

STANDARD FOR EMPTY BULK VESSEL SURVEYS BY ACCREDITED MARINE SURVEYORS

MAY 2023

This standard has been produced as a joint project by Australasian Institute of Marine Surveyors, Shipping Australia Limited, The Federal Department of Agriculture, Fisheries and Forestry, and Grain Trade Australia, to support accredited marine surveyors undertaking the survey of empty bulk vessels preparing to load Australian grain for export.

TABLE OF CONTENTS

1. Introduction.....	3
2. Legislative Framework.....	4-5
3. Roles and Responsibilities.....	6
4. Accreditation of Marine Surveyors.....	7-9
4.1 Application process for marine surveyors to become accredited	
4.2 Accreditation Fees	
4.3 Evidence of Accreditation	
4.4 Complaints involving an accredited marine surveyor	
4.5 Survey requirements for Trainee Accredited Marine Surveyors	
5. Marine Surveyors Certificate of Fitness to Load.....	10
5.1 Completing the Fitness to Load Certificate	
6. Preparing for the survey.....	11
7. How long should the survey take?.....	11
7.1 Resources, tools, and equipment	
7.2 Work Health and Safety Requirements	
8. Conducting the survey.....	12-19
8.1 Inspection Procedures	
8.2 Types of Contamination	
8.3 Inspecting for structural damage and vessel structure	
9. Finalising the survey.....	20-21
9.1 What happens if the vessel is fit to load grain?	
9.2 What happens if the vessel is not fit to load grain?	
10. Marine Surveyor records.....	21-28
11. Appendices and Reference Material.....	29-34
12. Definitions and Abbreviations.....	35



Australian Government

Department of Agriculture,
Fisheries and Forestry



GRAIN TRADE
AUSTRALIA



1 INTRODUCTION

This standard is intended to inform and support accredited marine surveyors. It incorporates the Australasian Institute of Marine Surveyors (AIMS) Code of Common Practice for Grain Surveys and relevant information from the [Australian Maritime Safety Authority \(AMSA\) Marine Orders MO33 and MO42](#) and the [International Maritime Organisation \(IMO\) Code for the Safe Carriage of Grain in Bulk](#).

It does not address ship stability or cargo shift as its objective is to support accredited marine surveyors responsible for assuring Government that a vessel intending to export Australian grain is fit to load such exports and that its holds meet the internationally recognised standards known as grain clean.

The [Export Control \(Plants and Plant Products\) Rules 2021](#) (plant rules) set the legislative requirements for the export of plants and plant products. The Accredited Grain Surveyor Assurance (AGSA) scheme has been included in the plant rules and is intended to improve the survey and inspection practices of bulk vessels for exports of prescribed plants and plant products.

The Plant Rules, the AGSA scheme and this standard share the same objective:

The aim of this standard is to ensure that the vessel condition supports the Department of Agriculture, Fisheries and Forestry (DAFF) phytosanitary certification by improving export bulk vessel survey and inspection practices. This will provide greater assurance to the DAFF, the shipping industry, and Australia's grain exporters that bulk vessels comply with agricultural export legislation.

Prepared through a joint approach and supported by DAFF, this standard has been developed as a general reference for marine surveyors involved in the survey of empty bulk vessels for the carriage of prescribed plants or plant products with the purpose of providing a consistent required survey standard.

The standard provides pictorial examples to illustrate the acceptable standards required of empty bulk vessel holds.

From the 1st of July 2023, all qualified marine surveyors must be accredited under the AGSA scheme administered by AIMS to survey and certify bulk vessels.

Users of this standard are advised that a marine surveyor's 'Fitness to Load' certificate does not guarantee that the vessel will pass DAFF phytosanitary requirements to be issued with a 'Permit to Load' as there are differences in inspection requirements associated with the role of a marine surveyor to that of a DAFF Authorised Officer. Further, marine surveyors involved in the survey of holds for the export of grain should be aware of and comply with any additional DAFF advice and guidelines for marine surveyors.

Users of this standard should be aware this is a digital standard and is a 'live' marine surveyor tool. Users are recommended to view this standard electronically, directly from the [AIMS website](#), to ensure they are using the latest controlled version.

2 LEGISLATIVE FRAMEWORK

The current legislative framework that this standard has been prepared and aligned to is the framework that dictates the requirements of DAFF for empty bulk vessel inspections for the export of prescribed plants or plant products.

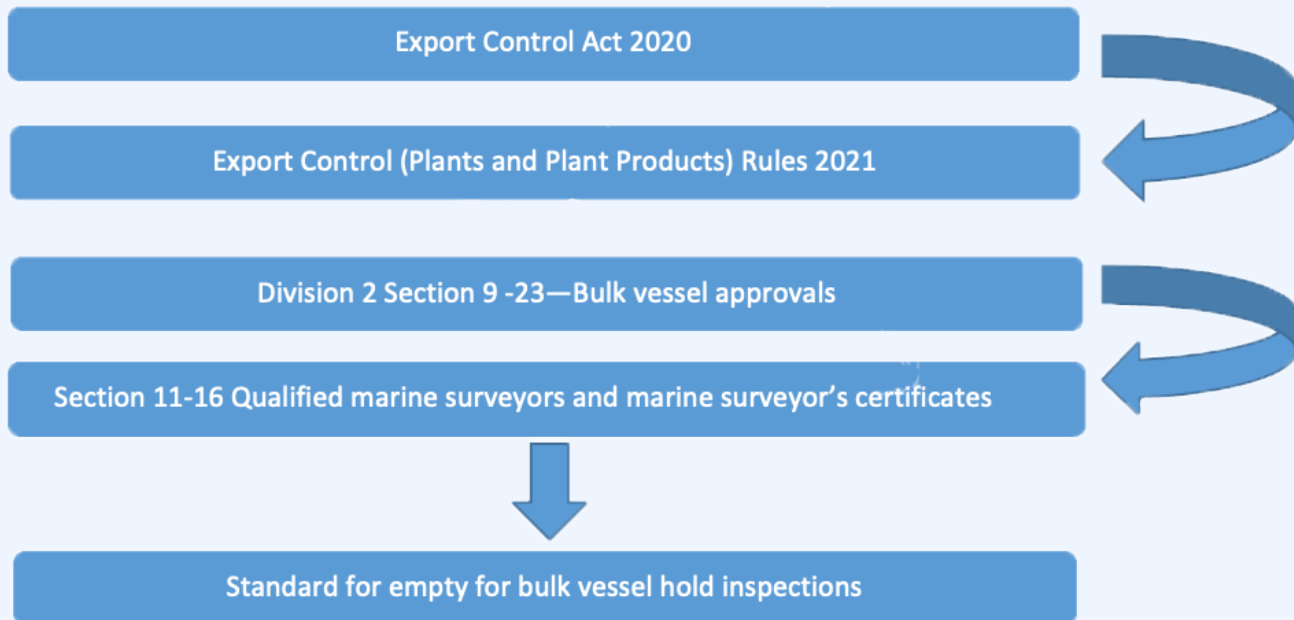


Figure 1. Legislative Framework of Standard for Empty Bulk Vessel Inspections

Under the Export Control (Plants and Plant Product Rules) 2021:

1. Prescribed plants or plant products at a registered establishment that are to be exported in a bulk vessel must not be loaded into or onto the bulk vessel unless a bulk vessel approval, covering the cargo spaces of the vessel into or onto which the prescribed plants or plant products are to be loaded, is in force for the bulk vessel.
2. If a bulk vessel approval is suspended under subsection 9-27(1), prescribed plants or plant products must not be loaded, or must not continue to be loaded, into or onto the bulk vessel.

Bulk vessel approval is issued by an Authorised Officer (AO) who is appointed as an Australian Government Official under the [Export Control Act 2020](#) (The Act). Before issuing a bulk vessel approval, the AO requires approval that the vessel is free of possible contaminants and fit to load grain by an accredited marine surveyor who will issue a certificate stating as such.

Under the plant rules, an accredited marine surveyor may issue a marine surveyors certificate (otherwise known as a Fitness to Load (FTL) certificate) for a bulk vessel that is to be used to transport prescribed plants or plant products if:

1. The accredited marine surveyor has carried out a survey of the vessel, including of the cargo spaces into or onto which prescribed plants or plant products of that kind are intended to be loaded; and
2. The accredited marine surveyor is satisfied that:
 - The vessel is free of conditions that could result in contaminating, wetting or imparting an odour to prescribed plants or plant products of that kind transported in or on the vessel.
 - The vessel, including the cargo spaces of the vessel into or onto which prescribed plants or plant products of that kind are intended to be loaded, is suitable to transport prescribed plants or plant products of that kind.

This standard includes:

1. Roles of both the AO and the marine surveyor in the survey and inspection of empty bulk vessels for prescribed plants and plant products.
2. Accreditation requirements of marine surveyors.
3. Procedures and guidelines for accredited marine surveyors that perform the survey of an empty bulk vessel intending to load grain and plant products for consumption in compliance with accepted national and international grain clean standards.
4. Procedures for passing or failing a ship as fit to load grain.

Shippers, agents, and vessel owners should ensure that they understand the standards contained within and that they have in place appropriate procedures for ensuring the appointed marine surveyor has the required accreditation to issue the FTL certificate.



3 ROLES AND RESPONSIBILITIES

Where a bulk vessel is intended to be used to transport prescribed plants or plant products such as grain an AO and a marine surveyor are appointed to carry out certain functions in accordance with the legislative requirements under the plant rules:

1. AOs are individuals, trained and assessed by the DAFF who are appointed as Australian Government officials under the Act. The AO performs their role on behalf of the DAFF. The AO may be a DAFF employee, employee of a private company, employee of an exporter or self-employed individuals.
2. Marine surveyors are employed by private companies or self-employed individuals who are accredited by AIMS to undertake bulk vessel surveys.

The following table broadly outlines the roles and responsibilities of AOs and marine surveyors involved in bulk vessel inspections for prescribed plants or plant products:

Role	Responsibility
Authorised Officer (More information on the role and responsibilities of an AO can be found within the DAFF's AO instructional material)	<ul style="list-style-type: none"> • Confirm that another inspection AO has been appointed to perform bulk vessel inspection tasks consistent with the buddy system. • Validate supporting inspection documentation including the marine surveyor's certificate. • Inspect empty bulk vessels to be loaded with prescribed plants or plant products for export, recording the inspection using a video recording device on the head or face. • Inspect the vessel for evidence of live insects, live or dead rodents, infestible and non-infestive residues. • Issue, withhold, suspend, or revoke bulk vessel approval.
Marine Surveyor	<ul style="list-style-type: none"> • Hold the appropriate accreditation required of marine surveyors • Survey the bulk vessel holds identified for loading of consumable prescribed plants or plant products are in all ways in a suitable condition, fit and safe to received and preserve the intended cargo. • Check holds are compliant with the standard for loose rust, scale or paint • Pay special attention to dark stains of painting, gaps between frames, brackets and behind access ladders, pipes etc. • Check for dry and clean condition • Check holds are free from odours • Check bilge wells are clean and dry with pumps in good working order • Confirm hatch cover seals and sealing faces are in position and property maintained to be watertight • Issue an FTL certificate consistent with legislation

In addition to the specific role that each party undertakes there are some protocols and rules that both parties should be aware of and act in accordance with. These are:

1. The AO, as a Commonwealth delegate must be seen to be independent at all times. The AO is authorised to perform duties on behalf of the Commonwealth and, as a condition of their authorisation, are required to have a different employer to the accredited marine surveyor
2. Where a vessel has failed a survey, marine surveyors may advise the Master of required cleaning operations, but the marine surveyor should not engage, appoint, or lease cleaning equipment or personnel for the vessel.

4 ACCREDITATION OF MARINE SURVEYORS

From the 1st of July 2023, all marine surveyors wishing to undertake bulk vessel surveys for the export of prescribed plants or plant products must be accredited under the AGSA Scheme administered by AIMS.

The requirements for accreditation under the scheme were developed to ensure that marine surveyors undertaking empty bulk vessel surveys are sufficiently qualified and experienced to provide greater assurance that bulk vessel surveys comply with agricultural export legislation.

The qualification and experience requirements for marine surveyors wishing to become accredited are outlined in [Appendix 1](#).

4.1 Application process for marine surveyors to become accredited

Before application, applicants must confirm they meet the qualification and experience requirements for accreditation.

An application to become accredited is open to anyone who meet these requirements, there is no condition for the applicant to be a member of AIMS. The application process is the same for all applicants wishing to be accredited.

An application must be made via the AIMS website:

<https://www.aimsurveyors.com.au/Grain-Surveyor-Application-Form>

Mandatory evidence of qualifications and experience will be required to be submitted as part of the application process. Required evidence for validating qualifications and experience are outlined in [Appendix 2](#) of this standard as well as listed on the online accreditation application form.

Applications will generally be processed within 10 business days of receipt. Insufficient or incorrect information provided as part of the application will delay this timeframe. All provided documents will require verification by AIMS prior to application approval.

In the instance where an application is not approved, the applicant will be advised in writing and will have the opportunity to rectify any deficiencies and resubmit their application. In the case of resubmission, applicants will be advised of the outcome of their application within 10 days of their resubmission date.

Accreditation will be required to be renewed by the 1st of July each year. To renew accreditation, Marine Surveyors must be able to show they have undertaken at least three bulk vessel surveys in the previous 3-year period.

Accreditations which are not renewed by this date or do not comply with the three bulk vessel survey requirement will expire and the Marine Surveyor will no longer be accredited to undertake bulk vessel surveys as an Accredited Surveyor.

4.2 Accreditation Fees

An accreditation application fee is payable by the applicant at the time of application. This fee is outlined in the fee schedule in [Appendix 3](#) of this standard and subject to change at the discretion of AIMS.

Once accreditation has been approved, the yearly accreditation fee is payable by the applicant prior to activation of the Marine Surveyor's accreditation. This fee is payable yearly thereafter with accreditation renewal and is listed in [Appendix 3](#) of this standard.

4.3 Evidence of Accreditation

Once an application has been approved and the accreditation fee paid, the Marine Surveyor will be issued with a Grain Accreditation Identification Card (ID card) with their name, photo, accreditation number and expiry date clearly visible on the card. This ID card can be used to identify their accreditation status to AOs and other stakeholders.

As well as being issued an ID card, the Marine Surveyors name will appear on the Accredited Grain Surveyor list. This list will be published on the AIMS website and linked to or referenced from other industry websites.

<https://www.aimsurveyors.com.au/Accredited-Grain-Surveyor-List>

AOs may sight the Marine Surveyors ID card as part of their inspection process. AOs will be required to confirm the Marine Surveyors name appears on this list. If the Marine Surveyors name does not appear on this list, it will be assumed the Marine Surveyors accreditation is not valid or has been revoked

4.4 Complaints involving an accredited marine surveyor

In administering of the AGSA scheme, AIMS will respond to complaints received with relation to:

1. Marine surveyor accreditation
2. Accredited marine surveyor professional ethics or behaviour
3. Accredited marine surveyor standards of surveys

All received complaints involving accredited marine surveyors will be investigated in accordance with AIMS complaint handling and investigation policy and procedures and relevant privacy laws. This policy is available for download from the AIMS website.

<https://www.aimsurveyors.com.au/Accredited-Grain-Surveyors>

During the investigation phase, the marine surveyor's accreditation may be suspended or paused temporarily until an outcome and decision on further action can be reached. Outcomes of a complaint investigation may be, but are not limited to:

1. Official written notification with action for improvement and/or rectification
2. Remedial retraining with another accredited marine surveyor
3. Required undertaking of theory training units – Manage Grain Operations and/or Conduct Dry Bulk Surveys
4. In the instance of serious breaches or continued repeat offences, temporary or permanent suspension of accreditation.

4.5 Survey requirements for Trainee Accredited Marine Surveyors

In accordance with the qualification requirements set out in [Appendix 1](#) of this standard, new applicants wishing to apply for accreditation will need to provide evidence of performing a minimum of 10 bulk vessel surveys in no less than 2 months and no more than 2 years under the mentorship of an Accredited Marine Surveyor.

There is no requirement for the trainee to complete all 10 surveys with the same Accredited Marine Surveyor, but to ensure a consistent level and standard of training, all surveys must be conducted in accordance with this standard.

For there to be a fair and equitable process for the training, and to support the ongoing accreditation of new Marine Surveyors, it is a condition of accreditation that an Accredited Marine Surveyor should not unreasonably refuse a request from a trainee surveyor to undergo training and supervision on a bulk vessel survey.

There are however certain requirements from the trainee which first need to be satisfied to the training company:

1. The trainee is independently insured for workers compensation, public indemnity and public liability and the details of the insurance are shared with the training company.
2. The trainee is fully inducted to the port or terminal the inspection is to be completed at.
3. A written letter of approval from a company manager or director prior to training is undertaken.

5 MARINE SURVEYORS CERTIFICATE OF FITNESS TO LOAD

The marine surveyor's certificate, otherwise known as a Fitness to Load (FTL) certificate is issued by an accredited marine surveyor for a bulk vessel that is to be used to transport prescribed plants or plant products when the marine surveyor is satisfied that:

1. The vessel is free of conditions that could result in contaminating, wetting, or imparting an odour to prescribed plants or plant products of that kind transported in or on the vessel.
2. The vessel, including the cargo spaces of the vessel into or onto which prescribed plants or plant products of that kind are intended to be loaded, is suitable to transport prescribed plants or plant products of that kind.

The FTL certificate must not be issued by the Marine Surveyor until the survey is complete and they are satisfied that all the above criteria are met, even if there is minor work to be completed prior to meeting the above criteria. AOs cannot issue a bulk vessel approval until the FTL certificate has been received. A copy of the FTL certificate is also issued to the Master of the vessel and the appointing party or their Agent.

5.1 *Completing the Fitness to Load Certificate*

Only accredited marine surveyors are authorised to issue an FTL certificate, and the AO will confirm the marine surveyor's accreditation status prior to accepting the certificate.

It is important to check all particulars are correctly listed on the FTL certificate or it may be deemed incorrect and could result in the cargo being deemed illegal.

An FTL certificate must include:

1. Name of the Vessel
2. Port of Registry
3. IMO Number
4. Gross Register Tonnage (GRT)
5. Place of Survey (Name and location of port)
6. Holds/Spaces surveyed
7. Date and Time the vessel was passed as suitable to load
8. Name of surveyor and accreditation number

The FTL certificate will also state that it is not a certificate of approval to start loading, and final approval must be determined by DAFF and Australian Maritime Safety Authority (AMSA) representatives. [Appendix 4](#) of this standard contains a standard template FTL certificate. Accredited surveyors are encouraged to use this template to ensure consistency and minimise any possible delays for shippers and agents on the required wording.

6 PREPARING FOR THE SURVEY

Before undertaking a grain bulk vessel survey, the Accredited Marine Surveyor must ensure they have all the required documentation, permits, PPE and survey equipment. Marine Surveyors must have their ID card on them when undertaking the survey.

7 HOW LONG SHOULD THE SURVEY TAKE?

The time it takes to complete the grain bulk vessel survey is very much dependent on vessel condition, number of holds to be surveyed and their condition. For a vessel presented in good condition, newly painted after dry dock or a vessel on her maiden voyage the below generally accepted minimum times for a survey can be used as a guide.

From the time of arrival on board and discussions with the Chief Officer, Master and AO's, proper inspection of deck area/deck stores, entry, and full inspection of each of the cargo holds minimum times to complete a survey prudently are usually as follows:

1. 4 hold vessel: 2h 30m,
2. 5 hold vessel: 3h,
3. 7 hold vessel: 4h
4. 9 hold vessel (rare): 5h

Due to the variation in presented conditions of vessels, these minimum guidelines will not be sufficient to complete a more complex survey where extensive residues and contaminants are present.

7.1 Resources, tools, and equipment

Some basic equipment is required by a marine surveyor performing a grain survey:

1. A high-powered (>1000 lumens) spot torch with long life battery and capable of illuminating the deck head and coaming beams from the hold access ladders should be used during grain surveys.
2. A high-powered LED headlamp
3. A handheld scraper
4. White gloves
5. Marking chalk for marking unclean areas
6. Personal Protective Equipment
7. Camera, preferably one which records date and time of photos

8 CONDUCTING THE SURVEY

8.1 Inspection procedures

8.1.1 Before beginning the survey

The request for a Marine Surveyor to undertake a bulk vessel survey should be confirmed by the appointing party, or their agent, in writing.

Bulk vessel surveys should be conducted during daylight hours and surveys must not commence until 30 minutes after sunrise and should be completed not later than 30 minutes before sunset.

The Marine Surveyor may undertake their survey at the same time as the AOs inspection or separately. Either way the AO will be unable to issue the bulk vessel approval until the Marine Surveyor has issued their FTL Certificate.

On boarding the vessel, the Marine Surveyor should identify themselves to the Master, Chief Officer, and AOs if present. The Surveyor should obtain from the Master or Chief Officer:

1. A record of the last 5 cargos
2. Any cleaning chemicals that have been used
3. Intended stowage plan (holds that are to be inspected)
4. The ship particulars including the IMO number of the ship

Knowing what the previous cargos were, will assist the surveyor in what to look for and where problem areas might be.

8.1.2 Starting the survey

It is advisable that Surveyors perform the hold inspection in a systematic approach. Throughout the survey quality, clear photos must be taken of every aspect and structure.

All holds that are intended to carry grain must be surveyed except where a hold is in ballast, in which case the surveyor should inspect these compartments after deballasting is complete and the hold is completely dry.

Upon coming aboard, the hatch lids may be opened or closed. They are often kept closed to prevent rain, foreign contaminants, or dust from entering the holds.

Some structures such as ventilation systems may only be accessible with the hatches closed. The hatches should be assessed to establish structure and which areas require survey prior to opening.

Hatch covers should be opened fully to ensure:

1. There is sufficient natural light in the hold to allow maximum visibility.
2. There is sufficient view of the structures below the hatch covers to permit surveying of these structures.

Bulk vessel grain clean surveys should never be undertaken in the rain or with insufficient natural light.

8.1.3 Hatch Covers/Coamings

The hatch lids should be partially opened to allow for survey of the hatch cover (inter-section) channels and seals.

The opening of hatch covers may dislodge grain or residues.

If insect control treatments have been undertaken, the cargo holds should not be entered until they have been gas freed and Master gives permission for re-entry.

Prior to entering a hold, the marine surveyor should quickly familiarise themselves with the construction of the hold identifying structures which will need particular attention such as fire suppression systems in the end and side coamings. All areas of the hatch covers and the undersides and coamings must be examined prior to entry into the hold.

The major causes of hatch cover failures are:

1. Compression bars in poor condition.
2. Rubber gaskets in poor condition
3. Hatch coamings in poor condition
4. Hatch cover/coaming drain channels having previous cargo residues and/or excessive loose rust/paint flakes
5. Non-return valves in poor condition
6. Quick release cleats in poor condition

8.1.4 Other deck structures

Survey of the deck is generally not considered as part of the Marine Surveyors role, however, noticeable residues on deck that could impact the grain cargo should be brought to the attention of the Master for rectification as a matter of good practice.

It is not uncommon to find residue such as grain from past cargo in mooring lines and other structures.

If the surveyor considers that any loose substances or old grain cargo residues around the hatch may contaminate the grain cargo to be loaded, the surveyor may bring this to the attention of the Master for those substances to be removed/cleaned.

8.1.5 Accessing a hold

Prior to entering a hold, Marine Surveyors should ensure the access lid is open and locked in place.

As soon as the surveyor enters the hold, they should stop and examine:

1. Void spaces at the top of the ladder access
2. Ladders – platforms, rungs, and rails
3. Aft comings, underdeck beams, deck beams, shedder plates and stiffeners

8.1.6 Under deck beams and stiffeners

The upper, less accessible parts of the holds, particularly the under-deck beams and stiffeners will require thorough examination. These areas can be examined from the ladder platforms. Modern bulk carriers may be fitted with additional under deck walkways.

In some holds these areas may not be accessible at all. In such cases if the surveyor observing from a distance finds any traces of loose substances or previous cargo residues, or has reason to believe the presence of such substances which may pose a risk of contamination of the cargo, the surveyor may request cleaning or blowing of these areas with compressed air or similar. The surveyor may also request a man-lifter or cherry picker to examine these areas.

8.1.7 Bilge Wells

Bilge well covers will need to be removed to ensure the bilges are clean, dry, and free of any odour. They will need to be examined, using a torch if necessary, and any remaining residues or water will need to be removed by the crew.

Bilge cover plates are to be made grain-tight with hessian or other suitable porous cloth to prevent ingress of grain.

Bilge space and bilge well suctions are surveyed and tested by the surveyor. Where this is not possible the Master must supply a Certificate of Guarantee stating that the cargo hold bilge pumps and non-return valves are operating satisfactorily. This should be attached to the FTL Certificate. An example template of this Certificate is included in [Appendix 6](#) of this standard.

8.1.8 Tank Tops

Examine the whole tank top surface including a thorough visual of the perimeter of the hold, particularly at the meeting of the tank top and bulkhead. Manhole covers on tank tops and stools must be removed and checked thoroughly.

8.1.9 Cable casings and sounding pipes

Cargo residues may be found where cables are fitted although a thorough examination can be difficult due to limited accessibility. The lower part of the cable casings may be viewed by looking upwards from the tank top and it is common to ask for a ladder to assist during a survey.

Sounding pipes will need to be examined for grain residues on the inner and outer surfaces of the pipe. Residues may be dislodged by sharply tapping the pipe.

Brackets and guards associated with cable casings and sounding pipes will also need to be thoroughly examined.

Temperature and moisture sensors are often recessed in bulkheads and coamings and protective casings may need to be dismantled to allow thorough examination.

When using a ladder as part of the survey, use the visual vantage point to look around when ascending and descending for areas limited visually from lower vantage points.

8.1.10 Ventilator trunks

Hold ventilators and associated trunks need to be closely examined where possible. Visual survey is preferred. Mechanical ventilators that are too high or otherwise inaccessible due to poor design should be opened and the fans started. This should clear any old residues or rust scale trapped therein.

8.1.11 Other areas within a cargo hold

Other areas within the cargo hold must be included in the survey. These areas include but are not restricted to ladders, ladder platforms, holding brackets, pipe protectors, side frames, side frame brackets as well as any other variations in the structure of the cargo hold.

8.2 Types of contamination

Cargo holds must be surveyed, to establish if contaminants are present, prior to loading grain and other consumable goods in Australia. If present, contaminants must be identified, and the quantity established, to decide if the contamination will pose a risk to the cargo to be loaded.

Contamination may originate from:

1. Loose residue from previous cargoes
2. Transferable stains from previous cargoes
3. Loose rust scale
4. Loose paint scale
5. Old dunnage or strapping
6. Odours from previous cargoes/ pest treatments/ uncured paint
7. Excessive moisture
8. Unsanitary conditions

8.2.1 Previous cargo residue

Previous cargo residues have the potential to contaminate grain cargo and may present as loose residue or stain on bulkheads and other structures within the hold. Cargo residues have the potential to contaminate the cargo during transit.

If cargo residues are present, the surveyor must first determine what the residues are before determining if they present a contamination risk, and the level of tolerance, if any.

Knowledge of the previous five cargoes carried will alert the marine surveyor as to what they should be looking for and where they might expect to find it.

Australia operates on a zero tolerance of toxic residues for cargo holds to be loaded with consumable goods, therefore holds must be 100% free of toxic residues and transferrable stains to be passed as fit to load grain.

Even if backloading the same commodity, the holds must still be thoroughly surveyed for previous residues.

White Glove Test

To ascertain whether a stain is transferrable or not, the “white glove test” should be utilised. Using clean white gloves and rubbing with gentle force the surveyor will be able to identify if any stain has transferred onto the gloves. If the stain noticeably transfers, it must be investigated further to determine the contaminant present.

Criteria	Acceptable / Pass Standard
Presence of loose particles of previous cargo and organic material other than toxic residues such as those listed below	No loose particles are acceptable. However, a tolerance of up to 5 litres per hold may apply where cleaning cannot take place prior to the survey ending.
Presence of loose residue of zinc concentrate, lead concentrate, copper concentrate, bauxite, ammonium nitrate, sulphur, or other toxic residues	Must be completely absent. Zero tolerance for loose residue of toxic substances.
Any residue from insect treatment such as pesticides dust treatment or chemical residue	Must be completely absent. Zero tolerance for residue of toxic substances.
Transferable stains from zinc concentrate, lead concentrate, copper concentrate, bauxite, ammonium nitrate, sulphur, paint, or other toxic residues	Must not transfer using the white glove test. Zero tolerance for transferable stain residue of toxic substances.
Loose organic material	Must be completely absent.
Loose inert or inorganic material	Must be completely absent.
Hard adhering cement	Acceptable.

8.2.2 Rust

All areas of the hold must be examined for rust. There are three main types of rust that the surveyor may find:

1. Oxidisation rust
2. Loose scale rust
3. Hard rust

Oxidation rust

This type of rust will typically form on bare metal surfaces and results from the bare metal reacting with water or oxygen. Oxidation rust will not flake off when struck or when light pressure from a knife is applied. Oxidation rust is acceptable.

Loose scale rust

It is important to differentiate such scale from other types of rust. Loose scale will break away when struck lightly with a chipping hammer or handheld scraper or when light pressure is applied with a knife blade or scraper under the edge of the scale. Levels of tolerance must be applied when assessing if the presence of loose rust scale will result in a vessel not passing survey.

Hard rust

Hard rust is generally acceptable when loading grain and may be referred to as adhering scale rust. The surveyor must satisfy themselves that the rust scale is hard and that there is no possibility of rust scale coming loose during the voyage or during normal cargo operations.

Criteria	Acceptable / Pass Standard
Loose scale rust	No loose scale rust is acceptable, however, a tolerance of up to 5 litres per hold may apply where cleaning cannot take place prior to the survey ending.
Oxidation rust	Must be assessed for loose rust scale. If loose rust scale is present, apply above standard.
Hard rust	Acceptable if no loose scale.
Transferrable oxidised rust stain	Nontoxic – acceptable.

8.2.3 Paint

One aspect that must be carefully examined by a surveyor is paint condition. Flaking or blistering paint with openings may potentially harbour residues from previous cargoes or rust. Loose paint flakes may also come away and contaminate the surface of the cargo.

Fresh paint, which has not cured may be soft, easily transferrable and emit an odour that may contaminate grain cargoes. To determine if the paint is soft and transferable, use the white glove test.

A paint scraper should be used to see whether paint will easily flake off.

There may be occasions where a non-compatible coating of paint has been applied, or the cargo hold has been painted in humid conditions. This can lead to extensive and ongoing paint flakes.

Criteria	Acceptable / Pass Standard
Flaking paint	No flaking paint is acceptable however a tolerance of up to 5 litres per hold may apply where cleaning cannot take place prior to the survey ending.
Blistering paint	Will usually result in flaking paint when disturbed – refer to flaking paint for acceptable standard.
Soft paint (easily removed)	Paint which is wet, produces an odour or a transferrable stain is not acceptable. Dry soft paint, which results in flaking paint – refer to above acceptable standard for flaking paint.
Wet paint	Not acceptable.
Transferrable paint stain	Not acceptable.
Paint which produces an odour	Not acceptable.

8.2.4 Odours

All holds intending to carry grain should be odour free and gas free. This includes odours from paint and cleaning chemicals. Persistent odours are not acceptable - there should not be a presence of any smell of a particular substance or of an unpleasant nature within the hold which continues after the hold has been vented with doors fully open for 30 minutes then closed for 30 minutes to an hour and reopened.

Toxic substances such as lead concentrate or strong-smelling cargo residues such as sulphur could contaminate a grain cargo and surveyors should be aware of previous cargoes and the cleaning undertaken by crew.

Criteria	Acceptable / Pass Standard
Persistent strong or toxic odours	Presence of any strong or toxic odour or smell from a particular substance or of an unpleasant nature should not be present after hatches have been open for 30 minutes.

8.2.5 Moisture

All holds and bilge wells must not have water or excessive moisture present.

Criteria	Acceptable / Pass Standard
Moisture, pooled water, wet stains, or leaking water	Any level of moisture which may cause wetting of the grain is unacceptable. There must be no pooling of water on any surface including tank tops and bilges.
Mould	Mould visible on any surface which is transferrable under the white glove test is not acceptable.

8.2.6 Unsanitary conditions

Holds should not contain any animal filth, rodent excreta, bird excreta, decaying animals or vegetable matter, sewage or other unsanitary conditions. There is also a zero tolerance for live or dead pests such as snails, mice, rats, or nesting birds. Any pests should be photographed and reported to the Vessel Chief Officer or Master immediately.

Any insects found should be reported to the AOs who will be responsible for action in relation to these.

Criteria	Acceptable / Pass Standard
Animal filth, rodent excreta, bird excreta, decaying animals or vegetable matter, sewage, or other unsanitary conditions	Not acceptable
Live or dead pests such as snails, mice, rats, or nesting birds	Not acceptable
Insects, dead or alive	Report to the Authorised Officers

8.3 Inspecting for structural damage and vessel structure

Whilst the Marine Surveyor may be only attending to conduct a survey to ascertain if the vessel is fit to load grain, it is still appropriate to notify the Chief Officer or Master of any serious safety concerns with regards to the structure of the ship.

Damage to structures within the holds may cause the vessel to fail the survey if the Surveyor believes that such damage could lead to contamination of the grain cargo. (E.g. Broken ladders that are “just hanging on” or air vent pipes/sounding pipes within the hold that have visible holes and/ or tears).

Corroded / broken piping such as ladder handrails and ladder protectors can be full of previous cargo residues and/or rust scale. As such they pose a risk to any grain cargoes. It is imperative that corroded and/or torn pipes be cut off or repaired prior to loading grain.



9 FINALISING THE SURVEY

Most often, the crew can complete any minor rectifications while the Marine Surveyor is onboard, after which the ship can be passed, but if some difficult cleaning must be undertaken the vessel will be failed.

On most occasions the Marine Surveyor and AO come to the same conclusion.

The Marine Surveyor is representing their client – the shipper, owner or agent and the AO is effectively representing the Australian Government. These are two distinct roles, but they should work together to achieve the common goal objective.

9.1 What happens if the vessel is fit to load grain?

Once the marine surveyor has completed the survey and is satisfied the vessel meets the required standard for loading grain, the FTL Certificate can be issued. If minor work is still to be completed to meet the required standard, the certificate must not be issued until all the work is complete.

Once the FTL Certificate is complete, a copy is given to the AO, the Master of the vessel and a copy forwarded to the appointing party or their agent. The AO is unable to issue their bulk vessel approval until this FTL Certificate is received.

The role of Marine Surveyor is then considered to be effectively complete, and they may notify crew of their intention to leave and disembark the vessel.

9.2 What happens if the vessel is not fit to load grain?

If the crew have been instructed by the surveyor to clean areas during the survey this cleaning must be completed to the surveyors satisfaction before the survey is complete. Where cleaning has not been finalised prior to the surveyor completing the survey a fitness to load certificate must not be issued and the surveyor should fail the vessel.

The marine surveyor does not need to consult with the AO before making this decision. The AO is assessing for phytosanitary requirements but will need to know if the marine surveyor finds major deficiencies.

If a vessel fails the survey, a notice of failure or hold condition report is issued to the Master. While the surveyor is under no obligation to provide instructions on how to remedy deficiencies it is good practice to issue a report or notice that highlights the reasons for the vessel's failure.

A sample hold condition report is included in [Appendix 5](#) of this standard.

Once the Master has been issued this notice, the Surveyor must notify the appointing party or their agent. The role of Marine Surveyor is then considered to be complete for now, and they may notify crew of their intention to leave and disembark the vessel.

Once the deficiencies have been rectified, the appointing party or their agent will request the Marine Surveyor to re-survey the vessel. If during the re-survey, the vessel still does not meet the required standard the Marine Surveyor will advise the Master and follow the same process again. There is no limit on the number of re-inspections undertaken by the Surveyor until the vessel is passed as fit to load grain.

When re-surveying the vessel, the marine surveyor must not only examine the areas of deficiency in the last survey, but also check for any new contamination which may be the result of dislodged residue, use of cleaning chemicals or water, insect or pest treatments or any other changes to the holds since initial survey.

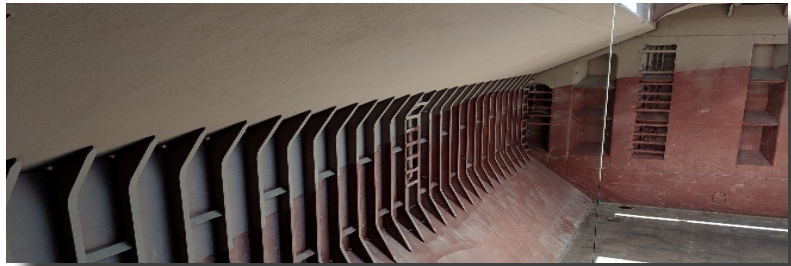
If the vessel is fit to load grain at the conclusion of the Marine Surveyors re-survey, the Surveyor can follow the process outlined in section 9.1 above.



10 MARINE SURVEYOR RECORDS

Once the survey has been completed, the vessel has passed and the FTL Certificate has been issued, the Marine Surveyor must keep all records including photographs taken as part of the survey for a period of 5 years.

These records may be called upon by the DAFF or the Surveyors client in the instance of an issue with contamination of the loaded grain or by AIMS in undertaking an internal audit of Accredited Marine Surveyors records.



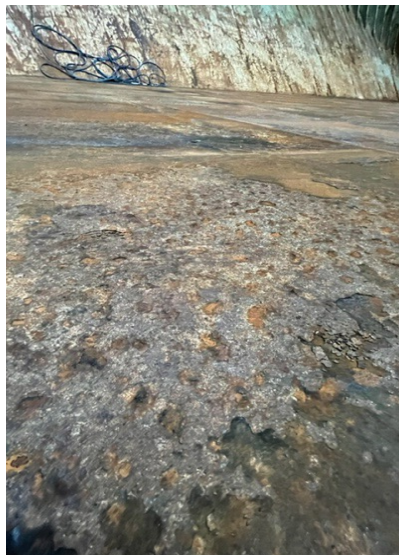


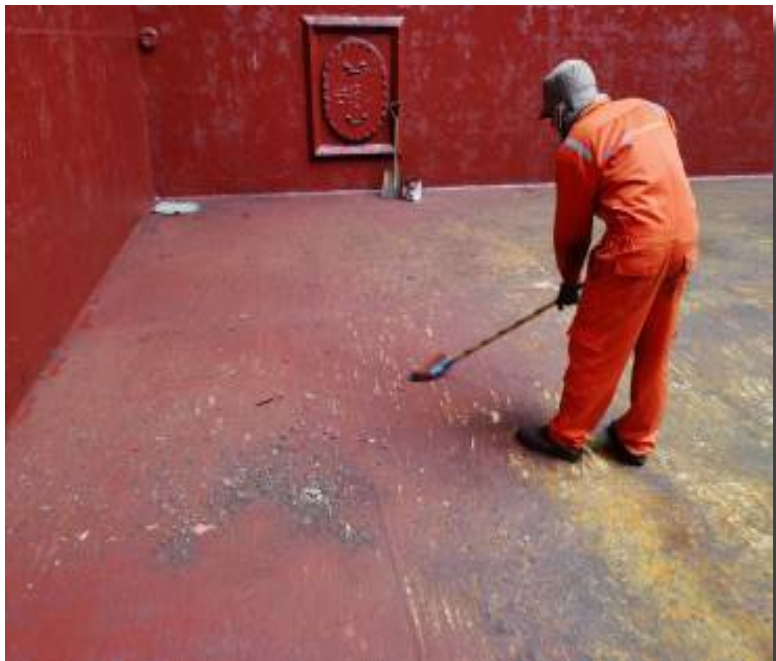
Transferable Stain



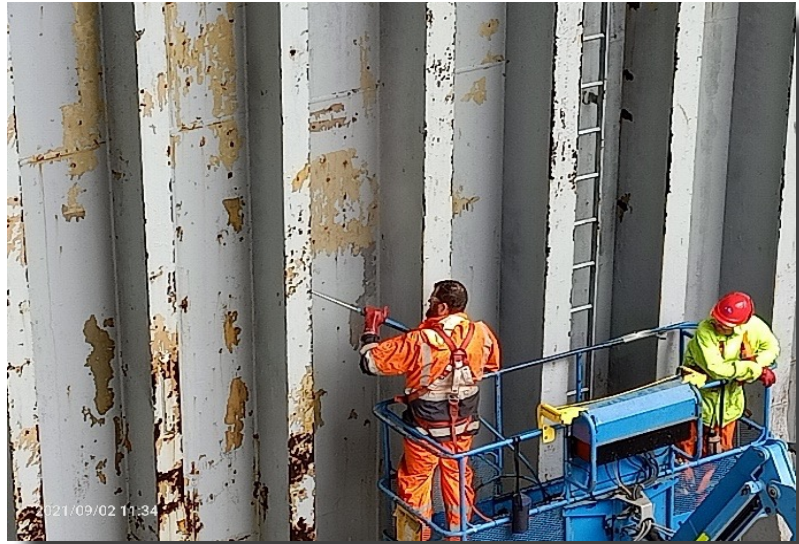


Loose Scale Rust





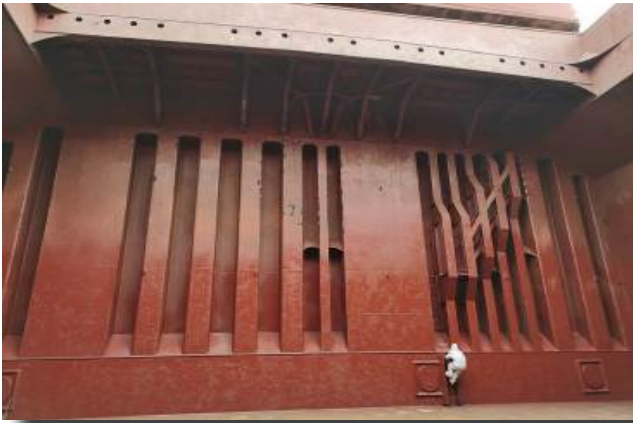




Flaking And Blistering Paint



Paint In Acceptable Condition



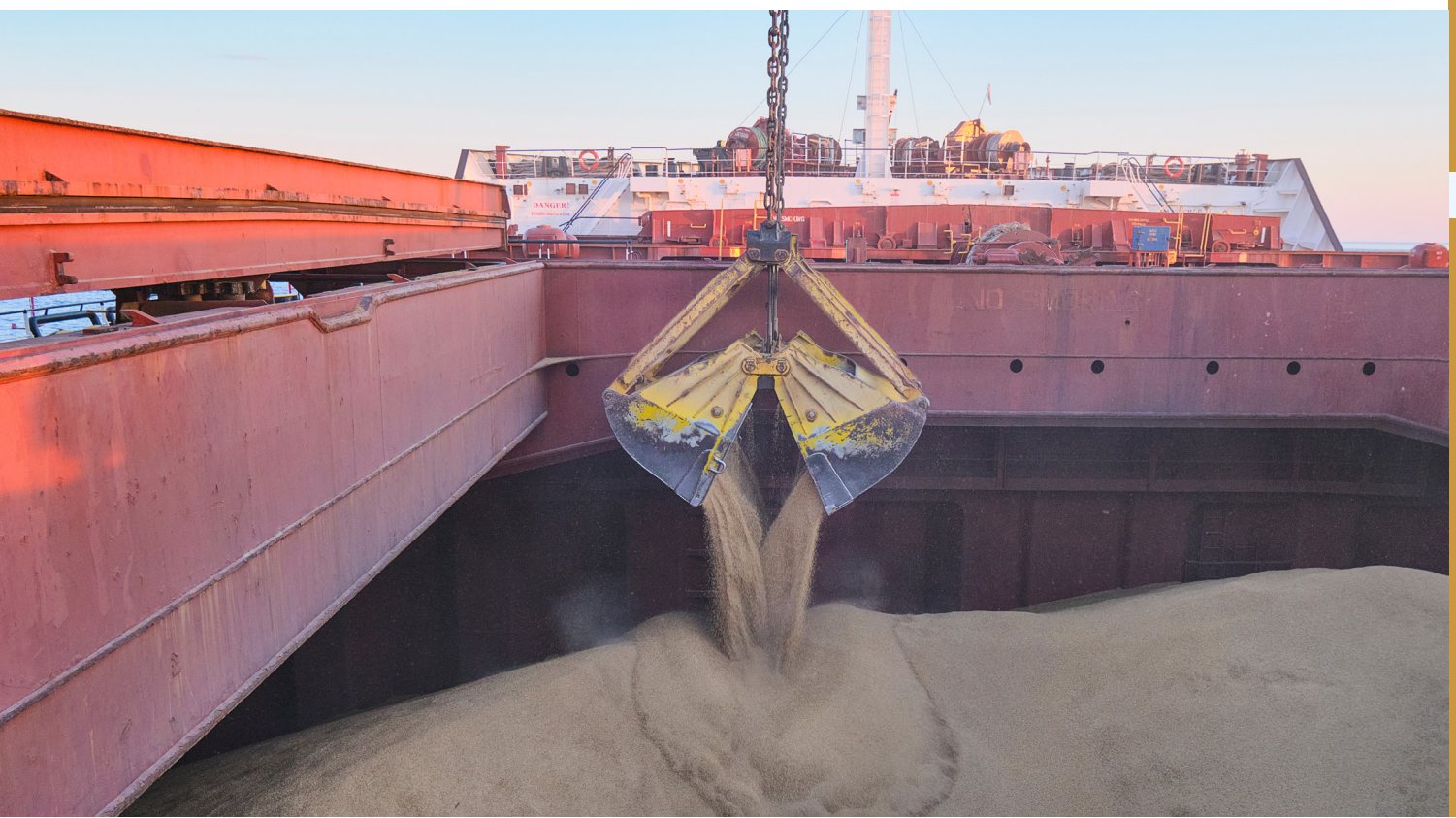
Structural Damage



11 APPENDICES AND REFERENCE MATERIAL

The following acknowledgements are made to reference materials used in preparation of this standard:

1. Export Control Act 2020
2. Export Control (Plants and Plant Products) Rules 2021
3. Australasian Institute of Marine Surveyors Common Survey Code V3; 2009
4. Australian Maritime Safety Authority – Marine Order 33 (Cargo and cargo handling – grain); 2016
5. Australian Maritime Safety Authority - Marine Order 42 (Carriage, stowage and securing of cargoes and containers); 2016
6. The Standard – Standard Cargo; Charles Taylor & Co Limited; 2011
7. IMO International Code for the Safe Carriage of Grain in Bulk (International Grain Code)
8. Department of Agriculture – Volume 10: Inspection of Empty Bulk Vessels: ORAN Pilot; 2016
9. Australian Grain Industry Code of Practice for the Management of Grain along the Supply Chain; Grain Trade Australia; May 2018
10. Standards for Empty Shipping Container Inspection – Version 2; May 2021



APPENDIX 1

From the 1st of July 2022, Marine Surveyors must hold at least one combination of the following qualification and experience options:

One of the below Qualifications:

1. Master Class 1 (Unrestricted) Certificate OR Master grade Certificate of Competency as outlined under Schedule 1 of Marine Orders 71 (Masters and deck officers) 2014 made under the Navigation Act 2021
2. Advanced Diploma of Maritime Operations (Master Unlimited)
3. Diploma or Advanced Diploma of Marine Surveying with the modules of dry bulk cargo and grain operations
4. Diploma of Maritime Operations (Watchkeeper Deck) with modules from dry bulk cargo and grain operations

Plus have either of the following Experience:

1. 12 months served on a bulk carrier with at least 6 months in the capacity of Chief Officer
2. 3 years' experience as a marine surveyor of bulk carriers

Prior to application, applicants must have also performed at least 10 bulk vessel surveys in no less than 2 months and no more than 2 years. They must have been accompanied by another accredited marine surveyor (or a person who was a qualified Marine Surveyor prior to commencement of the AGSA scheme).

If these 10 supervised ship surveys were completed more than 3 years ago, Marine Surveyors will also need to provide evidence they performed at least 3 bulk vessel surveys in the most recent 3- year period.

Acceptable evidence of ship surveys may be:

1. Your name as an attending surveyor listed on the Fitness to Load (FTL) certificate that is provided to the authorised officer at the completion of the survey
2. Submission of a list of your ship surveys which must include:
 - Date
 - Ships Name
 - Grain Type
 - Port of Survey
 - Attending FTL Surveyors name and signature
 - Masters signature and ships stamp

APPENDIX 2

When applying to AIMS for accreditation, applicants must provide the following evidence:

Qualification requirement evidence

1. Certified copy of your qualification
2. If option requires dry bulk cargo and grain operation modules, also provide a copy of your transcript showing completion of the relevant modules

Experience requirement evidence

One of the following provided as applicable to demonstrate the relevant experience requirement:

1. Sea service record
2. The following evidence supported by an Australian Commonwealth Statutory Declaration
 - Discharge notices
 - Evidence of sea service
 - Employer or client reference
 - Resume
3. The following evidence for 3 years marine surveying experience
 - 3 verifiable Fitness to Load surveys for each of the previous 3 years

APPENDIX 3

Marine Surveyor Accreditation Fee Schedule As of the 1st of July 2022

Fee Type	Amount	Payable
Accreditation application fee	\$150	At the time of accreditation application
Initial accreditation fee *	\$250	At the time of accreditation approval. Accreditation will not be activated until this fee is paid
Yearly accreditation fee	\$250	Payable prior to the 1 st of July each year upon renewal of accreditation

*If an initial accreditation application is received part way through an accreditation year the initial fee may be applied at a pro-rata rate.

CERTIFICATE OF FITNESS TO LOAD GRAIN

THIS IS TO CERTIFY that the

<Name of Vessel>

Registered at:	xxxxxxx
IMO Number:	xxxxxxx
GRT:	xxxxx
Place of Survey:	<Name and Location of Port>

Has been surveyed by the undersigned Accredited marine surveyor and has been approved as suitable for loading the prescribed goods in the following holds/spaces, for the voyage described:

Holds: <insert Hold Numbers>

This Fitness to Load Certificate has been issued as prescribed in the Export Control (Plants and Plant Product) Rules – 2021 and the Australian Stowage Requirements for Vessels Loading Grain.

The certificate confirms that the vessel has been surveyed in accordance with the prescribed standards under the AGSA scheme and that at the time of the inspection the vessel was deemed free of conditions that could result in contaminating, wetting or imparting an odour on the prescribed goods and that the vessel meets the approved standards required to carry the prescribed goods.

Time and Date:
0000 hrs (LT) <INSERT DATE>
0000 hrs (GMT) <INSERT DATE>

<p>NOTE: This Certificate is not an approval to start loading or a Certificate of Seaworthiness. Final approval to be determined by Australian Department of Agriculture and Australian Maritime Safety Authority (AMSA) representatives.</p>

<PRINT THE NAME OF THE SURVEYOR>	<ACCREDITATION NUMBER>
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_____ <SIGNATURE>

COMPANY NAME _____

APPOINTING PARTY _____

SHIPPER/EXPORTER _____

HOLD CONDITION REPORT

This report is issued only when cleaning is required following an inspection by an Accredited Marine Surveyor

<Name of Vessel>

Has been surveyed by the undersigned Accredited Marine Survey on <insert date> and the following has been found.

- a. Old cargo residues of <insert cargo> likely to contaminate the grain cargo are present in the following areas:

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.....
.....
.....
.....
.....

- b. Non-organic contaminants of <insert type of contaminants> likely to contaminate the grain cargo are present in the following areas:

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.....
.....

- c. Bilge suction to be tested in holds:

- d. Additional requirements:

.....
.....

.....

<Insert Name>

Accredited Marine Surveyor

CERTIFICATE OF GUARANTEE.

OPERATION OF BILGE PUMPS AND NON-RETURN VALVES FOR VESSEL CARGO HOLDS

THIS IS TO CERTIFY that in the absence of a physical test being carried out, the undersigned Marine Surveyor has requested the vessel to guarantee the operation of bilge pumps and non-return valves for the relevant cargo holds.

VESSEL _____
 PORT _____
 BERTH _____
 CARGO _____
 Date & Time _____
 Cargo Holds _____

The vessel is also advised that the operation and recent testing of bilge pumps and non-return valves for the cargo holds are the responsibility of the vessel.

The above is in accordance with the Australian Stowage Requirements for Vessels Loading Grain.

Marine Surveyor _____ Name _____
 Signature _____ Rank _____
 Date _____ Signature _____
 Vessel Stamp



12 DEFINITIONS AND ABBREVIATIONS

Act	Export Control Act 2020
Accredited Marine Surveyor	Marine Surveyor accredited under the requirements of AIMS as outlined in this standard
AGSA	Accredited Grain Surveyor Assurance Scheme
AIMS	Australasian Institute of Marine Surveyors
AMSA	Australian Maritime Safety Authority
AO	Authorised Officer – individuals trained and assessed by the DAFF who are appointed as Australian Government officials under the Act
Bulk Vessel	Ship intended to transport prescribed plants or plant products in bulk
Contaminant	Any foreign matter whether organic or inorganic
DAFF	Department of Agriculture, Fisheries and Forestry
FTL	Fitness to Load Certificate also called Marine Surveyor Certificate
Plant Rules	Export Control (Plants and Plant Products) Rules 2021
PPE	Personal Protective Equipment
Standard	Standard for Empty Bulk Vessel Surveys by Accredited Marine Surveyors
Survey	The inspection process carried out on a bulk vessel by a Marine Surveyor to assess a vessels fitness to load
Surveyor	An Accredited Marine Surveyor
WHS	Workplace Health and Safety

