

## Z3 Periodical Survey of the Outside of the Ship's Bottom and Related Items

(1984)

(Rev.1

1996)

(Rev.2

Aug 2002)

(Corr.1

Feb 2004)

(Rev.3

Aug 2004)

(Rev.4

Oct 2006)

(Rev.5

Apr 2011)

(Rev.6

Dec 2013)

(Rev.7

Jan 2018)

(Rev.8Apr 2019)

### Z3.1 General

Z3.1.1 The Owner is to notify the Classification Society whenever the outside of the ship's bottom and related items can be examined in drydock or on a slipway.

Z3.1.2 There is to be a minimum of two examinations of the outside of the ship's bottom and related items during each five-year special survey<sup>1</sup> period. One such examination is to be carried out in conjunction with the special survey. In all cases the interval between any two such examinations is not to exceed 36 months. An extension of examination of the ship's bottom of 3 months beyond the due date can be granted in exceptional circumstances<sup>2</sup>.

Z3.1.3 Examinations of the outside of the ship's bottom and related items of ships is normally to be carried out with the ship in drydock. However, consideration may be given to alternate examination while the ship is afloat as an In-water Survey, subject to provisions of Z3.3. Special consideration is to be given to ships of 15 years or over before being permitted to have such examinations. For ESP ships of 15 years of age and over, such examinations are to be carried out with the ship in drydock.

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#### Footnotes:

- 1) Some Member Societies use the term "Special Periodical Survey" others use the term "Class Renewal Survey" instead of the term "Special Survey".
- 2) 'Exceptional circumstances' means unavailability of dry-docking facilities; unavailability of repair facilities; unavailability of essential materials, equipment or spare parts; or delays incurred by action taken to avoid severe weather conditions.

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#### Notes:

1. IACS agreed for uniform implementation date of Rev.1 1996 from 1 July 1996.
2. Changes introduced in Rev.2 are to be uniformly implemented by IACS Members and Associates from 1 July 2003.
3. Changes introduced in Rev.3 are to be uniformly implemented from 1 July 2005.
4. Changes introduced in Rev.4 are to be uniformly implemented from 1 Jan 2008.
5. Changes introduced in Rev.5 are to be uniformly implemented from 1 Jan 2012.
6. Changes introduced in Rev.6 are to be uniformly implemented from 1 July 2014.
7. Changes introduced in Rev.7 are to be uniformly implemented from 1 January 2019.
8. Changes introduced in Rev.8 are to be uniformly implemented from 1 July 2020.

## Z3 (cont)

Z3.1.4 The interval between examinations of the outside of the ship's bottom and related items for ships operating in fresh water and for certain harbour or non-self-propelled craft may be greater than that given in Z3.1.2.

Z3.1.5 Compliance with UR Z3 does not absolve the Owner from compliance with the requirements of SOLAS as amended, especially when shorter intervals between examination of the ship's bottom for certain types of ship are required.

Z3.1.6 For Oil Tankers, Combination Carriers, Bulk Carriers, Chemical Tankers, Double Hull Oil Tankers, Double Side Skin Bulk Carriers and General Dry Cargo Ships and Liquefied Gas Carriers, reference is also to be made to Z10.1, Z10.2, Z10.3, Z10.4, Z10.5 and Z7.1 and Z7.2 as applicable.

### Z3.2 Scope of the survey

Z3.2.1 When a ship is in drydock or on a slipway, it is to be placed on blocks of sufficient height and with the necessary staging to permit the examination of elements such as shell plating including bottom and bow plating, stern frame and rudder, sea chests and valves, propeller, etc.

Z3.2.2 The shell plating is to be examined for excessive corrosion, or deterioration due to chafing or contact with the ground and for any undue unfairness or buckling. Special attention is to be paid to the connection between the bilge strakes and the bilge keels. Important plate unfairness or other deterioration which do not necessitate immediate repairs are to be recorded.

Z3.2.3 Sea chests and their gratings, sea connections and overboard discharge valves and cocks and their fastenings to the hull or sea chests are to be examined. Valves and cocks need not be opened up more than once in a special survey period unless considered necessary by the Surveyor.

Z3.2.4 Visible parts of rudder, rudder pintles, rudder shafts and couplings and stern frame are to be examined. If considered necessary by the Surveyor, the rudder is to be lifted or the inspection plates removed for the examination of pintles. The clearance in the rudder bearings is to be ascertained and recorded. Where applicable, pressure test of the rudder may be required as deemed necessary by the surveyor.

Z3.2.5 Visible parts of propeller and stern bush, are to be examined. The clearance in the stern bush and the efficiency of the oil gland, if fitted, are to be ascertained and recorded. For controllable pitch propellers, the Surveyor is to be satisfied with the fastenings and tightness of hub and blade sealing. Dismantling need not be carried out unless considered necessary by the Surveyor.

Z3.2.6 Visible parts of side thrusters are to be examined. Other propulsion systems which also have manoeuvring characteristics (such as directional propellers, vertical axis propellers, water jet units) are to be examined externally with focus on the condition of gear housing, propeller blades, bolt locking and other fastening arrangements. Sealing arrangement of propeller blades, propeller shaft and steering column shall be verified.

NOTE: For the survey of propeller shafts, refer to Requirement UR Z21.

Z3.2.7 Special consideration may be given in application of relevant sections of this Unified Requirement to commercial vessels owned or chartered by Governments, which are utilized in support of military operations or service.

**Z3**  
(cont)**Z3.3 In-Water Surveys**

Z3.3.1 The In-water Survey is to provide the information normally obtained from a docking survey. Special consideration shall be given to ascertaining rudder bearing clearances and stern bush clearances of oil stern bearings based on a review of the operating history, on board testing and stern oil sample reports. These considerations are to be included in the proposals for in-water survey which are to be submitted in advance of the survey so that satisfactory arrangements can be agreed with the Classification Society.

Z3.3.2 The In-water Survey is to be carried out with the ship in sheltered water and preferably with weak tidal streams and currents. The in-water visibility and the cleanliness of the hull below the waterline is to be clear enough to permit a meaningful examination which allows the surveyor and the in-water survey firm to determine the condition of the plating, appendages and the welding. The Classification Society is to be satisfied with the methods of orientation of the divers or Remotely Operated Vehicle (ROV) on the plating, which should make use where necessary of permanent markings on the plating at selected points.

Z3.3.3 The equipment, procedure for observing and reporting the survey are to be discussed with the parties involved prior to the In-water Survey, and suitable time is to be allowed to permit the in-water survey firm to test all equipment beforehand.

Z3.3.4 The In-water Survey is to be carried out under the surveillance of a surveyor by an in-water survey firm approved as a service supplier according to UR Z17.

Z3.3.5 The Surveyor is to be satisfied with the method of pictorial representation, and a good two-way communication between the Surveyor and divers is to be provided.

Z3.3.6 If the In-water Survey reveals damage or deterioration that requires early attention, the Surveyor may require that the ship be drydocked in order that a detailed survey can be undertaken and the necessary repairs carried out.

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