

General Examination of Expansion Joints

Object of Amendment

Guidance for the Survey and Construction of Steel Ships Part B
Guidance for High Speed Craft

Reason for Amendment

The IMO adopted its “Survey Guidelines under the Harmonized System of Survey and Certification” (hereinafter referred to as “this Guideline”) so as to specify detailed requirements related to periodical surveys carried out to confirm that ships in service have satisfied the structural and arrangement requirements mandated by international conventions and the like. In response, IACS adopted Unified Requirement (UR) Z1 which makes reference to and clarifies certain survey items in this Guideline that are considered necessary for ship classification requirements. These requirements have already been incorporated into the NK Rules.

At the 33rd Session of the IMO Assembly (December 2023), an amendment to this Guideline was adopted as IMO resolution A.1186(33) to meet the requirements for the latest international conventions and the like. In response, IACS reviewed UR Z1 and subsequently adopted a revision of it as UR Z1(Rev.10) in September 2024.

Accordingly, requirements related to the survey of expansion joints are amended based on UR Z1(Rev.10).

Outline of the Amendment

- (1) Changes the general examination required for expansion joints during an Annual Survey from “expansion joints in seawater systems” to “non-metallic expansion joints in piping systems” for “cases where penetrations and non-metallic expansion joints are located below the deepest load waterline”.
- (2) Adds confirmation of service records related to such expansion joints as a survey item.

Effective Date and Application

This amendment applies to periodical surveys for which the application is submitted to the Society on or after 1 January 2026.

ID:DD25-18

Amended-Original Requirements Comparison Table (General Examination of Expansion Joints)

| Amended | Original | Remarks |
|---|---|---------|
| <p align="center">GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS</p> <p align="center">Part B CLASS SURVEYS</p> <p align="center">B3 ANNUAL SURVEYS</p> <p>B3.3 Annual Surveys for Machinery</p> <p>B3.3.1 General Examinations (-1 to -4 are omitted.)</p> <p>5 In applying 3.3.1-1(1), Part B of the Rules, the following to (1) to (9) are also to be applied.</p> <ol style="list-style-type: none"> (1) It is to be confirmed that the normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative. (2) The means for the operation of the main and auxiliary machinery essential for the propulsion and the safety of the ship are to be examined. (3) The arrangements to operate the main and other machinery from a machinery control room are to be examined. (4) It is to be confirmed that the machinery, boilers and other pressure vessels, associated piping systems and fittings are installed and protected so as to reduce to a minimum any danger to persons on board, due regard being given to moving parts, hot surfaces and other hazards. | <p align="center">GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS</p> <p align="center">Part B CLASS SURVEYS</p> <p align="center">B3 ANNUAL SURVEYS</p> <p>B3.3 Annual Surveys for Machinery</p> <p>B3.3.1 General Examinations (-1 to -4 are omitted.)</p> <p>5 In applying 3.3.1-1(1), Part B of the Rules, the following to (1) to (9) are also to be applied.</p> <ol style="list-style-type: none"> (1) It is to be confirmed that the normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative. (2) The means for the operation of the main and auxiliary machinery essential for the propulsion and the safety of the ship are to be examined. (3) The arrangements to operate the main and other machinery from a machinery control room are to be examined. (4) It is to be confirmed that the machinery, boilers and other pressure vessels, associated piping systems and fittings are installed and protected so as to reduce to a minimum any danger to persons on board, due regard being given to moving parts, hot surfaces and other hazards. | |

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| <p>(5) It is to be confirmed that means are provided so that the machinery can be brought into operation from the dead ship condition without external aid.</p> <p>(6) The electrical installations, including the main source of power and the lighting systems are, as far as practicable, to be examined visually and in operation.</p> <p>(7) It is to be examined that the precautions provided against shock, fire and other hazards of electrical origin are being maintained.</p> <p>(8) The condition of <u>all the non-metallic</u> expansion joints in <u>piping</u> systems <u>penetrating ship's side for cases where penetrations and these joints are located below the deepest load waterline is</u> to be visually examined <u>and the relevant service record is to be checked.</u></p> <p>(9) Arrangements for remote closing of valves for fuel oil tanks, lubricating oil tanks and other flammable oil tanks are to be examined.</p> | <p>(5) It is to be confirmed that means are provided so that the machinery can be brought into operation from the dead ship condition without external aid.</p> <p>(6) The electrical installations, including the main source of power and the lighting systems are, as far as practicable, to be examined visually and in operation.</p> <p>(7) It is to be examined that the precautions provided against shock, fire and other hazards of electrical origin are being maintained.</p> <p>(8) The condition of <u>any</u> expansion joints in <u>seawater</u> systems are to be visually examined.</p> <p>(9) Arrangements for remote closing of valves for fuel oil tanks, lubricating oil tanks and other flammable oil tanks are to be examined.</p> | <p>UR Z1 (Rev.10) 2.3 (2.2.2.32, Annex I of IMO A.1186(33)) In addition, based on Regulation II-1/26.9, of SOLAS, it was clarified that the application is limited to piping that penetrates the shell of the ship and that the penetration and non-metallic joints are located below the deepest load waterline.</p> |

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| <p align="center">GUIDANCE FOR HIGH SPEED CRAFT</p> <p align="center">Part 2 CLASS SURVEYS</p> <p align="center">Chapter 3 PERIODICAL SURVEYS AND PLANNED MACHINERY SURVEYS</p> <p>3.6 Annual Surveys for Machinery</p> <p>3.6.1 Requirements for Annual Surveys (-1 and -2 are omitted.)</p> <p>3 In applying 3.6.1(1), Part 2 of the Rules, the following (1) to (8) are also to be applied.</p> <ol style="list-style-type: none"> (1) It is to be confirmed that the normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative. (2) The means for the operation of the main and auxiliary machinery essential for the propulsion and the safety of the ship are to be examined. (3) The arrangements to operate the main and other machinery from a machinery control room are to be examined. (4) It is to be confirmed that the machinery, boilers and other pressure vessels, associated piping systems and fittings are installed and protected so as to reduce to a minimum any danger to persons on board, due regard being given to moving parts, hot surfaces and other hazards. | <p align="center">GUIDANCE FOR HIGH SPEED CRAFT</p> <p align="center">Part 2 CLASS SURVEYS</p> <p align="center">Chapter 3 PERIODICAL SURVEYS AND PLANNED MACHINERY SURVEYS</p> <p>3.6 Annual Surveys for Machinery</p> <p>3.6.1 Requirements for Annual Surveys (-1 and -2 are omitted.)</p> <p>3 In applying 3.6.1(1), Part 2 of the Rules, the following (1) to (8) are also to be applied.</p> <ol style="list-style-type: none"> (1) It is to be confirmed that the normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative. (2) The means for the operation of the main and auxiliary machinery essential for the propulsion and the safety of the ship are to be examined. (3) The arrangements to operate the main and other machinery from a machinery control room are to be examined. (4) It is to be confirmed that the machinery, boilers and other pressure vessels, associated piping systems and fittings are installed and protected so as to reduce to a minimum any danger to persons on board, due regard being given to moving parts, hot surfaces and other hazards. | |

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| EFFECTIVE DATE AND APPLICATION | | |
| <p>1. The effective date of the amendments is 1 January 2026.</p> <p>2. Notwithstanding the amendments, the current requirements apply to the surveys for which the application is submitted to the Society before the effective date.</p> | | |