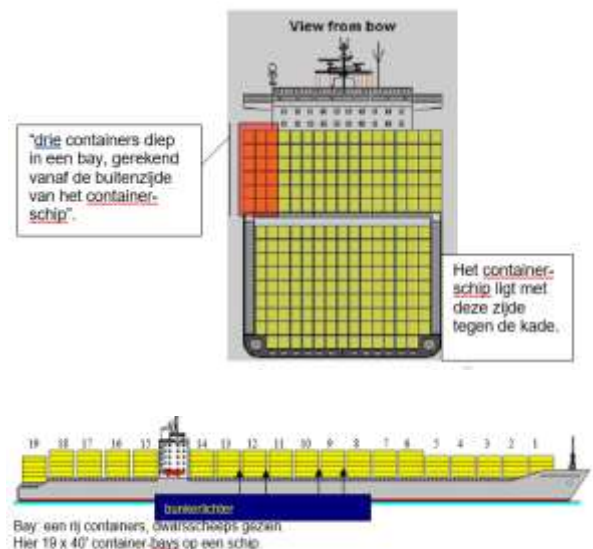
With the current and new generation of container ships, the containers are placed higher and wider on deck. Work by the lashers is carried out both from the so-called cradle system (see page 4) and from (platforms on the) deck.

#### **Bunker barge alongside? (Article 3.1)**

Before lashers can work on the outermost three rows of containers, it must first be checked whether there is a bunker barge alongside the container ship.

#### **Starting or stopping work (Art. 3.2)?**

When starting or stopping work, this must at least also be discussed with the ship, since they are also responsible for the coordination of all activities. Because of the risk of a false sense of safety and misunderstandings, it has been decided in consultation with all parties to discontinue the hanging up of signal tapes by the lashers as was common previously. In addition, these signal tapes are no longer necessary due to a redefinitions of risk area and safe area.



### **Article 4 Working method of crew members of bunker vessels**

#### **Registration form (Article 4.1)**

The person responsible on the bunker barge provides the following information by e-mail to the relevant terminal: Name bunker barge, Contact details (captain, telephone number, e-

mail address), Name Vessel, Location of connection point, Timeline bunkering and bunker barge location, and then discusses this with the terminal. Together with the terminal, it is discussed and recorded when the work at the location of the wheelhouse will take place. In the event of any deviation from the agreements made, the terminal is contacted immediately (see Appendix 4, registration form bunker barge).

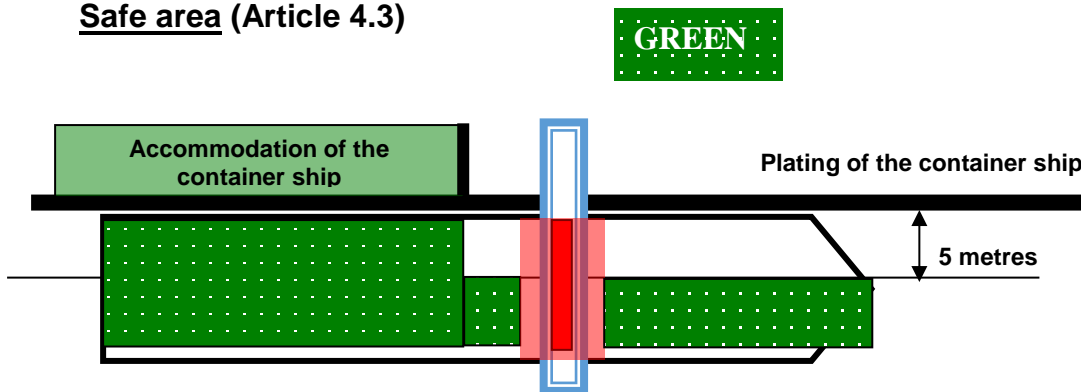
**Personal Protective Equipment (Article 4.2)**

On deck, the crew on board a bunker barge must wear personal protective equipment. In this case, it concerns safety shoes and fluorescent clothing and/or safety helmet visible from above.

The deck of a bunker barge comprises two areas:

- a safe area,
- a risk area.

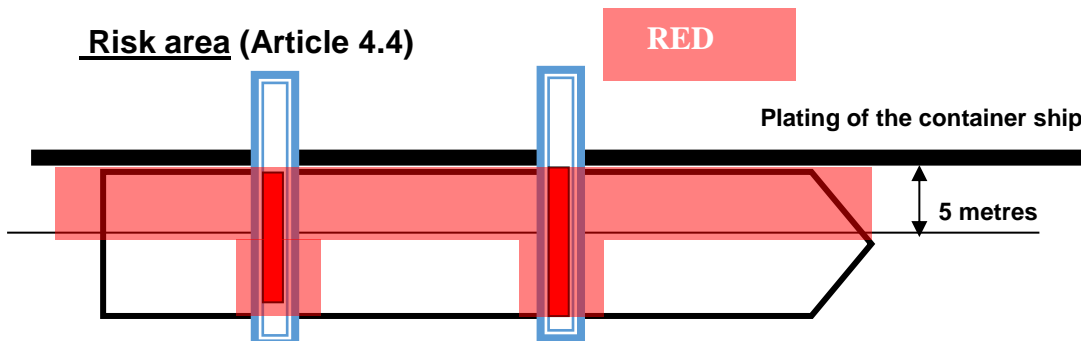
**Safe area (Article 4.3)**



- not under a working crane and
- is located at least five metres from the plating of the container ship and/or
- at the location of the accommodation of the container ship.

Because the cargo on container ships is constantly getting higher, the intensity of falling objects is such that an accommodation on board does not necessarily offer enough protection against twist locks and lashing bars.

**Risk area (Article 4.4)**



The area within five metres of the plating of the container ship without a container crane above it and/or the area in which a container crane is active.

The area located under a working crane is a risk area in which being close to the working crane must be avoided. The distance of 5 metres is often insufficient.

For various reasons, a container may inadvertently fall on the bunker ship and, despite great care, this risk cannot be reduced to "0". There are basically three reasons why containers can fall from the ship.

- A twist lock is still attached because the lashers failed to notice it or because it has been placed incorrectly in the port of origin and is tightened even more rather than loosened. This cannot clearly be observed when using the cradle system.
- A container in the outer row is half positioned on a hatch and half on an upright. When unloading another container, the hatch is lifted, as a result of which the outer container may fall overboard.
- A crane operator can, by lowering the crane too low above the ship, overturn containers and, possibly, push them overboard. The problem in such a case, however, often originates on shore.

### Using the cradle system



The cradle system is used to release the upper two layers of containers on deck. Depending on how high the containers are stacked, this will require several cradle movements, especially with the advent of large ships. On the lower and middle platform are the lasher (one per container layer), on the middle platform also the deck radio operator.

The deck radio operator gives the crane operator instructions

The cradle is used from the inside (shore side) to the outside.

For connecting the discharge hose of the bunker barge to the bunker manifold of the container ship, a bunker boom is used for most deliveries. The crew of the bunker barge ensures that this bunker boom cannot come into contact with the cradle of the lashers. The cradle will be suspended on the outside of the ship when the container crane is manoeuvred to the next bay. This may result in a lack of space near the ship's accommodation if one or more bunker booms are connected to the ship. As a result, it may not be possible to correctly operate the cradle, and the containers on deck cannot be unloaded. If necessary, the work regarding the connection of the discharge hose is stopped until the cradle is no longer used on the bay in question.



*In practice, it is possible that during the use of the cradle near the connection point for the bunker boom, the cradle and the bunker boom can make contact. This risk is shown in the photographs above.*

Since in most cases, the connections of the bunker manifold are at the level of the superstructure of the sea-going vessel, especially the bay immediately before and/or behind the superstructure deserves the attention if the lashers carry out their work here.

#### **Mooring or unmooring (Article 4.6)**

Article 4.6 provides an instruction to the crew member of the bunker barge on how to act during mooring and unmooring. This does not detract from the fact that the attention of the lashing team can also be drawn via the ship's horn, a spotlight or calling, with the same effect, namely: the suspension of the risky activity for the crew of the mooring bunker barge.

#### **Article 5**

Article 5 addresses the responsibility of the container terminal. They provide a service by allowing bunkering from the water to take place simultaneously with the loading and unloading operation. The terminal actively communicates with the bunker vessel about the form completed by the captain of the bunker vessel (see Article 4.1 and Appendix 4 of the bunkering protocol) and the planning of the loading and unloading activities.

Any deviations from the previously communicated planning are communicated by telephone to the captain of the bunker vessel. During the cradle operations, during which the cradle may be positioned in the area of the bunker boom of the bunker barge, the responsible person on deck of the sea-going vessel may ask the bunker barge not to operate the bunker boom if the cradle is at the location of last three rows of containers and, if necessary, when the cradle must be moved outboard to a new bay.

## **Article 6**

The crew and shipping agents of the container ship are the ones who benefit most from having the bunkering and loading and unloading take place simultaneously. Because the communication between terminal and bunker crew is important, the shipping company and/or agent will share the bunker planning before the container ship arrives at the terminal. Before the start of the bunkering, the crew of the container ship checks whether the bunker barge has registered at the terminal and that coordination has also taken place regarding positioning, work areas and times.

## **Article 7 Provision of information**

Pre-notification:

A pre-notification is preferably sent by e-mail by the skipper/captain of the bunker barge to the terminal where the container ship will be berthed. The terminal records the internal reporting of this pre-notification in the corresponding internal procedures.

Article 7.1 refers to informing each other of incidents.

The risk-causing party must be made aware of the fact that something has actually landed on the bunker barge. This will allow the lashing company to take immediate action to recover the fallen material, evaluate the damage and take measures.

Article 7.2 designates Deltalinqs as an organisation that must be informed of any incidents as soon as possible. "As soon as possible" does not mean "within 24 or 72 hours," but shortly after the (damage) reports have been drawn up by the parties. The notification to Deltalinqs can also take place via its own (branch) organisation.

This mainly involves knowing how many incidents have occurred over a certain period. In addition, the provided data can serve to analyse what the most common cause and circumstances are under which incidents occur. Near incidents from which lessons can be learned, but also the indication of points of improvement can be reported to Deltalinqs. The easiest way to inform Deltalinqs is by sending a copy of the (damage) report to:

Deltalinqs, attn. Mr F.P.M. Kasel.  
P.O. Box 54200  
3008 JE ROTTERDAM, THE NETHERLANDS  
E-mail: kasel@deltalinqs.nl

## **Article 9 Evaluation**

Deltalinqs has a coordinating role in the evaluation as referred to in Article 9.