Inspection Checklist

Technical Guide - Ver 1.1

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Contents

Introduction

The purpose of this document is to serve as a comprehensive reference guide to help surveyors accurately complete the Idwal Vessel Inspection Checklist, ensuring detail, consistency and clarity throughout.

Once the checklist has been completed it will be submitted for internal technical review to verify the data provided and ensure that the vessel's condition is reported accurately. The checklist is designed to cover a multitude of key areas and pertinent details so that we can make a complete assessment of the vessel's condition, assign an accurate grade and ultimately produce a high-quality inspection report for the client.

For ease and consistency, Idwal use similar question styles and formats throughout the checklist and this guide is to provide you with some examples of how such questions should be completed. Additionally, guidance will be provided for questions that we often see answered poorly or incorrectly. Each chapter covers the different types of question found in our inspection checklist.

It is highly recommended that this document is reviewed in collaboration with the other Technical Guides in the series, which provides comprehensive commentary regarding what we are looking for in every question asked in our checklist.

Fundamental Principles

Idwal's inspection checklist has been designed to provide you with the framework to conduct a thorough and detailed inspection of any vessel type. The inspection checklist ensures a standardisation across all Idwal inspections which supports the Idwal Grade – an industry recognised metric for benchmarking maritime vessels.

Every question in the inspection checklist is included for a reason. This Technical Guide will explain what the primary question types are, and how to answer them. The Guide will also provide insight into the standard terminology used at Idwal.

Once you submit your inspection checklist, the checklist will pass through our internal software. This will automatically generate condition summaries for the vessel based on the answers you have provided. Successfully completing the inspection checklist requires a full understanding of how this process works. Examples are provided throughout this Technical Guide. Any question that is an open ended sentence should be answered in a way to complete with the sentence, without a capital letter or full stop.

Idwal Terminology

Terminology	Used for	Definition
Good	Condition appraisal	No issues or only minor issues found that do not materially impact any aspect of the vessel operation or impair the safety of the vessel, its machinery, personnel or environment. Minor expected wear and tear is permitted, not requiring correction or repair.
Fair	Condition appraisal	Obvious wear and tear or deficiencies evident that require planned correction or repair.
Poor	Condition appraisal	Significant wear and tear or deficiencies evident that require immediate correction or repair.
None	Corrosion assessment	Plating is largely free of corrosion with very minor and sporadic spots noted, covering less than 2% of the surface area.
Minor	Corrosion assessment	Corrosion covering up to 5% of the surface area.

Terminology	Used for	Definition
Moderate	Corrosion assessment	Corrosion covering 5-15% of the surface area.
High	Corrosion assessment	Corrosion covering more than 15% of the surface area.

Survey Dates

Survey	Date Last Completed	Date Next Due	Survey Due Soon
Main / Special / Renewal	28/01/2024 ☐ Not Applicable	07/03/2028	
Intermediate	☐ Not Applicable	06/06/2026	
Annual	28/01/2024 ☐ Not Applicable	06/06/2025	
Bottom in water	☑ Not Applicable	17/06/2025	
Bottom in dry dock	☐ Not Applicable	07/03/2026	

Key: Red = Due in less than 3 months Amber = Due in less than 6 months Green = Due in over 6 months

Answering this question should be straightforward. The easiest method is it extract the relevant dates from the supplied **Class Status Report** (CSR). Dates can also be taken the **Class certificate** and **Safety Construction certificate.**

In some cases, certain Classification societies Class Status Reports contain incomplete/unclear dates. In which case, there are other methods available to ascertain the dates (e.g. vessel certificates, limited Class access via Equasis etc).

Crew onboard frequently state dates that are different from those documented – in which case the documented dates should always be used. Crew reports should only be included when incomplete documented data is provided.

Where certificates have a period for renewal, select the exact anniversary date. For the example of an extracted Class Status Report below, the Annual renewal date would be 2024-09-17.

VESSEL SURVEYS

Class surveys

Survey description	Code	Last survey	Location	Next survey [from, to]	Status
Main class renewal (Last: Initial)	MC.R	2022-06-17	China South NB	2027-03-17, 2027-06-17	
Main class intermediate (Last: Initial)	MC.In	2022-06-17	China South NB	2024-03-17, 2025-09-17	
Main class annual	MC.A	2023-03-27	FIS Korea	2024-03-17, 2024-09-17	
n/a (replaced by new Hull items survey) (Last: Initial)	HS.Sa				
Machinery items (Last: Initial)	MS.Sa	2022-06-17	China South NB	2027-03-17, 2027-06-17	
Main class hull renewal (Last: Initial)	HR.pl	2022-06-17	China South NB	2027-03-17, 2027-06-17	
Main class hull intermediate	HIn.pl	2022-06-17		2024-03-17, 2025-09-17	
Bottom complete survey (Last: Out Of Water)	BOT.C	2022-06-17	China South NB	2025-06-17	

'Not Applicable' is generally intended for use for newer built vessels which have not yet undergone certain Class surveys (as seen in the example above).

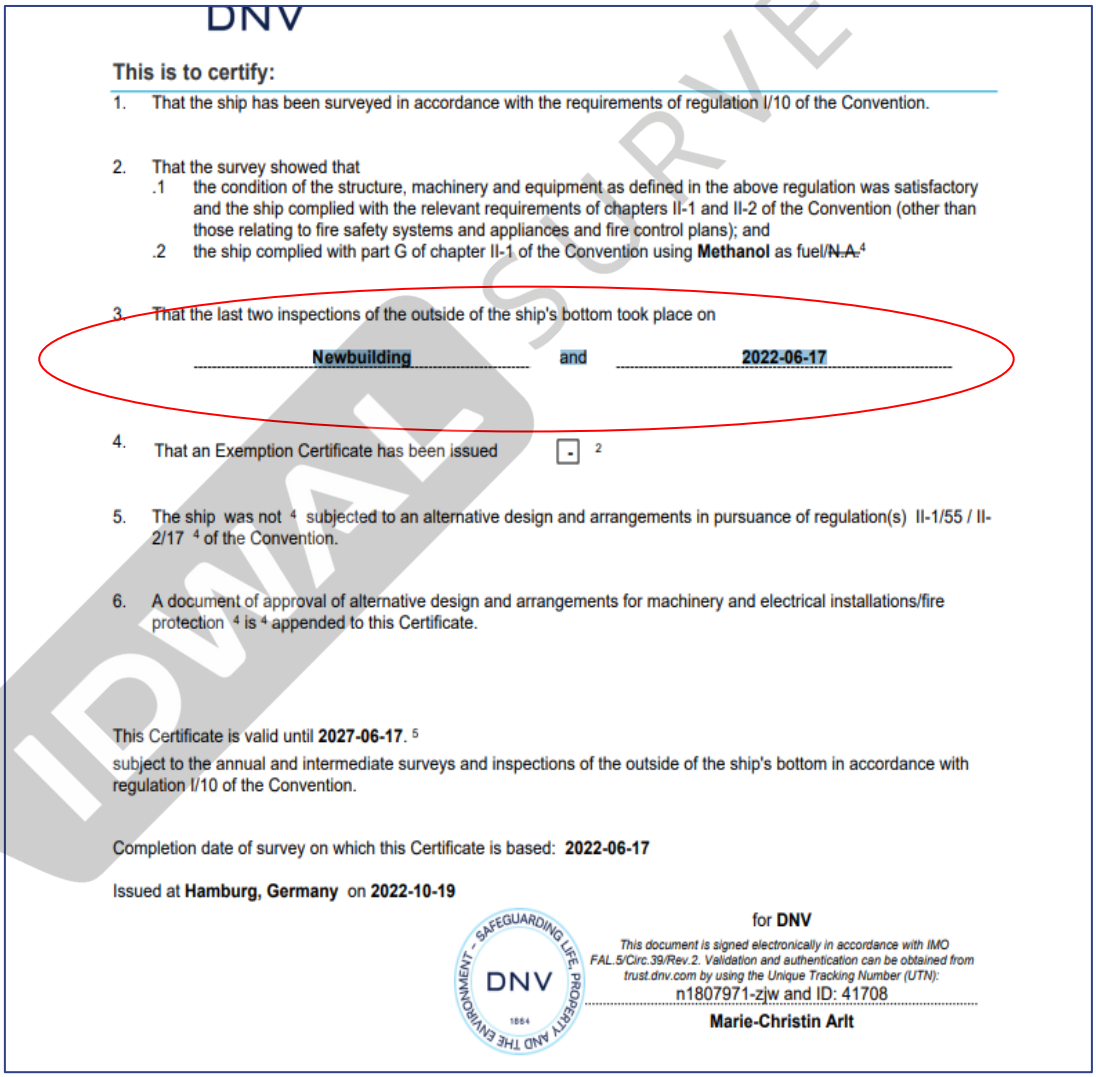
In-Water Survey

Some minor added complexity comes when the vessel has In-Water Survey (IWS) notation. Some Classification societies state whether the last bottom survey was completed in water or out of water, which can clarify this.

Where this is not explicitly stated, we can use the vessel's certificates. The Class certificate shows the date and type of survey completed (normally on the endorsement pages).

The Anti-Fouling Certificate can also be used to ascertain when the last out of water survey was completed (via the date of application). If the date of last application aligns with the last bottom survey date, then this confirms that the bottom survey was done in dry dock and not in water.

Some examples are shown below.



DNV

This is to certify:

1. That the ship has been surveyed in accordance with the requirements of regulation I/10 of the Convention.

2. That the survey showed that
   .1 the condition of the structure, machinery and equipment as defined in the above regulation was satisfactory and the ship complied with the relevant requirements of chapters II-1 and II-2 of the Convention (other than those relating to fire safety systems and appliances and fire control plans); and
   .2 the ship complied with part G of chapter II-1 of the Convention using **Methanol** as fuel/~~N.A.~~[4]

3. That the last two inspections of the outside of the ship's bottom took place on

   Newbuilding and **2022-06-17**

4. That an Exemption Certificate has been issued [-] [2]

5. The ship was not [4] subjected to an alternative design and arrangements in pursuance of regulation(s) II-1/55 / II-2/17 [4] of the Convention.

6. A document of approval of alternative design and arrangements for machinery and electrical installations/fire protection [4] is [4] appended to this Certificate.

This Certificate is valid until **2027-06-17**. [5]
subject to the annual and intermediate surveys and inspections of the outside of the ship's bottom in accordance with regulation I/10 of the Convention.

Completion date of survey on which this Certificate is based: **2022-06-17**

Issued at **Hamburg, Germany** on **2022-10-19**

for **DNV**

This document is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication can be obtained from trust.dnv.com by using the Unique Tracking Number (UTN):
n1807971-zjw and ID: 41708

Marie-Christin Arlt

DNV

Endorsement for annual and intermediate surveys

THIS IS TO CERTIFY:
that, at a survey required by regulation I/10 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Anniversary date is (unless endorsed for advancement, see page 5): **17 Jun** Range: **17 Mar to 17 Sep**

Annual survey: Place: **Daesan, Republic of Korea** Date: **2023-03-27**

Signature: **Dong Ki Kim**

Annual/Intermediate[6] survey: Place: Date:

Signature:

Stamp

Annual/Intermediate[4] survey: Place: Date:

Signature:

Stamp

Annual survey: Place: Date:

Signature:

Stamp

Annual/Intermediate survey in accordance with regulation I/14(h)(iii)

THIS IS TO CERTIFY:
that, at an annual/intermediate[4] survey in accordance with regulation I/14(h)(iii) of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Place: Date:

Signature:

Stamp

DNV

Date of issue: **2022-06-17**

RECORD OF ANTI-FOULING SYSTEMS

Details of Anti-Fouling System(s) applied

Type(s) of Anti-Fouling System(s) used:	**Organotin-free self polishing anti fouling system**
Date(s) of application of Anti-Fouling System(s):	**2022-06-10**
Name(s) of company(ies) and Facility(ies)/location(s) where applied:	**Guangzhou Shipyard Co.,Ltd./Guangzhou PRC**
Name(s) of Anti-Fouling System manufacturer(s):	**PPG Coatings Europe B.V. Protective & Marine Coatings**
Name(s) and colour(s) of Anti-Fouling System(s):	**SIGMA SAILADVANCE GX/Brown, Red-brown**
Active ingredient(s) and their Chemical Abstract Service Registry Number (CAS number(s)):	**Copper(1)oxide (CAS No. 1317-39-1); Zineb (CAS No. 12122-67-7)**
Type(s) of sealer coat, if applicable:	**Not applicable**
Name(s) and colour(s) of sealer coat applied, if applicable:	-
Date of application of sealer coat:	-

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at **Guangzhou, China** on **2022-06-17**

for **DNV**

This document is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication can be obtained from trust.dnv.com by using the Unique Tracking Number (UTN):
n1567255-ccg and ID: 41708

Yun Tao Michael Lu

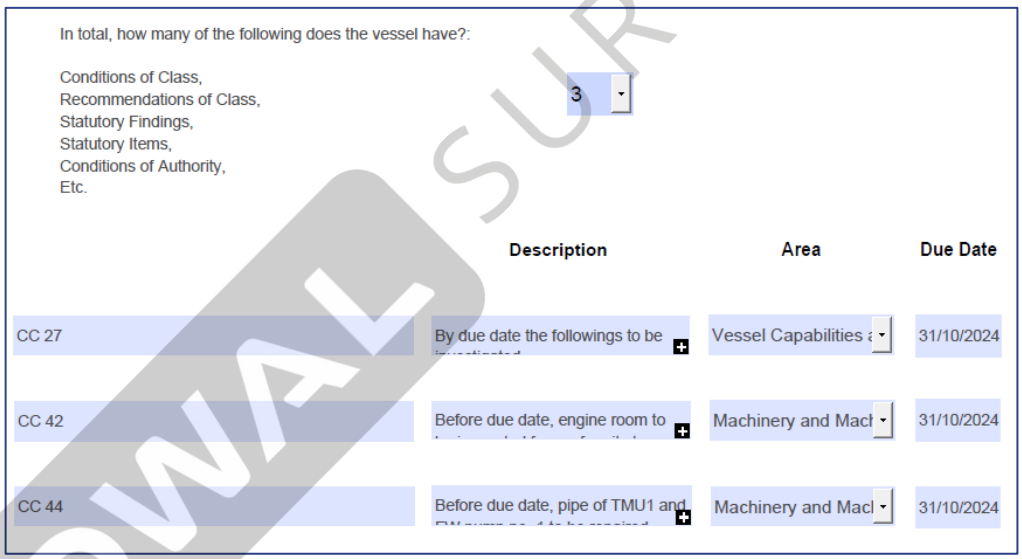
Conditions of Class/ Statutory Findings / Class Memos / Actionable Items etc.

Any Conditions of Class, Statutory Findings/Recommendations should be recorded here, noting that different Classification Societies have different terminology for such.

This data can be found in the supplied Class Status Report. Where no Class Status Report was provided (or the supplied Class Status Report is more than one month old) a comment should be left in the Surveyor Comments box at the end of the section. If no Class Status Report was provided, the question should be answered as '0' (zero).

Sometimes, Equasis 'limited Class access' can be used when the vessel does not provide us with all relevant documentation. If this is used, a comment should be left in the Surveyor Comments box at the end of the section to alert the technical reviewer as to where the information was found.

All relevant information should be replicated in the PDF. Surveyor discretion and experience should be exercised in determining the most relevant grading area. An example of a vessel with 3 Conditions of Class is shown below.

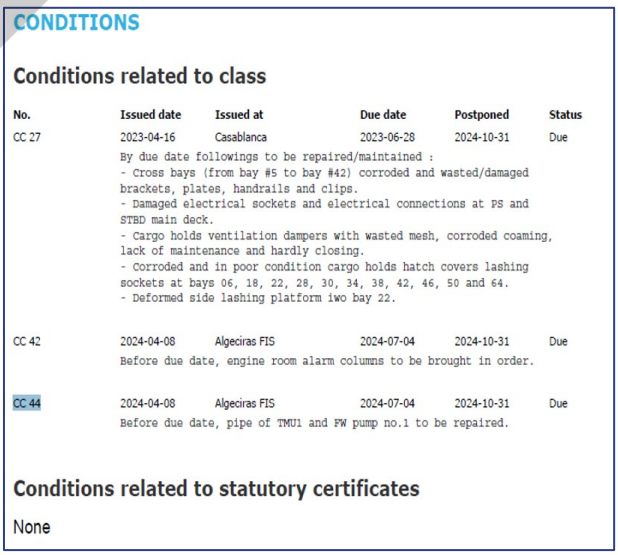


In total, how many of the following does the vessel have?:

Conditions of Class,
Recommendations of Class,
Statutory Findings,
Statutory Items,
Conditions of Authority,
Etc.

3

	Description	Area	Due Date
CC 27	By due date the followings to be	Vessel Capabilities a	31/10/2024
CC 42	Before due date, engine room to	Machinery and Mach	31/10/2024
CC 44	Before due date, pipe of TMU1 and	Machinery and Mach	31/10/2024



CONDITIONS

Conditions related to class

No.	Issued date	Issued at	Due date	Postponed	Status
CC 27	2023-04-16	Casablanca	2023-06-28	2024-10-31	Due
	By due date followings to be repaired/maintained : - Cross bays (from bay #5 to bay #42) corroded and wasted/damaged brackets, plates, handrails and clips. - Damaged electrical sockets and electrical connections at PS and STBD main deck. - Cargo holds ventilation dampers with wasted mesh, corroded coaming, lack of maintenance and hardly closing. - Corroded and in poor condition cargo holds hatch covers lashing sockets at bays 06, 18, 22, 28, 30, 34, 38, 42, 46, 50 and 64. - Deformed side lashing platform iwo bay 22.				
CC 42	2024-04-08	Algeciras FIS	2024-07-04	2024-10-31	Due
	Before due date, engine room alarm columns to be brought in order.				
CC 44	2024-04-08	Algeciras FIS	2024-07-04	2024-10-31	Due
	Before due date, pipe of TMU1 and FW pump no.1 to be repaired.				

Conditions related to statutory certificates

None

If the Class Status Report contains any Memos (sometimes referred to as Actionable Items or Asset Notes), these should be detailed.

Where only administrative or informative details are provided, a comment should be left such as '*the vessel was seen to have several Class/Statutory memos of a legislative/descriptive nature.*' However, where any notable or adverse memos are sighted, these should be replicated in the PDF. Surveyor discretion and experience should be exercised in determining such memos.

When the vessel has a large number of memos, a comment such as the below can be left.

Where no Class Status Report (and/or any other objective evidence) was provided, this question can be answered 'No.'

Does the vessel have any Class Memos, Observations or Additional Requirements?	☑ Yes ☐ No	Please provide further details The vessel was seen to have a number of Class and Statutory memos - please see the supplied Class Status Report for more details

MEMORANDA FOR OWNERS

Memoranda related to class certificate

No.	Issued date	Issued at	
MO 6	2016-04-26	MCTDE663	Vessel is approved and certified for PMS-H(Hull) under L-GL Rules. Upon request DNV may carry out annual audits of the implementation of the system. This audit is not a class requirement and has no bearing on class status, class surveys or class audits.
MO 18	2020-09-28	Jiangyin FiS	EGCS Initial Survey was carried out during her 2nd renewal survey at Chengxi Shipyard, China. Below mentioned approval comment is pending Approval comment 10074: We noted that the calculated maximum exhaust gas back pressure don t meet the maximum allowed values. Your proposal to measure the exhaust back pressure after final installation is acceptable. The results and possible further measures for the main and all auxiliary engines are to be agreed by the attending surveyor.
MO 19	2020-11-25	Statutory Support, Høvik	Administrative surcharge Liberia: A surcharge fee per any statutory short or full term certificate issued or endorsed will be invoiced by DNV to the vessel's manager on behalf of the Liberian Flag Administration.

Memoranda related to statutory certificates

No.	Issued date	Issued at	
MO 32	2024-04-13	Algeciras FIS	Power limitation of main propulsion machinery: The vessel's main propulsion power output has been limited from 31.990 kW to 16.594.5 kW, by overridable EPL/ShaPoli.
MO 34	2024-06-04	Class Systematics	Liberia has withdrawn IHM survey and certification authorization for vessels in operation from their RO's with effect from 1 April 2024. Existing certificates issued by DNV (REC-IHM and EU-REC-IHM as applicable) will continue to remain valid until they expire, are replaced by Liberia, or until 26 June 2025, whichever is earlier. Any re-issuance due to changes affecting the certificate content

Structural Damage or Indentations

Questions related to the structural condition of the vessel are located throughout the checklist, including the following sections: Hull, Mooring Decks, Main Decks and Fittings, Ballast Tanks and Systems, Accommodation and Vessel Capabilities and Cargo Systems.

These questions should be answered negatively 'No' when any defects related to the structure of the vessel are identified. Such defects include but are not limited to:

- Significant indentations of plating
- Buckling of plating or frames
- Cracks to plating or frames
- Issues with weld seams

It should be noted that such defects may have already been identified and recorded as a Condition of Class or Class Memo (in the Operational Data section). Such information and any further investigation can be replicated/detailed here.

Additionally, the supplied UTM report can be referenced when making such assessments, especially when high levels of diminution have been recorded.

In the case of the hull, it is relatively common to find minor operational indentations, normally a result of tug/fender contact. That is why the hull section has a second question for 'minor' damages. Surveyor discretion and experience should be exercised in determining between major and minor, although major structural issues are normally obvious and do not require much doubt or second thought.

When any of these questions are answered negatively, we require clear and objective evidence of the defect, including satisfactory photographic evidence. Additionally, as much detail as possible is required including but not limited to:

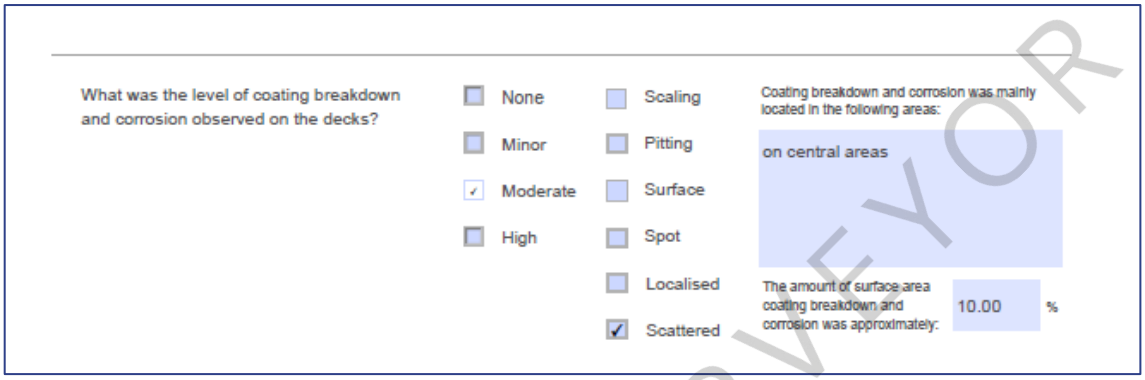
- Severity and nature
- Known or suspected cause
- Location including frame number, port/starboard, nearby to any notable landmark etc.
- Plans for repair/rectification

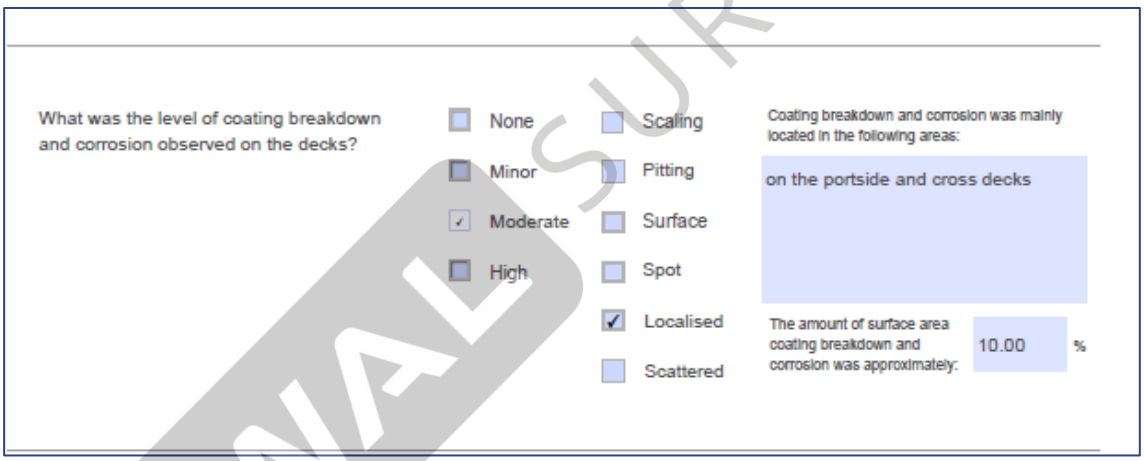
Ensure that the terminology used to describe the damage and location is professional and clear. For example, "indent", "boot top", "anti fouling layer", "stern", "shoulder" and "bow".

Coating Breakdown and Corrosion

Direct questions related to the levels of corrosion are located throughout the checklist, including in the following sections: Hull, Mooring Decks, Main Deck and Fittings, Ballast Tanks and Systems, Accommodation and Vessel Capabilities and Cargo Systems.

Additionally, reference to corrosion related defects are also implied in various other sections.





The above question style applies to corrosion of plating only – corrosion related to fittings or machinery should be recorded under the applicable 'condition of fittings' or 'condition of machinery' questions. These questions follow the plating corrosion question in each section.

Level of corrosion

- **None:** plating is largely free of corrosion with very minor and sporadic spots noted, covering less than 2% of the surface area
- **Minor:** corrosion covering up to 5% of the surface area
- **Moderate:** corrosion covering 5-15% of the surface area
- **High:** corrosion covering more than 15% of the surface area

The % of corrosion input should be provided in multiples of 5 (i.e. 5%, 10%, 15%, etc.), as it is impractical to be more accurate than this.

Type of corrosion

Either Localised **or** Scattered should be selected. Select the type of corrosion which is more prominent.

Then select which is the most prevalent type of corrosion (scaling, pitting, surface or spot). Where multiple types of corrosion are seen, please only select the most prevalent in the tick boxes. Further detailing can be provided in the comments box. Idwal often see all 6 boxes ticked which is not technically correct.

Location of corrosion

Enter an accurate description of where the corrosion is located. Include information such as the frame number or reference to the location on the vessel.

General comments such as "across main deck" are unacceptable.

Once your report has been submitted, our software will generate the output report and complete the sentence using your text. This is then added to by the reviewer based on the information you have provided. This is why Idwal require you to include as much detail as possible during your inspections.

An example of how the software will interpret the answers that you provide is given below. It is recommended that, so far as possible, you provide your answers in the inspection checklist to support the software. You should aim to complete the sentence that is shown in the inspection checklist.

Software	Surveyor text
The mooring decks had minor localised spot corrosion, up to 10% of mooring deck plating total surface area, mainly located...	... on the weld seams, free edges and surrounding deck plating areas of the mooring machinery
Output sentence	
The mooring decks had minor localised spot corrosion, up to 10% of mooring deck plating total surface area, mainly located on the weld seams, free edges and surrounding deck plating areas of the mooring machinery.	

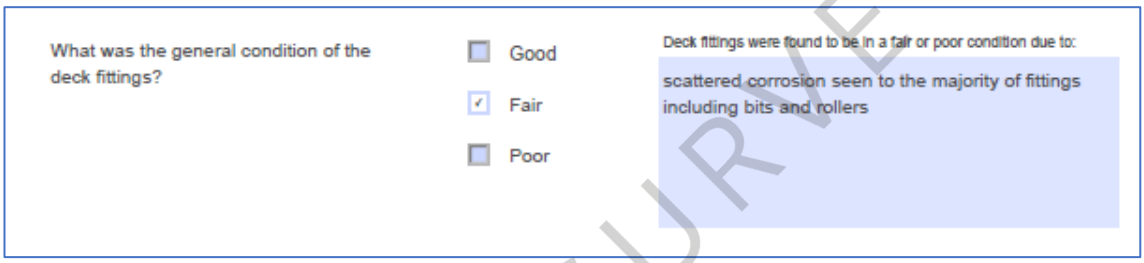
Fittings

Questions related to fittings generally tend to follow the corrosion question in the majority of sections. Idwal highlight fittings because the most common defect with fittings is corrosion.

Idwal Grade® definitions should generally be applied throughout the full checklist in the following manner:

- **Good**: No issues or only minor issues found that do not materially impact any aspect of the vessel operation or impair the safety of the vessel, its machinery, personnel or environment. Minor expected wear and tear is permitted, not requiring correction or repair.
- **Fair:** Obvious wear and tear or deficiencies evident that require planned correction or repair.
- **Poor**: Significant wear and tear or deficiencies evident that require immediate correction or repair.

Surveyor discretion and experience should be exercised in determining the most appropriate definition, taking into account what best describes the overall condition. A single isolated minor issue can still be answered as *Good*, with the details provided in the Surveyor Comments box located at the end of the applicable section.



The text box should be completed as a continuation of the ghost text sentence above it. “Deck fittings were found to be in a fair or poor condition due to…” which generally tends to work well. If the majority of fittings are affected by the same/similar issues, it is fine to state as such and provide a few examples, other than providing an itemised list. Text should always be input in paragraph form throughout the checklist.

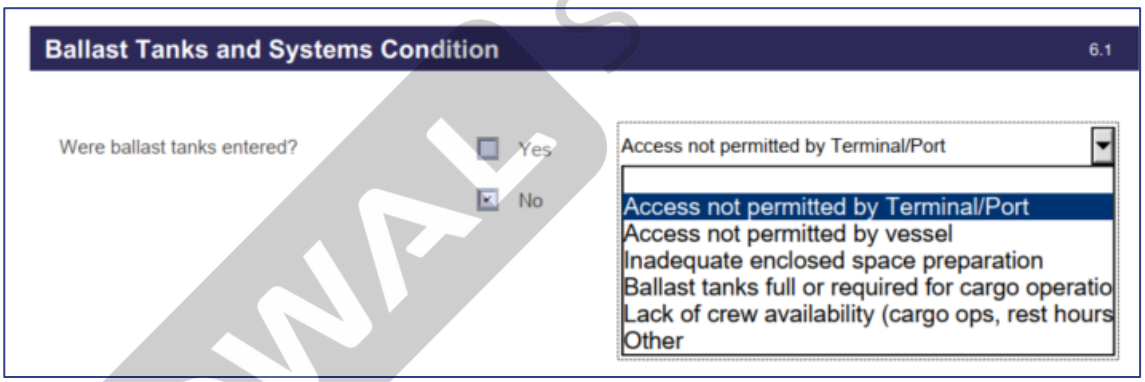
Ballast Tanks and Systems

Were ballast tanks entered?

If ballast tanks were entered during the inspection, select '*Yes*'. An additional text box will appear for you to enter the ballast tanks that were entered.

If no ballast tanks were entered then we select '*No*' and state a reason from the dropdown menu. In this case, the following sentence will be produced in the output report:

`Ballast tanks could not be entered due to terminal/port restrictions.`

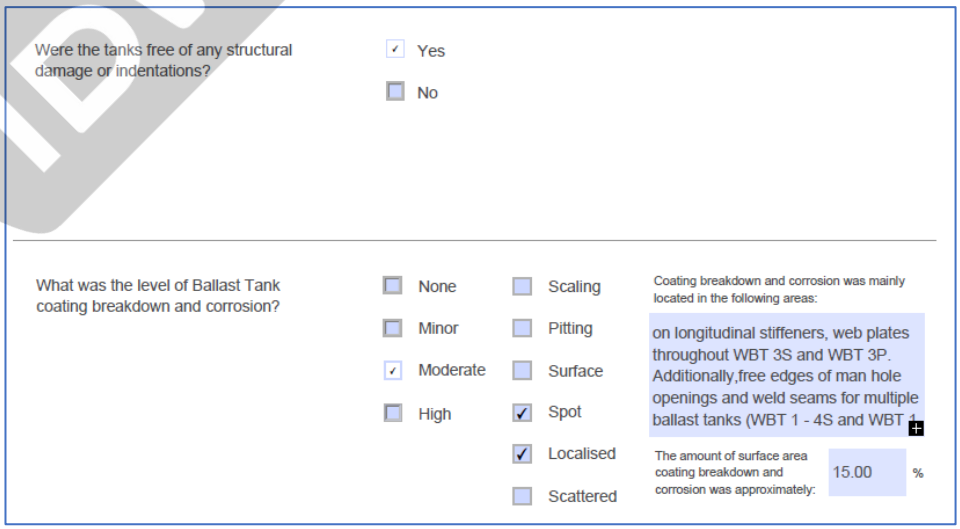


Ballast Tank Photographs

If ballast tank inspection photographs were provided by the vessel's crew for review we can select '*Yes*'. The checklist will then ask you to enter the date that the ballast tank photographs were taken. This can be checked either by a date stamp on the photographs or verbally from the crew during the inspection.

Ballast Tank Corrosion

When stating the level of coating breakdown and corrosion we want to give a summary of the type of corrosion that was observed inside the ballast tanks. You must consider both the ballast tanks that you inspected and the information provided by the vessel crew in the recent inspection reports and photographs.



Once you have appraised all the sources you have regarding the condition of the ballast tanks, you use the check boxes to specify the levels and type of corrosion along with the comment box to provide more specific detail of where the corrosion was mostly located, as described in the earlier chapter of this Guide. The output report will now generate the following sentence:

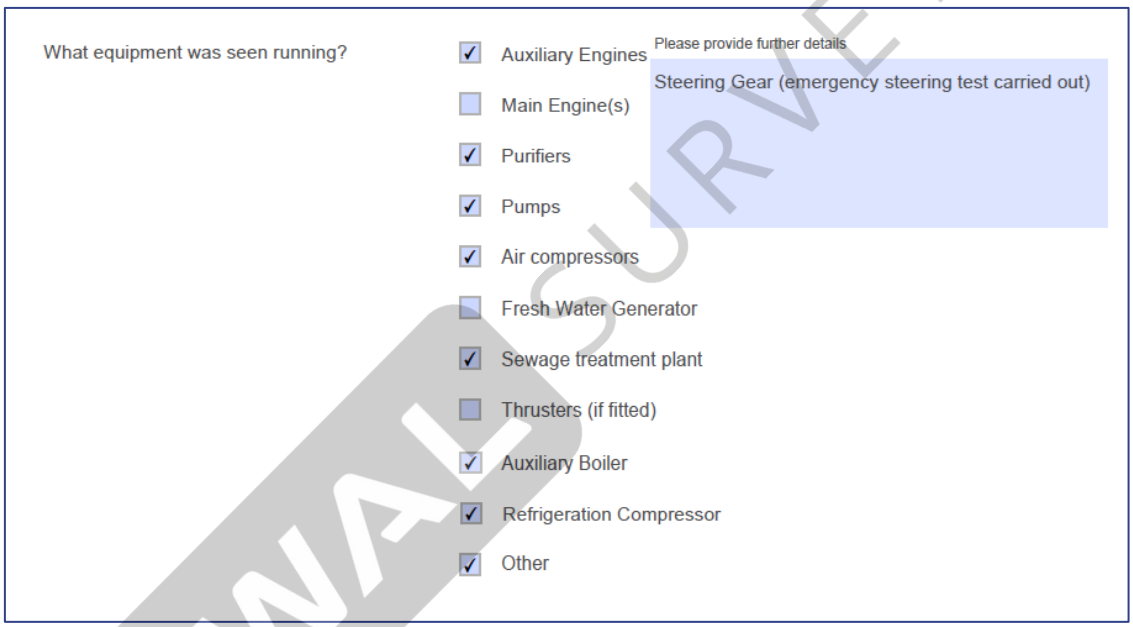
The inspected ballast tanks were found to be *generally free of significant structural defects* but had *moderate localised, surface and spot* corrosion, up to approximately *10%* of the ballast tanks total surface area, mainly located on *longitudinal stiffeners, web plates, free edges of man hole openings and weld seams.*

Engine Room and Machinery

What equipment was seen running?

For this question, please tick all equipment that was seen running during the inspection. If the equipment was not seen running but a visual assessment of the equipment was able to be made, please ensure to state this in the report in the surveyors comments box at the end of the respective section.

Additionally, if any equipment not listed was seen running (the steering gear, for example), the '*Other*' box can be selected; a free text box will then appear, and then details can be provided manually. Please see below for an example:



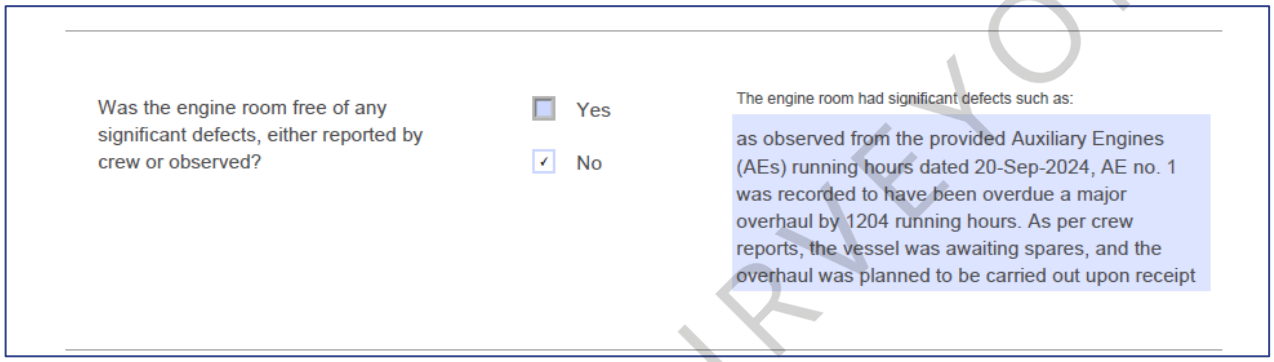
Was the engine room free of any significant defects, either reported by crew or observed?

Please use this box to report on any significant defects found during attendance. Some below examples of what Idwal would deem significant defects can be found below:

- Out of order critical machinery, such as the Main Engine or steering system; defects that would likely require Class attendance.
- Out of order auxiliary machinery, such as an out of order Auxiliary Engine(s), Auxiliary Boiler, purifiers, pumps, freshwater generator, emergency generator, air compressors etc.
- Significant overdue maintenance, such as overdue Main Engine units or overdue major overhauls of Auxiliary Engines.

- Any heavy leakages.
- Missing equipment or machinery.
- Relevant structural defects, such as reverse impact indentations on bulkheads visible in the Engine Room.

If any significant defects are found, please tick '*Yes*' and enter as much detail regarding the defect(s) as possible, making sure to include any details of discussions with crew or any planned rectifications. An example can be found below:

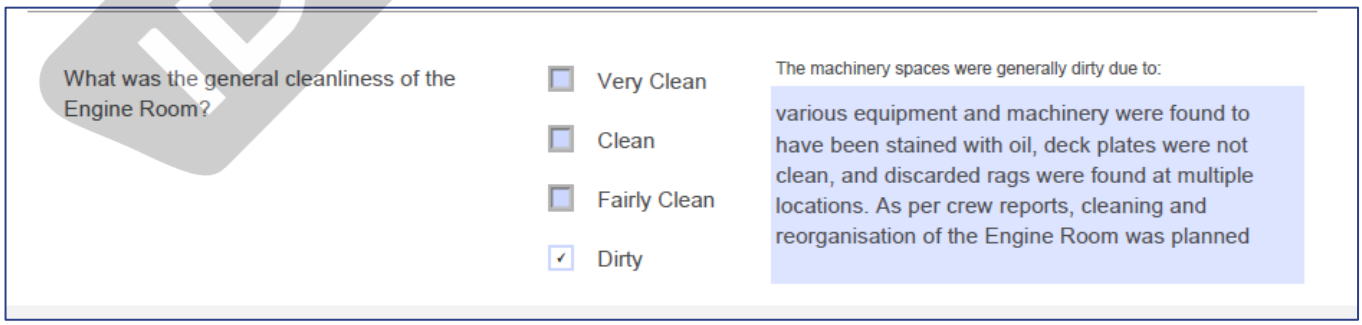


What was the general cleanliness of the Engine Room?

This is a judgement based assessment of the Engine Room as a whole. When '*Dirty*' is selected, a free text box will appear. This should only be selected for Engine Rooms where housekeeping is clearly lacking, and numerous areas were found to have been dirty. If, for example, only isolated areas of the Engine Room are found to be dirty, '*Clean*' or '*Fairly Clean*' could be selected, and a comment on the relevant dirty areas could be included as a comment in the Surveyor Comments box at the end of the relevant section.

When '*Dirty*' is selected, please provide as much detail as possible in the free text box. Please also ensure to include sufficient photographic evidence.

An example of a completed question can be found below:



Were bilges and tank tops free of oil and water?

If bilges and tank tops are observed to contain any oil and/or water, be sure to investigate the sources of any oil and/or water. When '*No*' is selected, a free text box will appear; please use this to record all details of the oil and/or water found, as per the below example:

Were bilges and tank tops free of oil and water?	☐ Yes ☑ No	Please provide further details: an accumulation of clear water was found in the Port forward Engine Room bilge well. Upon further investigation, it was found that a nearby LT system valve had a leakage from it's gland. This was raised with crew who tightened the gland and stopped the leakage

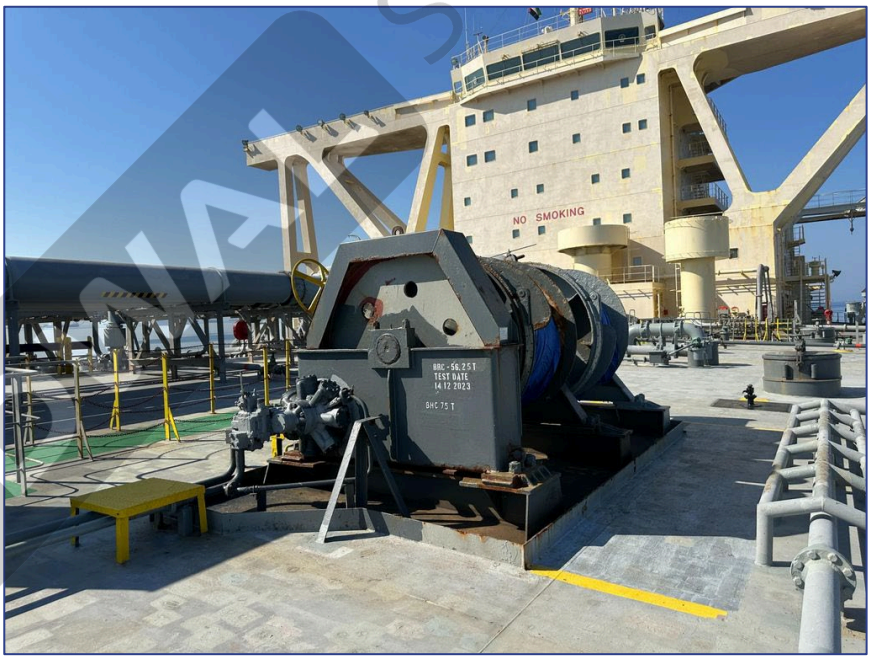
Common Mistakes

In this chapter, common errors that Idwal see from submitted inspection checklists will be discussed and highlighted. This list is not exhaustive and is intended as an indication of how to ensure that your inspection checklist meets Idwal's expectations.

Main Deck Mooring Winches

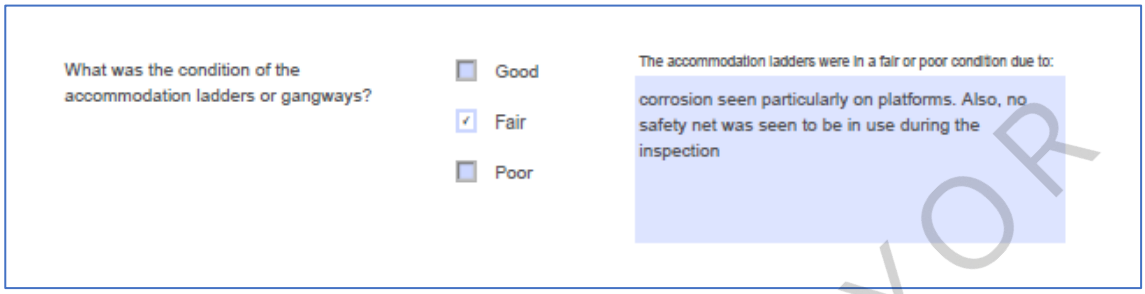
This main deck question is specifically regarding weather deck winches. It should only be used to state the condition of these winches. Weather deck winches are generally found on tanker vessels. Do not refer to the mooring winches found on the mooring decks in this question.

Does the vessel have mooring winches fitted on the main deck?	☐ Yes ☑ No
What was the condition of the mooring winches?	☐ Good ☐ Fair ☐ Poor



Accommodation Ladders and Gangways

The below question is found in the Main Deck and Fittings section of the inspection checklist. The question refers to the physical condition of the accommodation ladders and/or gangways. Any structural or cosmetic issues identified should be mentioned.



Safe working issues, such as the poorly rigged safety net, may also be included. However, they must also be highlighted in the Safe Working section of the inspection checklist.

If the accommodation ladder or gangway is not safe, it must not be used for boarding the vessel

Provision Lifting Appliances

This question is referring to provision cranes which are used for loading stores, provisions, etc. You should not answer this question in regards to the vessel's cargo cranes as these are covered in the Vessel Capabilities and Cargo Systems section of the inspection checklist.