



TECHNICAL CIRCULAR No. 452 of 06th December 2017

To: All Surveyors/Auditors

Applicable to flag: All Flags

General Cargo Ship Inspection 2

Reference: Survey planning, preparation and execution

Survey planning, preparation and execution

4.1 General

4.1.1 The owner should be aware of the scope of the forth coming survey and instruct those responsible, such as the master or the superintendent, to prepare necessary arrangements. If there is any doubt, the Classification Society concerned is to be consulted.

4.1.2 Survey execution will naturally be heavily influenced by the type of survey to be carried out. The scope of survey will have to be determined prior to the execution.

4.1.3 When deemed prudent and/or required by virtue of the periodic classification The surveyor should study the ship's structural arrangements and review the ship's operating and survey history and those of sister ships, where possible, to determine any known potential problem areas particular to the class of the ship. Sketches of typical structural elements should be prepared in advance so that any defects and/or ultrasonic thickness measurements can be recorded rapidly and accurately.

4.2 Conditions for survey

4.2.1 The owner is to provide the necessary facilities for a safe execution of the survey.

4.2.2 Tanks and spaces are to be safe for access, i.e. gas freed (marine chemist certificate), ventilated, etc.

4.2.3 Tanks and spaces are to be sufficiently clean and free from water, scale, dirt, oil residues, etc. and sufficient illumination is to be provided, to reveal corrosion, deformation, fractures, damages or other structural deterioration.

In particular this applies to areas which are subject to thickness measurement.

4.3 Access arrangement and safety

4.3.1 In accordance with the intended survey, measures are to be provided to enable the hull structure to be examined in a safe and practical way.

4.3.2 In accordance with the intended survey in cargo holds and salt water ballast tanks a secure

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and acceptable means of access is to be provided. This can consist of permanent staging, temporary staging or ladders, lifts and movable platforms, or other equivalent means.

4.3.3 In addition, attention should be given to the following guidance:

- (a) Prior to entering tanks and other enclosed spaces, e.g. chain lockers, void spaces, it is necessary to ensure that the oxygen content is to be tested and confirmed as safe. A responsible member of the crew should remain at the entrance to the space and if possible, communication links should be established with both the bridge and engine room. Adequate lighting should be provided in addition to a hand-held torch (flashlight).
- (b) In tanks where the structure has been coated and recently de-ballasted, a thin slippery film may often remain on the surfaces. Care should be taken when inspecting such spaces.
- (c) The removal of scale can be extremely difficult. The removal of scale by hammering may cause sheet scale to fall. When using a chipping or scaling hammer care should be taken to protect eyes, and where possible safety glasses should be worn.
If the structure is heavily scaled, then it may be necessary to request descaling before conducting a satisfactory visual examination.
- (d) Owners or their representatives have been known to request that a survey be carried out from the top of the cargo during discharging operations. For safety reason, surveys must not to be carried out during discharging operations in the hold.
- (e) When entering a cargo hold or tank the bulkhead vertical ladders should be examined prior to descending to ensure that they are in good condition and rungs are not missing or loose. If holds are being entered when the hatch covers are in the closed position, then adequate lighting should be arranged in the holds. One person at a time should descend or ascend the ladder.
- (f) If a portable ladder is used for survey purposes, the ladder should be in good condition and fitted with adjustable feet, to prevent it from slipping. Two crewmembers should be in attendance in order that the base of the ladder is adequately supported during use. The remains of cargo, in particular fine dust, on the tank top should be brushed away as this can increase the possibility of the ladder feet slipping.
- (g) If an extending/articulated ladder (frame walk) is used to enable the examination of upper portions of cargo structure, the ladder should incorporate a hydraulic locking system and a built in safety harness. Regular maintenance and inspection of the ladder should be confirmed prior to its use.
- (h) If a hydraulic arm vehicle ("Cherry Picker") is used to enable the examination of the upper parts of the cargo hold structure, the vehicle should be operated by qualified personnel and there should be evidence that the vehicle has been properly maintained. The standing platform should be fitted with a safety harness. For those vehicles equipped with a self-leveling platform, care should be taken that the locking device is engaged after completion of maneuvering to ensure that the platform is fixed.
- (i) Staging is the most common means of access provided especially where repairs or renewals are being carried out. It should always be correctly supported and fitted with handrails. Planks should be free from splits and lashed down. Staging erected hastily by inexperienced personnel should be avoided.
- (j) In double bottom tanks there will often be a buildup of mud on the bottom of the tank and this should be removed, in particular in way of tank boundaries, suction and sounding pipes, to enable a clear assessment of the structural condition.

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REFERENCES:

- **CONARINA class**

ATTACHMENTS: No.

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