IACS

Recommendation 83

(August 2003)

Notes to Annexes to IACS Unified Requirement S1A on Guidance for Loading/Unloading Sequences for Bulk Carriers.

Introduction

1   To be of practical use to the ship's officers, any acceptable loading or unloading sequence must, in addition to meeting strength and stability requirements, satisfy operational and commercial requirements as far as possible. Therefore, the following notes have been developed by the Nautical Institute, in association with IACS, Intercargo, BIMCO and the International Bulk Terminals Association. It is recommended that they be taken into account when compiling the typical loading and unloading sequences described in the Annexes to the IACS Unified Requirement.

Loading

2   Deballasting can present difficulties.   The process should always be started and finished as early as possible in the loading process and should be planned to proceed in the most favourable circumstances.

3   The easiest ballast tanks to drain should be left until last in the deballasting sequence. In order to take into account the effects of draft, heel and trim and the characteristics of the tanks, the preferred deballasting sequence (subject to the strength requirements of the individual ship) is:

   1: ballast holds, 2: double bottoms, 3: topside tanks, 4: peak tanks.

4   A good stern trim should be maintained as far as possible throughout deballasting and final stripping of ballast.

5   The ship should never be allowed to go "by the head" during deballasting, as the ballast suctions and sounding pipes of most bulk carriers are not designed to cope with this eventuality.

6   Departure draft, when laden, is usually even keel or close thereto.   As this trim does not favour the stripping of ballast tanks it should be reached as late as possible in the loading process (See Item 2, above).

7   When loading a homogeneous cargo, one draft survey only will normally be required to interrupt the loading. The purpose of this draft survey, made after some 85-95% of the cargo has been loaded, is to make an accurate calculation of the tonnage remaining to be loaded and to calculate how it is to be distributed between a forward and an after hold, to achieve the desired final trim.   Operational factors will influence which specific forward and after holds are used for the trimming.

8   Draft surveys will normally also be made before commencement and after completion of loading but these surveys need not be included in the loading sequence. If several grades of cargo are loaded it may be necessary to hold a draft survey before commencement and after completion of each grade and, in addition when 85-95% of the grade has been loaded, if the ship is to control the tonnage loaded.

9   If the ship has a ballast hold or ballast holds loading of those holds should be programmed as late as possible in the loading sequence to allow the maximum time for deballasting, cleaning, drying, opening the bilges and closing ballast lines.

Unloading

10   A trim by the stern is easily achieved and is to be preferred throughout unloading to avoid disruption to the ship's machinery and domestic services. Airdraft and strength requirements both usually require that the trim by the stern should not be excessive.

11   Holds which are to be ballasted for the ensuing voyage, or to reduce airdraft whilst unloading, should be the first to be completely unloaded, to allow maximum time for cleaning holds, closing bilges and opening ballast lines.

12   When a full homogeneous cargo is being unloaded, there is no need for a draft survey to interrupt the unloading at any stage, although draft surveys may be required before the start and at the completion of unloading.

13   Unlike deballasting (see above), the tank sequence is not critical when taking on ballast as it is not significantly affected by heel or trim. The sequence will be governed by strength and airdraft considerations and possibly by the desire to avoid taking sediment-laden ballast in double bottom tanks from which the sediment will be most difficult to remove.

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