



GUIDE FOR THE CLASS NOTATION

UNDERWATER INSPECTION IN LIEU OF DRYDOCKING (UWILD)

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Foreword

This Guide aims to consolidate the classification requirements, currently specified in Appendix 7-A-1 of the *ABS Rules for Survey After Construction (Part 7)* for the optional class notation (**UWILD**) in response to the industry and market demands.

This consolidated *Guide for the Class Notation Underwater Inspection In Lieu of Drydocking Survey (UWILD)* is prepared for the user's convenience, but intends to change the current applicable requirements as specified in Appendix 7-A-1 of the *ABS Rules for Survey After Construction (Part 7)*. In order to improve the usefulness as a Guide, some reorganization of the text and additional information are provided.



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SECTION 1 Introduction

1 Scope and Application

A request for Underwater Inspection may be accepted as an alternative to Drydocking Inspection provided that all arrangements and equipment meet the requirements specified in this Guide.

For vessels 15 years of age or over and subject to the Enhanced Survey Program (ESP), Underwater Inspections in Lieu of Drydocking (UWILD) are not permitted as an alternate Drydocking Surveys.

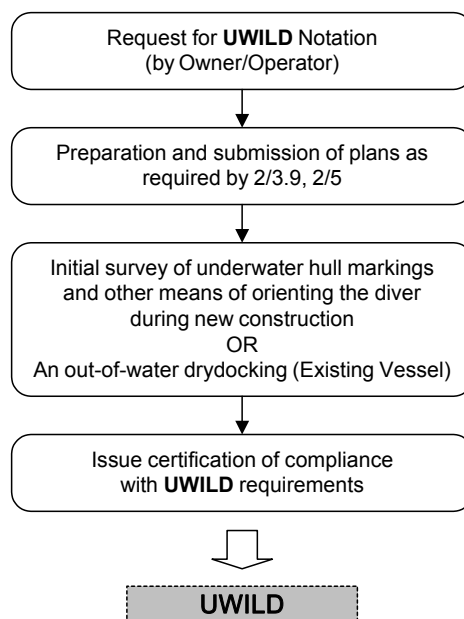
3 Approval Procedure

An ABS optional notation, **UWILD**, for Underwater Inspection in Lieu of Drydocking, is to be assigned to a vessel in full compliance with the requirements as specified in this Guide. The entire procedure for assignment of the **UWILD** notation is shown in Section 1, Figure 1.

5 Governmental Regulations

The requirements specified in this Guide are for classification only. Flag Administrations may have specific regulations for Underwater Surveys in Lieu of Drydocking, including requirements for enrollment, hull markings, extent of visibility and procedures for older vessels.

FIGURE 1
Approval Procedures for UWILD Class Notation





SECTION 2 Conditions and Procedures

1 General

At the request of the Owner, the Bureau may consider Underwater Inspection in Lieu of Drydocking Survey provided all arrangements and conditions meet the requirements of the Guide.

All requests for Underwater Inspection in Lieu of Drydocking Survey are to be forwarded to the applicable ABS Divisional Assistant Chief Surveyor's Office for review and authorization.

Underwater inspection is to be carried out by a qualified diver under the surveillance of the attending Surveyor. The diver is to be employed by a firm approved by the Bureau as a service supplier.

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.

If the Underwater Inspection reveals damage or deterioration that requires further attention, the Surveyor may require that the vessel be drydocked in order to undertake a detailed survey and necessary repairs.

The extent of the underwater inspection is to be sufficient to include all items which would normally be examined if the vessel was on drydock, some of which are listed in 2/7.3.

The following Subsections describe the conditions and procedures under which a properly conducted underwater inspection may be credited as an alternative of Drydocking Survey.

3 Conditions

3.1 Limitations

- i) *Non-ESP* vessels 15 years of age or over applying to maintain their **UWILD** notation are subject to special consideration based on the following review and examination before being permitted to have underwater inspection:
 - Review of vessel's records to ensure that no unusual repairs have been required/made
 - Internal examination of representative tanks and cargo holds
- ii) Underwater Inspection In Lieu of Drydocking Survey (UWILD) may be restricted or limited where there is record or indication of abnormal deterioration, existing recommendation, or damage to underwater body, rudder, or propeller.

3.3 Existing Outstanding Recommendations

UWILD may not be applicable if there are outstanding recommendations for repairs to propeller, rudder, stern frame, underwater structure, or sea valves. It may also be inapplicable if damage affecting the fitness of the vessel is found during the course of the survey.

3.5 Thickness Measurements and Nondestructive Testing

Underwater or internal thickness measurements of suspect areas may be required in conjunction with the underwater inspection. Means for underwater nondestructive testing may also be required for fracture detection.

Note Thickness measurements of the hull underwater body, as required for Special Periodical Survey, are to be taken at drydock in conjunction with visual inspection of the bottom plating by the Surveyor.

3.7 Tailshaft Surveys

Tailshaft Surveys are not covered by this Guide and are to be dealt with in accordance with Chapter 5 of the *ABS Rules for Survey After Construction (Part 7)* and other applicable Rules.

3.9 Plans and Data

Plans showing the following items are to be submitted to the attending Surveyor, together with the proposed inspection procedures for review, well in advance of the inspection.

- i)* Location of bottom shell seams and butts (Shell Expansion), including any doublers, straps, bottom plugs, appendages and all underwater openings.
- ii)* Hull markings or other means to orient the diver and identifying photographs, which entail specific areas of plating, (e.g., locations of bulkheads or tanks) sea suction and discharge openings, propeller blades and rudder surfaces. Such preparations may include a weld bead grid system on the hull, a contrasting color coating system, a movable grid, an acoustic locating system, or any other arrangement that is satisfactory to the Surveyor.
- iii)* Reference data and instructions to the diver for any necessary underwater operations such as means of access to sea chests to inspect the external side of hull connections and sea valves, to rudder bearings to determine clearances of rudder bearings or to propeller shaft strut and stern bearings.
- vi)* Most recent gaugings and gauging report from last Special Periodical Survey and the as-built scantlings for the underwater body.

3.11 Underwater Conditions

- i)* The vessel's underwater body is to be sufficiently clean and the sea water is clear enough to permit meaningful examination and photography by the diver. "Sufficiently clean" is taken to mean that sections of the underwater body, including flat keel plating forward, amidships and aft, are cleaned to the extent that the Surveyor can determine the condition of the plating, the welding and the coating. Additional cleaning may be necessary. Overall or spot cleaning may be required at the discretion of the attending Surveyor.
- ii)* Where possible, the underwater examination should be carried out in protected waters, preferably with weak tidal streams and currents and with the vessel at light draft.

5 Physical Features

The following physical features are to be incorporated into the vessel's design in order to facilitate the underwater inspection. When verified, they are to be noted in the vessel's records for reference at subsequent surveys.

5.1 Stern Bearing

- i)* Means are to be provided to ascertain that the seal assembly remains intact on oil-lubricated bearings and to verify that the clearance or wear-down is within limits on the stern bearing
- ii)* For oil-lubricated bearings, this may require the review of operating history and onboard testing including accurate oil-loss records and a check of the oil for contamination by sea water or white metal and/or oil sample reports (considerations are to be included in the proposals for UWILD). For wood or rubber bearings, an opening in the top of the rope guard and a suitable gauge or wedge is sufficient for checking the clearance.
- iii)* Any doubt on wear-down of oil-lubricated metal stern bearings from above is to be further checked by external measurements or by the vessel's wear-down gauge, where the gauge wells are located outboard of the seals or the vessel can be tipped. For use of the wear-down gauges, up-to-date records of the base depths are to be maintained onboard the vessel. Whenever the stainless steel seal sleeve is renewed or machined, the base readings for the wear-down gauge are to be re-established and noted in the vessel's records and in the survey report.

5.3 Rudder Bearings

Means and access are to be provided to determine the condition and clearance of the rudder bearings, and verify that all parts of the pintle and gudgeon assemblies are intact and secure. This may require bolted access plates and a measuring arrangement.

Where it is deemed impractical, clearance verification on the rudder pintle may be dispensed with if the attending Surveyor is satisfied with the physical condition and securing arrangements of the pintle, the operating history and the onboard testing. These considerations are to be included in the proposals for UWILD.

5.5 Sea Suctions

Means are to be provided to enable the diver to confirm that the sea suction openings are clear. Hinged sea suction grids may be used to facilitate this operation.

5.7 Sea Valves

Sea valves and their attachment to sea chests are to be examined externally, including expansion pieces in sea water cooling and circulating systems.

7 Procedures

7.1 Exposed Areas

An examination of the outside of the shell plating above the waterline and exposed portions of appendages (such as propeller, rudder and rudder bearings) is to be carried out by the attending Surveyor. Means are to be provided to enable the Surveyor to accomplish this visual inspection.

7.3 Underwater Areas

An examination of the entire vessel below the waterline is to be carried out by an ABS-approved diver using closed-circuit television with two-way communication. The progress of the dive is to be monitored by the onboard Surveyor as required, or is to be photographically documented, or both, depending on the age and type of vessel. Items that must be recorded on the tape/photograph include but are not limited to:

- i)* Time at which dive commences
- ii)* Point of commencement

- iii)* Time viewed
- iv)* Conditions of hull markings
- v)* Random areas of plating
- vi)* All sea chests
- vii)* All inlets and discharges
- viii)* Rudder
- ix)* Pintles
- x)* Propeller
- xi)* Time and point of completion of the dive;

The above examination is to be supplemented by the diver's report describing and attesting to the conditions found. A copy of this report and pertinent photographs are to be submitted to the attending Surveyor. Copies are also to be retained onboard.

7.5 Damage Areas

Damage and corrosion areas are to be taped/photographed. Internal examination or thickness gauging of such locations may be necessary, as determined by the attending Surveyor. Means are to be provided for orienting and identifying underwater surfaces in photographs, as noted in 2/3.9ii).

7.7 Planning

The equipment and procedure for observing and reporting the survey are to be discussed with the parties involved prior to the UWILD, and suitable time is to be allowed to permit the diving company to test all equipment beforehand.

9 Alternatives

The Bureau is prepared to consider alternatives to the above guidelines.

11 Maintenance of UWILD Class Notation

For maintenance of the **UWILD** notation, a vessel's markings and equipment installed for UWILD are to be satisfactorily verified by the attending Surveyor at each Drydocking.