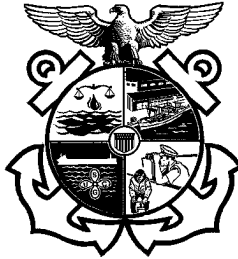


# United States Coast Guard



## Hull Tankship (HT) Inspector Job Aid

<b>Name of Vessel</b>		
<b>Official Number</b>	<b>Activity Number</b>	
<b>Date Completed</b>	<b>Class</b>	
<b>Location</b>		
<b>Vessel Built in Compliance with SOLAS:</b> <b>60</b> <b>74</b> <b>74/78</b> <b>NA</b>		
<b>Route</b>		
<input type="checkbox"/> Oceans	<input type="checkbox"/> Limited Coastwise	<input type="checkbox"/> Lakes / Bays / Sounds
<input type="checkbox"/> Coastwise	<input type="checkbox"/> Great Lakes	<input type="checkbox"/> Rivers
<b>Inspection Type</b>		
<input type="checkbox"/> Inspection for Certification (COI)	<input type="checkbox"/> Annual	
<input type="checkbox"/> Periodic	<input type="checkbox"/> Drydocking	
<b>Inspectors</b>		
1. _____	3. _____	
2. _____	4. _____	

## **Use of Hull Inspector (HT) Job Aid:**

This Job Aid is intended for use by qualified Coast Guard HT Marine Inspectors for use on U.S. flagged vessels during hull exams on vessels regulated under Subchapters D.

The tasks contained within this Job Aid are not intended to limit the scope or depth of inspection. A checked box should be a running record of what has been inspected and does not imply that the entire system has been inspected or that all or any items are in full compliance. This Job Aid does not constitute part of the official inspection record.

This document does not establish or change federal laws or regulations and references given are only general guidance to the Marine Inspector. The Marine Inspector will need to refer to other publications such as the International Maritime Organization (IMO) resolutions, U.S. Codes of Federal Regulation (CFR), USCG Navigation and Vessel Inspection Circulars (NVIC) or locally produced guidance during the course of inspection for specific regulatory references. Not all items in this Job Aid are applicable to all vessels.

***NOTE:*** *Guidance on how to conduct inspections of U.S. flagged deep draft vessels can be found in MSM Volume II, Section B: Domestic Inspection Programs.*

### **Pre-inspection Items**

- Review MISLE records
- Obtain copies of forms to be issued

### **Post-inspection Items**

- Issue letters/certificates to vessel
- Complete MISLE entries within 48 hours

# Table of Contents:

## **Administrative Items**

IMO Applicability Dates .....	1
Involved Parties & General Information .....	4
Vessel Information .....	5

## **Certificates and Documents**..... 6

## **Inspection Items**..... 9

Pre-Inspection .....	9
Dockside Assessment .....	11
Certificates and Documents .....	11
Logs and Manuals .....	21
Security .....	26
Bridge and Navigation .....	28
General Health and Safety .....	33
Lifesaving Equipment .....	37
Firefighting Systems .....	42
Electrical Systems .....	54
Structural & Watertight Integrity .....	57
Pollution Prevention .....	58
Topside Equipment .....	59
Cargo Systems .....	61
Helo Deck .....	69
Emergency Drills .....	70
Internal Structural Examination .....	72
Welding Repair .....	72
Nondestructive Testing .....	75
Follow Up Action .....	80

## **Appendices**

Vessel Layout .....	83
Recommended U.S. Vessel Deficiency Procedures .....	84
Deficiency Summary Worksheet .....	85
Notes .....	86
Conversions .....	88

## Section 1: Administrative Items

### IMO Applicability Dates:

Reference	Dates
<b>1974 SOLAS (2020 Consolidated)</b>	
Chapter (I)	All Ships
Chapter (II-1)	01 JAN 09
Chapter (II-2)	01 JUL 02
Chapter (III)	01 JUL 98
Chapters (IV-XII)	All Ships
<b>1974 SOLAS (2009 Consolidated)</b>	
Chapter (II-1)	01 JAN 09
Chapter (II-2)	01 JUL 02
Chapter (III)	01 JUL 98
<b>1974 SOLAS (2004 Consolidated)</b>	
Chapter (II-1)	01 JUL 86
Chapter (II-2)	01 JUL 02
Chapter (III)	01 JUL 98
<b>1974 SOLAS (2001 Consolidated)</b>	
Chapter (II-1)	01 JUL 86
Chapter (II-2, III)	01 JUL 98
<b>1974 SOLAS (1997 Consolidated)</b>	
Chapters (II-1, II-2 Part A,C,D, III)	01 JUL 86
Chapter (II-2 Part B)	01 OCT 94
<b>1974 SOLAS (1981 Amendments)</b>	
Chapters (II-1, II-2, III)	01 SEP 84
<b>1974 SOLAS (Unamended)</b>	25 MAY 80
<b>1960 SOLAS</b>	Prior to 25 MAY 80

<p><b>74 SOLAS 2020</b> Consolidated contains all amendments entered into force up-to 01 Jul 14. The following Amendments (resolutions) have entered into force since it was published. <a href="http://www.imo.org">www.imo.org</a></p> <p>MSC 365(93)</p> <p>MSC 366(93)</p>	<p>01 JUL 15</p> <p>01 JUL 15</p>
<p><b>FSS CODE (2015 edition)</b></p>	
<p><b>LSA Code (2017 edition)</b></p>	
<p><b>ITC 1969</b></p>	<p>18 JUL 82</p>
<p><b>Load Line 1966</b></p> <p><b>Load Line 88 Protocol</b></p>	<p>21 JUL 68</p> <p>03 FEB 00</p>
<p><b>Load Line (2005 edition)</b> contains all amendments entered into force up-to 2003 Amendments. The following Amendments (resolutions) have entered into force since it was published. <a href="http://www.imo.org">www.imo.org</a></p> <p>MSC 172(79)</p> <p>MSC 223(82)</p> <p>MSC 270(85)</p> <p>MSC 329(90)</p> <p>MSC 356(92)</p> <p>MSC 375(93)</p>	<p>01 JUL 06</p> <p>01 JUL 08</p> <p>01 JUL 10</p> <p>01 JAN 14</p> <p>01 JAN 15</p> <p>01 JAN 16</p>

<p><b>MARPOL 2017</b> Consolidated contains all amendments entered into force up-to 01 JAN 2017 Amendments. The following Amendments (resolutions) have entered into force since it was published. <a href="http://www.imo.org">www.imo.org</a></p>	
<p><b>STCW (2017 edition)</b> contains all amendments entered into force up-to 2017 Amendments. The following Amendments (resolutions) have entered into force since it was published. <a href="http://www.imo.org">www.imo.org</a></p>	<p>28 APR 84</p>

**Involved Parties & General Information:**

Vessel's Representative:  _____
_____
Phone Numbers:

Owner
<input type="checkbox"/> No Change

Operator – Listed on DOC (if applicable) or COFR
<input type="checkbox"/> No Change

**Vessel Information:**

Classification Society	
ISM Issuer: Same as above? <input type="checkbox"/> Yes <input type="checkbox"/> No    If not the same, which Recognized Organization? _____	
<i><b>NOTE:</b> The period of validity for ISM documents should correspond to the following list. If they do NOT, ISM documents should be further investigated.</i>	
<input type="checkbox"/> 5 years = Full term (SMS and DOC)	<input type="checkbox"/> 12 months = Interim (DOC)
<input type="checkbox"/> 6 months = Interim (SMC)	<input type="checkbox"/> 5 months = Short term (SMC)
Last Drydocking Date	Next Drydocking Date
Location of Last Drydocking	
Call Sign	<input type="checkbox"/> No Change
Gross Tons	<input type="checkbox"/> No Change
Built Date (use delivery date)	<input type="checkbox"/> No Change
Overall Length (in feet)	<input type="checkbox"/> No Change



## Certificates and Documents

Name of Certificate	Issuing Agency	ID #	Port Issued/ Country	Issue Date	Exp. Date	Endors. Date
<b>Certificate of Documentation</b> <input type="checkbox"/> No Change	USCG					
<b>Classification Document</b> <input type="checkbox"/> No Change						
<b>Certificate of Financial Responsibility (COFR)</b> <input type="checkbox"/> No Change	USCG					
<b>FCC Station License</b> <input type="checkbox"/> No Change	FCC					
<b>FCC Safety Certificate</b> <input type="checkbox"/> No Change	FCC					
<b>FCC Marine Operator's Permit</b> <input type="checkbox"/> No Change	FCC					

Name of Certificate	Issuing Agency	ID #	Port Issued/ Country	Issue Date	Exp. Date	Endors. Date
<b>Cargo Ship Safety Construction</b> <input type="checkbox"/> No Change						
<b>Cargo Ship Safety Equipment</b> <input type="checkbox"/> No Change	USCG					
<b>Cargo Ship Safety Radio</b> <input type="checkbox"/> No Change	USCG					
<b>International Load Line (ILLC)</b> <input type="checkbox"/> No Change						
<b>International Tonnage (ITC)</b> <input type="checkbox"/> No Change						
<b>ISM Document of Compliance (DOC)</b> <input type="checkbox"/> No Change						
<b>ISM Safety Management (SMC)</b> <input type="checkbox"/> No Change						

Name of Certificate	Issuing Agency	ID #	Port Issued/ Country	Issue Date	Exp. Date	Endors. Date
<b>International Oil Pollution Prevention (IOPP)</b> <input type="checkbox"/> No Change						
<b>International Sewage Pollution Prevention (ISPP)</b> <input type="checkbox"/> No Change						
<b>International Air Pollution Prevention (IAPP)</b> <input type="checkbox"/> No Change						

## Section 2: Inspection Items

### Pre-Inspection

- 1. Research vessel details in MISLE (Marine Information for Safety and Law Enforcement) database
  - Determine authority, jurisdiction, applicable regulations and enrollment in alternate inspection programs (ACP, SIP, MSP, etc.) 46 USC 3301  
46 CFR 30.01-5,71.15 & 91-15-5
  - Locate vessel in MISLE MSM I/12.G.5
  - Verify documents are current in MISLE MISLE User Guide  
MSM II/B.1.C.2
  - Review history (narratives, deficiencies & special notes) MSM II/B.1.C.2
  - Verify status of user fees MSM II/B.1.C.2
  - Enter title and point(s) of contact MSM II/B.1.C.2
  - Verify status of Certificate of Financial Responsibility (e-COFR) 33 CFR 138.15 & .30(c)  
33 CFR 138.65
  - Generate new activity MSM I/12.G
  - Prepare folder and required documents MPS-PR-SEC-04 & 05
  
- 2. Coordinate inspection with vessel's representative
  - Verify vessel's representative MPS-PR-SEC-01
  - Determine location and time of inspection MPS-PR-SEC-01
  - Discuss inspection expectations 46 CFR 31.10 & 71.20 & 25  
46 CFR 91.25 & .27
  - Verify vessel's owner/operator information MPS-PR-SEC-04
  - Verify vessel's classification society information MPS-PR-SEC-04
  - Review outstanding conditions from third party reports and/or CG-835s MPS-PR-SEC-04
  - Review repairs and alterations 46 CFR 31.10-22 & -25  
46 CFR 71.55

- 1. Mitigate potential hazards encountered during an inspection
  - Recognize potential hazards encountered during an inspection
 NFFA 306  
NFFA 350
  - Determine confined spaces
 MSM I/10 App.A  
NFFA 350
  - Determine if inspection scope will require a Marine Chemist certification for space entry
 29 CFR 1915, Part B  
MSM II/A.5.H
  - Verify Marine Chemist has been scheduled for exam
 MSM I/10 App. A
  - Prepare necessary personal protective equipment for exam
 MSM I/10 App. A  
MSM I/8.A.3  
Gas Detector Operator's Manual
  - Review CG policy for when to leave a space due to hazardous condition
 MSM I/10 App. A
  
- 2. Review periodic gauging of tank vessel mid-bodies
  - Verify need for initial or periodic regauging
 46 CFR 31.10-21a (a) & (b)
  - Verify location of mid-body survey gauging
 46 CFR 31.10-21a(a) & (c)
  - Verify results, engineering analysis and repair proposal(s)
 46 CFR 31.10-21a(d) & (f)
  - Verify availability of permanent approved copies
 46 CFR 31.10-21a(e)

## Dockside Assessment

- 3. Initial vessel visual examination (upon arrival)
  - Verify presence of anchor(s) 46 CFR 32.15-15  
46 CFR 77.07
  - Verify Load Line markings 46 CFR 31.25-1, 78.50-15,  
97.40-15  
46 CFR 42.07-5, .13-25, -35 & -  
40
  - Verify IMO number SOLAS 20 XI-1/3
  - Verify draught (draft) marks 46 CFR 32.05-1  
46 CFR 78.50-10 & 97.40-10
  - Verify name, hailing port and  
official number markings 46 CFR 32.05-10  
46 CFR 78.50-5 & 97.40-5
  - Evaluate hull for signs of  
pollution/illegal discharge 33 USC 1321  
33 CFR 151.10(b)
  - Evaluate hull condition 46 CFR 31.10-15(b)  
46 CFR 71.25-10 & 91.25-10
  - Examine means of embarkation  
(gangway/ladders) 29 CFR 1915.74(a)(6)  
46 CFR 32.90-1 & 78.90-1
  - Examine cargo ports and other  
similar openings 46 CFR 42.15-55  
ICLL I/21
  - Examine sidescuttles  
(windows/skylights) 46 CFR 42.15-65  
ICLL I/23

## Certificates and Documents

- 4. Review Certificate of Inspection (COI)
  - Verify presence of original 46 CFR 31.05-5  
46 CFR 71.01-5
  - Validate manning 46 USC 81, 83 & 87  
46 CFR 15.501
  - Validate route(s) and service 46 CFR 31.05-1(b)  
46 CFR 71.20-15
  - Validate fire fighting and lifesaving  
equipment 46 CFR 31.10-15(b)
  - Validate cargo carriage (D & I only) 46 CFR 31.05-1(b)  
46 CFR 90.05-35
  - Review amendment(s) MSM II/A.3.J
  - Verify pressure vessel date(s) 46 CFR 31.30-1, 70.20-1  
46 CFR 91.25-35

- 5. Review Certificate of Documentation (COD)
  - Verify presence of original 46 CFR 67.313
  - Verify contact information is correct 46 CFR 67.321
  - Verify endorsement(s) for current service(s) 46 CFR 67.17 & .19
  - Verify validity 46 CFR 67.7 & .9  
46 CFR 67.161
  - Confirm renewal of endorsement 46 CFR 67.163
  
- 6. Review Merchant Mariner Credentials (MMCs), medical certificates & TWIC
  - Verify presence of original credentials 46 CFR 10.203(c)
  - Verify validity of credentials 46 CFR 10.205
  - Ensure credentials, including STCW endorsements, meet COI manning requirements 46 CFR 15.515 & 31.05-1(b)  
46 CFR 71.01-2 & 91.01-2
  - Verify number of GMDSS Operators 47 CFR 80.1073  
SOLAS 20 IV/16 & STCW IV/2
  - Verify Radar Operator endorsement 46 CFR 15.815  
46 CFR 11.480
  - Verify Tankerman endorsement(s) 46 CFR 15.860
  - Verify Vessel Security Officer (VSO) endorsement 33 CFR 104.215(c)  
STCW VI/5
  - Examine medical certificates 46 CFR 10.301  
STCW I/9
  - Verify Transportation Worker Identification Credential (TWIC) 46 CFR 10.203(b) & (d)
  
- 7. Examine maintenance and service records (lifesaving & fire fighting)
  - Review fire fighting service report(s) 46 CFR 31.10-18(a) & 78.17-80  
46 CFR 97.15-60(b)
  - Review lifesaving service report(s) 46 CFR 31.36-1 & 70.28-1  
46 CFR 90.27-1 & 199.190

- 8. Examine muster lists and emergency instructions
  - Parent cites
 

	46 CFR 31.36-1
	46 CFR 70.28-1
  - Verify muster lists and emergency instructions are posted
 

	46 CFR 199.80
	SOLAS 20 III/8
  - Verify information on muster lists and emergency instructions
 

	46 CFR 199.80
	SOLAS 20 III/37 3-6
  
- 9. Examine stability letter and booklet
  - Parent cites
 

	46 CFR 31.10-30 & 72.30-1
	46 CFR 91.55-5(c)
  - Verify stability letter posted
 

	46 CFR 170.120
	46 CFR 35.08-1 & 78.12-1
  - Verify stability requirements are documented
 

	46 CFR 170.110
--	----------------
  
- 10. Review certificates under International Convention for Safety of Life at Sea, 1974
  - Parent cites
 

	46 CFR 31.40
	46 CFR 71.75
  - Verify validity
 

	SOLAS 20 I/6
	NVIC 02-95 Encl. 1/G & 3/F
  - Verify endorsements (notations)
 

	SOLAS 20 I/6
	NVIC 02-95 Encl. 1/G & 3/F



- 11. Review International Safety Management Document of Compliance (DOC) and Safety Management Certificate (SMC)
  - Verify presence of DOC (copy) 33 CFR 96.330(a) & (d)  
SOLAS 20 IX/4.2
  - Verify DOC identifies company and vessel type 33 CFR 96.330(e)  
ISM Code B/13.3
  - Verify DOC validity with annual verifications 33 CFR 96.330(f)  
ISM Code B/13.4
  - Verify presence of SMC 33 CFR 96.340(d)  
SOLAS 20 IX/4.3 & ISM Code B/13.7
  - Verify vessel particulars listed on SMC match DOC ISM Code Appendix
  - Verify intermediate verification or additional verifications are complete 33 CFR 96.340(e)(2)  
IMO Res A.1071(28)
  - Verify extension or renewal endorsements 33 CFR 96.340(f)  
IMO Res A.1071(28)
  
- 12. Review International Ships Security Certificate (ISSC) & Continuous Synopsis Record (CSR)
  - Verify vessel particulars SOLAS 20 XI-1/5
  - Verify Company name and address match International Safety Management documents SOLAS 20 XI-1/5.3
  - Verify ISSC verification type with date ISPS Code A/19
  - Verify ISSC endorsement (Intermediate or additional) ISPS Code A/19.1.1
  - Verify additional ISSC verifications, extensions, renewals or expiry advancements are completed ISPS Code A/19.1.1  
ISPS Code A/19.3.4
  - Verify CSR is present and valid SOLAS 20 XI-1/5
  - Verify CSR information matches ISSC SOLAS 20 XI-1/5

13. Review International Oil Pollution Prevention Certificate (IOPP) & Form A
- Verify vessel particulars MARPOL I/9  
MARPOL I/Appendix II
  - Verify vessel type is accurate MARPOL I/2  
MARPOL I/9
  - Verify annual, intermediate, extension renewal, or change in anniversary date 33 CFR 151.17  
MARPOL I/6
  - Verify record of construction and equipment 33 CFR 151.23  
MARPOL I/9
  - Verify control requirements for machinery bilge and fuel oil tanks identified MARPOL I/14  
MARPOL I/16
  - Verify retention and disposal requirements for oily bilge water holding tanks 33 CFR 151.25  
MARPOL I/12
  - Verify standard discharge connection requirement 33 CFR 155.420 & .430  
MARPOL I/13
14. Review International Air Pollution Prevention Certificate (IAPP) and Supplement Record of Construction and Equipment
- Verify vessel particulars on the Record of Construction and Equipment MARPOL VI/8  
MARPOL VI/Appendix I
  - Verify annual, intermediate, renewal, repair and extension endorsements and/or change in anniversary date MARPOL VI/5  
MARPOL VI/8
  - Verify ozone depleting substances identified MARPOL VI/12
  - Verify Nitrogen Oxide emission sources identified MARPOL VI/13
  - Verify Sulphur Oxide (fuel oil) requirements identified MARPOL VI/14  
CG-CVC Policy Ltr 12-04
  - Verify incinerator installation identified MARPOL VI/16
  - Verify validity of alternatives or equivalents MARPOL VI/4



- 18. Verify compliance with Vessel General Permit (VGP)
  - Verify Notice of Intent (NOI) has been submitted VGP 1.5.1.1 & 10 VGP Table 1
  - Verify compliance with ballast water record keeping requirements 33 CFR 151.2070 VGP 4.3
  - Verify noncompliance & reportable quantity reports have been submitted VGP 4.4.1 VGP 4.4.2
  - Verify inspections, monitoring & record keeping VGP 4.1, 4.2 & 4.3 CG-543 Policy Ltr 11-01
  
- 20. Review drug and alcohol program compliance
  - Verify compliance with required Employee Assistance Program (EAP), including education and training 46 CFR 16.401
  - Verify presence and currency of drug and alcohol testing equipment 46 CFR 4.06-15
  - Verify training of designated testing equipment crewmen 46 CFR 4.06-20(a)(3)
  - Verify crew are enrolled in a drug testing program 46 CFR 16.210 & .230
  
- 21. Review Dangerous Cargo Manifest
  - Verify presence 49 CFR 176.30 SOLAS 20 VII/7-2
  - Verify contents 49 CFR 176.30 SOLAS 20 VII/7-2
  - Confirm location of dangerous cargo with stowage plan 49 CFR 176.30 SOLAS 20 VII/7-2
  
- 22. Review Federal Communications Commission Bridge-to-Bridge Certificate
  - Verify presence 47 CFR 80.1001
  - Verify validity 47 CFR 80.1005
  - Verify contents 47 CFR 80.1005
  - Verify log entries 47 CFR 80.409

- 23. Review Federal Communications Commission Station License
  - Verify presence 47 CFR 80.13
  - Verify validity 47 CFR 80.25
  
- 24. Review Federal Communications Commission Safety Radiotelephony Certificate
  - Verify presence 47 CFR 80.59(a)(2)
  - Verify validity 47 CFR 80.59
  - Verify contents 47 CFR 80.59
  
- 25. Review Load Line Certificate (International/Coastwise)
  - Parent cites 46 CFR 31.25-1  
46 CFR 72.01-5
  - Verify presence and type 46 CFR 42.03-5  
46 CFR 42.07-5
  - Verify validity 46 CFR 42.07-45  
ICLL Article 15
  - Verify proper certificate form 46 CFR 42.07-45(e)  
ICLL Article 18
  - Confirm load line observed on hull matches certificate 46 CFR 42.07-5(b)  
ICLL I/9
  - Verify Record of Conditions of Assignment (Form LL.11) is present and validates issued Load Line 46 CFR 42.09-15
  
- 26. Review Tonnage Certificate (International (ITC)/Domestic)
  - Verify presence 46 CFR 69.3  
46 CFR 69.11 & .69
  - Verify validity 46 CFR 69.15
  - Verify correct measurement system 46 CFR 69.11  
NVIC 11-93
  - Verify vessel particulars remain valid 46 CFR 69.55  
46 CFR 69.105

27. Review International Anti-Fouling System (IAFS) certificate & Record of Anti-Fouling System
- Verify vessel particulars IMO Res MEPC.208(62)2011
  - Verify COI has Anti-Fouling endorsement or, if not required, IAFS Certificates MSM II/B.3.J
  - Verify records from manufacturer & shipyard(s) where coatings were applied AFS Annex 4 Reg 5(1)
  - Verify vessel particulars on Record of Anti-Fouling System IMO Res MEPC.208(62)2011  
MSM II/B.3.J
  - Verify Anti-Fouling System details provided IMO Res MEPC.208(62)2011
  - Verify that no change in Anti-Fouling System has occurred since issuance of IAFS Certificates IMO Res MEPC.195(61) 5.2  
MSM II/B.3.J
28. Review International Ships Security Certificate (ISSC) & Continuous Synopsis Record (CSR)
- Verify vessel particulars SOLAS 20 XI-1/5
  - Verify Company name and address match International Safety Management documents SOLAS 20 XI-1/5.3
  - Verify ISSC verification type with date ISPS Code A/19
  - Verify ISSC endorsement (Intermediate or additional) ISPS Code A/19.1.1
  - Verify additional ISSC verifications, extensions, renewals or expiry advancements are completed ISPS Code A/19.1.1  
ISPS Code A/19.3.4
  - Verify CSR is present and valid SOLAS 20 XI-1/5
  - Verify CSR information matches ISSC SOLAS 20 XI-1/5
29. Review International Oil Pollution Prevention Certificate (IOPP) & Form B
- Verify presence 33 CFR 151.19(a)  
MARPOL I/7
  - Verify validity MARPOL I/10  
MARPOL I/6.1
  - Verify form/contents MARPOL I/9  
MARPOL I/Appendix II

- 30. Review International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances (IPPC-NLS)
  - Verify presence 46 CFR 153.8(b) & .12  
MARPOL II/9.1
  - Verify validity 46 CFR 153.8(b)(2)  
MARPOL II/10 & .12
  - Verify contents MARPOL II/9.4  
MARPOL II/Appendix III
  
- 31. Review Merchant Mariner Credential (MMC) endorsement
  - Verify tankerman endorsement on MMC 46 CFR 13.107
  - Verify endorsement for authorized cargoes 46 CFR 13.109
  - Verify basic training for oil/chemical tanker cargo operations 46 CFR 13.609  
STCW A-V/1-1.1
  - Verify advanced training for oil/chemical tanker cargo operations 46 CFR 13.603 & .605  
STCW A-V/1-1.2
  
- 32. Review certificate of inhibition or stabilization
  - Verify presence 46 CFR 153.912(a)
  - Verify contents 46 CFR 153.912(b)
  
- 33. Reviewing loading information
  - Verify presence 46 CFR 31.10-32(b)
  - Verify contents 46 CFR 31.10-32(b)
  
- 34. Review cargo information document
  - Verify presence 46 CFR 153.907(a)
  - Verify contents 46 CFR 153.907(a) & (b)

## Logs and Manuals

- 35. Review compliance with STCW watchkeeping standards
  - Review watchstanding schedules 46 CFR 15.1111  
STCW A-VIII/1 & 2
  
- 36. Review Shipboard Oil Pollution Emergency Plan (SOPEP)
  - Verify contents 33 CFR 151.26(a) & (b)
  - Verify approval 33 CFR 151.27  
MARPOL I/37.1
  - Verify annual review 33 CFR 151.28(a) & (d)
  - Verify combination plan MARPOL I/37.3



□ 37. Review logbook entries

- Parent cites 46 CFR 35.07-1  
46 CFR 78.37-1
- Verify log entries & signatures 46 USC 11302(4) & (5)  
46 CFR 35.07-5
- Verify training, musters & drills 46 CFR 35.07-10(b)(1) & 78.37-5(a)  
46 CFR 97.15-35, 35-5(a) & 199.180(h)
- Verify watertight doors/hatches operations 46 CFR 78.37-5(b)  
46 CFR 97-15-20
- Verify valve closing appliance operation 46 CFR 78.37-5(c)
- Verify loudspeaker system tests 46 CFR 78.37-5(d)
- Verify steering gear, whistle (H & I only) & communications tests 46 CFR 35.07-10(b)(4) & .20-10  
46 CFR 78.17-15 & .37-5(e)
- Verify drafts, load line markings 46 CFR 35.07-10(b)(2)  
46 CFR 78.37-5(f)
- Verify compliance with applicable stability requirements 46 CFR 35.07-10(b)(3)  
46 CFR 78.37-5(g)
- Verify loading door operations 46 CFR 78.37-5(h)  
46 CFR 97.35-5(e)
- Verify hatches and other openings operations 46 CFR 78.37-5(i)  
46 CFR 97.35-5(f)
- Verify testing of emergency lighting/power operations 46 CFR 35.07-10(7)  
46 CFR 78.37-5(j)
- Verify smoke detecting system tests 46 CFR 78.37-5(k)
- Verify fuel oil data documented 46 CFR 35.07-10(5)  
46 CFR 78.37-5(l)
- Verify cargo gear inspection 46 CFR 35.07-10(b)(8)  
46 CFR 78.37-5(m)
- Verify sanitary inspections 46 CFR 31.10-45
- Verify marine casualties documented 46 CFR 35.15-1  
46 CFR 78.07-1 & 97.07-1
- Verify items relative to crew and passengers documented 46 CFR 78.37-10

- 38. Review abandon ship and fire fighting training manual
  - Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
  - Verify location 46 CFR 199.180(a)(1)  
SOLAS 20 II-2/15.2.3
  - Verify contents 46 CFR 199.180(a)(2)  
SOLAS 20 II-2/15.2.3.3
  
- 39. Inspect lifesaving equipment maintenance records
  - Parent cites 46 CFR 35.07-10(b)(1)  
46 CFR 78.37-5(a)
  - Review lifeboat servicing records 46 CFR 199.190(e) & (f)  
SOLAS 20 III/20
  - Review rescue boat servicing records 46 CFR 199.190(e) & (f)  
SOLAS 20 III/20
  - Review records for launching appliances 46 CFR 199.190(i) & (j)
  - Review weekly inspections & tests 46 CFR 199.190(d)  
SOLAS 20 III/20
  
- 40. Review Cargo Securing Manual
  - Verify presence 46 CFR 97.12-10  
33 CFR 97.120
  - Verify contents NVIC 10-97  
SOLAS 20 VI/5.6
  - Verify approval 33 CFR 97.200  
SOLAS 20 VI/5.6
  
- 41. Review Waste/Garbage Management Plan
  - Verify validity 33 CFR 151.57  
MARPOL V/9.2
  - Verify contents 33 CFR 151.57(c)  
MARPOL V/9.2
  
- 42. Review Garbage Record Book
  - Verify validity 33 CFR 151.55  
MARPOL V/9.3
  - Verify contents 33 CFR 151.55  
MARPOL V/9.3

- 43. Review ballast water management documents
  - Verify USCG-approved 33 CFR 151.2025(a)(1)
  - Verify approved alternate management system 33 CFR 151.2026
  - Verify management plan 33 CFR 151.2050(g)  
NVIC 01-18
  - Verify reporting requirements are met 33 CFR 151.2060
  - Verify discharge standard 33 CFR 151.2030
  
- 44. Review cargo gear records
  - Verify presence 46 CFR 31.10-16(a)  
46 CFR 71.25-25(a)(5)
  - Verify inspections and tests 46 CFR 31.10-16(d)  
46 CFR 71.25-25(d)
  
- 45. Review Non-Tank Vessel Response Plan (NTVRP)
  - Verify applicability 33 USC 1321(j)(5)(F)(i)  
33 CFR 155.5015(a)(4)
  - Verify approval 33 USC 1321(j)(5)(D)  
33 CFR 155.5065(c)
  - Verify annual reviews and information is accurate 33 CFR 155.5070
  
- 46. Review Oil Record Book Part II (Cargo/Ballast Operations)
  - Verify presence 33 CFR 151.25  
MARPOL I/36.1
  - Verify validity and contents 33 CFR 151.25(d)  
MARPOL I/36.1-36.6
  - Verify presence of completed books 33 CFR 151.25(k)  
MARPOL I/36.7
  
- 47. Review cargo and ballast system instructional manual
  - Verify presence 33 CFR 157.23(a)
  - Verify format and contents 33 CFR 157.23(b)

- 48. Review inert gas operation and maintenance manual
  - Verify presence and approval 46 CFR 32.53-10(a)  
MSM II/C.5.C.11
  - Verify contents SOLAS 20 II-2/4.5.5.1.1  
FSS Code 15.2.2.5
  
- 49. Review Cargo Record Book and Procedures & Arrangements (P&A) Manual
  - Verify presence 46 CFR 153.490  
MARPOL II/14.1
  - Verify validity 46 CFR 153.490  
MARPOL II/14.1
  - Verify contents 46 CFR 153.490(b)  
MARPOL II/14.2
  
- 50. Review Shipboard Marine Pollution Emergency Plan (SMPEP)
  - Verify presence MARPOL II/17.1 & .3
  - Verify validity MARPOL II/17.1
  - Verify contents MARPOL II/17.2
  
- 51. Review Tank Vessel Response Plan (TVRP)
  - Verify presence 33 CFR 155.1015  
33 CFR 155.1025
  - Verify validity 33 CFR 155.1065(c)
  - Verify contents 33 CFR 155.1030  
33 CFR 155.1035
  - Verify training 33 CFR 155.1055
  - Verify exercises 33 CFR 155.1060
  - Verify inspection & maintenance of response resources 33 CFR 155.1062
  - Verify annual review 33 CFR 155.1070

# Security

- 52. Review Vessel Security Plan (VSP) or Alternate Security Plan (ASP)
  - Verify presence of approval letter for plan type 33 CFR 104.105, .120 & .140  
33 CFR 101.120(b) & (c)
  - Verify participation with sponsoring organizations NVIC 04-03 Ch1 Encl (6), 5, C.
  - Verify plan is secured 33 CFR 104.400(c)  
ISPS Code A/9.7
  - Examine contents 33 CFR 104.405
  - Verify amendment(s) 33 CFR 104.415(a)
  - Verify implementation 33 CFR 101.120(b)(2)  
33 CFR 104.140(c) & 400(a)
  - Verify security inspection/deficiency documentation NVIC 10-04 Part 1  
MSM II/A.2.C
  
- 53. Examine security records
  - Verify record(s) of security training 33 CFR 104.235(b)(1)  
SOLAS 20 XI-2/4.2
  - Verify presence of Declarations of Security (DoS) 33 CFR 104.255 & .235(b)(7)  
ISPS Code A/5.7
  - Verify record(s) of security drills 33 CFR 104.235(b)(2)  
ISPS Code A/10.1.1
  - Verify annual exercise has been conducted 33 CFR 104.235(b)(2)  
ISPS Code A/10.1.1
  - Verify record(s) of annual audit 33 CFR 104.235(b)(8)  
ISPS Code A/10.1.6
  - Verify VSA/SSA is reviewed and revalidated when VSP is submitted for reapproval or revisions 33 CFR 104.310 (c)  
NVIC 04-03 Encl (2), 2.C & 2.D
  
- 54. Examine security equipment
  - Verify location of Ship Security Alert System 33 CFR 101.310 & 104.297  
SOLAS 20 XI-2/6
  - Verify maintenance records 33 CFR 104.235(b)(5) & 260 (b)  
ISPS Code A/17
  - Verify operation 33 CFR 104.260(a)  
ISPS Code A/9.4.15 & 18

- 55. Evaluate crew's knowledge of security plan
  - Identify Company Security Officer (CSO) 33 CFR 104.200(b)(2)  
SOLAS 20 XI-2/4.2
  - Identify Vessel/Ship Security Officer (VSO/SSO) 33 CFR 104.200(b)(2)  
ISPS Code A/12.1
  - Verify VSO's knowledge regarding his/her responsibilities 33 CFR 104.215(e)  
ISPS Code A/12.2
  - Verify crew's level of knowledge regarding his/her security responsibilities 33 CFR 104.220  
ISPS Code A/13.3
  - Verify compliance with current Maritime Security (MARSEC) level 33 CFR 104.215(e)(9)  
33 CFR 104.240
  
- 56. Examine security training & records
  - Verify all access points are monitored 33 CFR 104.265(a)(3) & (b)(1)  
ISPS A/7.2.2
  - Observe gangway watch control of embarkation of persons and effects 33 CFR 104.265(a) & b(1)  
ISPS A/7.2.3
  - Verify security communications 33 CFR 104.245  
ISPS A/7.2.7
  - Verify security level 33 CFR 104.240  
ISPS A/7.1
  - Verify gangway watch is familiar with their responsibilities as per security plan ISPS A/13.2 & .3
  - Verify signage 33 CFR 104.265(f)(3)

## Bridge/Navigation

- 57. Verify operation of internal communication and control systems
  - Parent cites 46 CFR 32.30  
46 CFR 77.05-1
  - Witness operation of engine order telegraph 46 CFR 113.35  
SOLAS 20 II-1/37
  - Witness operation of sound powered phones 46 CFR 113.30-25(k)  
SOLAS 20 III/6.4.1
  - Witness operation of public address system 46 CFR 113.50  
SOLAS 20 III/6.4.2
  - Verify operation of pilothouse control 46 CFR 113.35  
SOLAS 20 II-1/49
  - Verify means of communication between deckhouses 46 CFR 32.02-5  
46 CFR 78.35-1
  
- 58. Inspect radar(s)
  - Verify number of radars 46 CFR 32.15-30  
46 CFR 77.09-1 & 96.25-1
  - Verify safety precautions followed Operations Manual
  - Verify operation 33 CFR 164.37  
SOLAS 20 V/19.2.3.2
  - Verify target acquisition of Automatic Radar Plotting Aid (ARPA) 33 CFR 164.38  
SOLAS 20 V/19.2.3.3
  - Verify device to indicate speed and distance 33 CFR 164.40
  
- 59. Inspect magnetic compass
  - Verify presence 46 CFR 32.15-35(a)  
46 CFR 77.11-1(a)
  - Verify illumination 33 CFR 164.35(b)
  - Verify presence of spare SOLAS 20 V/19.2.2.1
  - Verify presence of current deviation table 33 CFR 164.35(c)  
SOLAS 20 V/19.2.1.3

- 60. Inspect gyrocompass and repeaters
  - Verify operation 46 CFR 32.15-35(b)  
46 CFR 77.11-1(b) & 96.17-1(b)
  - Verify location and illumination of repeaters 46 CFR 32.15-35(c)  
46 CFR 77.11-1(c) & 96.17-1(c)
  - Verify operation under emergency power SOLAS 20 II-1/43.2.4.2
  
- 61. Inspect depth sounding/recording equipment
  - Verify operation of depth sounding device 46 CFR 32.15-10  
46 CFR 77.27-1 & 96.27
  - Verify operation of continuous recording device 33 CFR 164.35(i)
  
- 62. Inspect satellite navigation receiver (GPS)
  - Verify operation 33 CFR 164.41(a)(2)  
SOLAS 20 V/19.2.1.6
  - Verify final emergency load 46 CFR 112.15-5(i)
  - Witness functional test Operations Manual
  
- 63. Inspect operation of Automatic Identification System (AIS)
  - Verify AIS information 33 CFR 164.46  
SOLAS 20 V/19.2.4.5
  - Verify operation 33 CFR 164.46  
SOLAS 20 V/19.2.4.5
  - Verify operation under emergency power SOLAS 20 II-1/43.2.4.2
  
- 64. Inspect Long Range Identification and Tracking Information (LRIT) equipment
  - Verify operation 33 CFR 169.215  
33 CFR 169.230
  - Review conformance test report IMO MSC.1/Circ. 1307
  - Verify logbook entries when equipment was switched off 33 CFR 169.245



- 65. Inspect Global Maritime Distress and Safety System (GMDSS) equipment
  - Verify presence 47 CFR 80.1065
  - Verify Station ID numbers on applicable equipment 47 CFR 80.1083(a)(5)  
SOLAS 20 IV/6.2.5
  - Review logs for tests and notations 47 CFR 80.1075  
SOLAS 20 IV/17
  - Verify required equipment for operation areas 47 CFR 80.1083 - .1095  
SOLAS 20 IV/6.1
  - Verify operation of VHF Digital Selective Calling (DSC) radio 47 CFR 80.1085(a)(1) & (2)  
SOLAS 20 IV/7.1
  - Verify operation of NAVTEX receiver or Safety Net 47 CFR 80.1085(a)(4) & (5)
  - Verify emergency source of power is provided 47 CFR 80.1099(b)  
SOLAS 20 IV/13.2
  - Verify presence of maintenance manuals, tools, spare parts and test equipment 47 CFR 80.1105  
SOLAS 20 IV/15
  - Verify compliance with maintenance method(s) 47 CFR 80.1105(c) & (d)  
SOLAS 20 IV/15.6 & .7
  
- 66. Inspect radiotelephone equipment
  - Verify installation(s) 47 CFR 80.1003
  - Verify equipment for operational areas 47 CFR 80.1087, 89, 91
  - Witness operation 47 CFR 80.1023
  
- 67. Inspect Voyage Data Recorder (VDR)
  - Verify presence of VDR or S-VDR 67FR53382  
SOLAS 20 V/20
  - Examine installation 67FR53382  
SOLAS 20 V/20
  
- 68. Inspect lifeboat radios
  - Parent cites 46 CFR 31.36-1  
46 CFR 77.06-1
  - Verify availability 46 CFR 199.60(a)  
SOLAS 20 III/6.2.1
  - Verify functionality 46 CFR 199.60(a)  
47 CFR 80.271
  - Verify power supply SOLAS 20 III/6.2.1  
MSC.149(77) Sec 12

- 69. Inspect Search and Rescue Locating Devices (Radar SART & AIS -SART)
  - Parent cities 46 CFR 31.36-1  
46 CFR 77.06-1
  - Verify availability 46 CFR 199.60  
SOLAS 20 III/6.2.2
  - Verify functionality 46 CFR 199.190(e)(2)  
IMO Res MSC.247(83)
  - Verify battery date 46 CFR 199.190(f)(4)  
IMO Res MSC.247(83)
  - Verify markings 46 CFR 199.60(b)
  
- 70. Inspect steering system controls at Operating Station
  - Parent cites 46 CFR 31.30-1  
46 CFR 71.25-35
  - Verify presence of steering gear instructions, diagrams & markings 33 CFR 164.35(k)
  - Witness operation and illumination of rudder angle indicator 46 CFR 58.25-25(a) & (b)  
33 CFR 164.35(f)
  - Verify operation in follow-up and non follow-up mode 46 CFR 113.40  
SOLAS 20 II-1/29
  - Verify operation of steering failure alarms 46 CFR 58.25-25(c)  
46 CFR 113.43
  - Verify rudder orders 46 CFR 35.40-35  
46 CFR 78.47-57
  
- 71. Inspect navigation lights & shapes
  - Parent cites 46 CFR 32.45-1  
46 CFR 77.05-1
  - Verify operation of navigation and anchor lights 46 CFR 111.75-17
  - Verify operation of navigation light indicator panel 46 CFR 111.75-17(b)
  - Examine dayshapes 33 CFR 83.20(d)  
COLREGS Rule 20
  - Examine daylight signaling lamp 33 CFR 83.34(b)  
COLREGS Rule 34
  - Review Certificate of Alternative Compliance 33 CFR 81.9

- 72. Inspect sound signaling devices
  - Parent cites 46 CFR 32.15-5  
46 CFR 71.25-10
  - Witness operation of ship's whistle 33 CFR 86.01 (annex III)  
COLREGS Rule 33
  - Witness operation of ship's bell 33 CFR 86.02, (annex III)  
COLREGS Rule 33
  - Witness operation of ship's gong 33 CFR 86.02,(annex III)  
COLREGS Rule 33
  - Verify required tests 46 CFR 35.20-10  
46 CFR 78.17-15
  
- 73. Inspect charts and publications
  - Verify presence of current, applicable and corrected charts and/or Electronic Chart Display & Information System (ECDIS) 46 CFR 35.20-1  
46 CFR 78.05-5, 97.05-5
  - Verify presence of current and applicable Tide Tables 46 CFR 35.20-1  
46 CFR 78.05-5, 97.05-5
  - Verify presence of current and applicable Coast Guard Light List 46 CFR 35.20-1  
46 CFR 78.05-5, 97.05-5
  - Verify presence of current and applicable Current Tables 46 CFR 35.20-1  
46 CFR 78.05-5, 97.05-5
  - Verify presence of USCG Inland Navigation Rules 33 CFR 83.01
  - Verify presence of COLREGS COLREGS Rule 1
  - Verify presence of current and applicable U.S. Coast Pilot 46 CFR 35.20-1,  
46 CFR 78.05-5
  - Verify presence of International Code of Signals SOLAS 20 V/21.1
  - Verify presence and content of maneuvering fact sheet 46 CFR 35.20-40  
46 CFR 78.21-1
  - Verify presence of International Aeronautical and Maritime Search and Rescue (IAMSAR) manual SOLAS 20 V/21.2
  - Verify presence of sailing directions and notice to mariners 46 CFR 35.20-1  
46 CFR 78.05-5

## General Health and Safety

### 74. Inspect means of escape from accommodation, machinery and other spaces

- Parent cites 46 CFR 31.35-1  
46 CFR 77.05-1
- Verify means of escape 46 CFR 32.02-1, 72.10  
46 CFR 92.10
- Verify routes are accessible 46 CFR 32.02-1, 72.10-20 & -30  
46 CFR 92.10-20 & -30
- Verify location and operation of emergency lighting 46 CFR 111.75-15(c)(2)  
SOLAS 20 III/11.5
- Verify emergency lighting markings 46 CFR 35.40-6, 78.47-33  
46 CFR 97.37-25
- Verify location of exit signs 46 CFR 35.40-6 & 78.47-40  
46 CFR 97.37-3, 111.75-15,  
112.15-1(d)
- Verify emergency escape markings SOLAS 20 III/11.5

### 75. Inspect paint locker(s)

- Verify installation of fixed fire protection system 46 CFR 34.05-5(a), 76.05-20, .15-5(d)  
46 CFR 95.05-10, .15-5(d)
- Verify location of portable/semi portable fire extinguishers 46 CFR 34.50-10a  
46 CFR 76.50-10(a)
- Verify installation of smoke detector 46 CFR 76.27-80  
46 CFR 95.05-(1)(a)
- Examine space construction material 46 CFR 32.85-1, .57-10(b)  
46 CFR 72.03-15 & 92.05-10, .07-10(b)
- Verify electrical installations 46 CFR 32.45-1 & 77.05-1  
46 CFR 96.05-1 & 111.105-43
- Verify means to secure ventilation 46 CFR 34.15-35 & 72.15-15  
46 CFR 76.15-35  
46 CFR 92.15-10 & 111.103-7

- 76. Inspect general emergency alarm system
  - Verify location and operation of contact makers
 46 CFR 32.25-1 & 77.05-1  
46 CFR 96.05-1 & 113.25-5 & -11
  - Verify location and operation of audible signals
 46 CFR 32.25-1 & 77.05-1  
46 CFR 96.05-1 & 113.25-9
  - Verify location and operation of emergency red-flashing lights (if needed)
 46 CFR 32.25-1 & 77.05-1  
46 CFR 96.05-1
  - Verify markings
 46 CFR 35.40-1 & -5, 78.47-5 & -7  
46 CFR 97.37-5 & -7
  - Verify location and operation of public address system
 46 CFR 32.25-1 & 77.05-1  
46 CFR 96.05-1 & 113.50-5 & 10
  - Verify operation of loud speakers
 46 CFR 32.25-1, 77.05-1,  
46 CFR 96.05-1, 113.50-15
  - Verify operations with emergency power source
 46 CFR 32.25-1 & 77.05-1  
46 CFR 96.05-1 & 113.25-6

- 77. Inspect accommodation spaces
  - Verify location
 46 CFR 32.40-10  
46 CFR 72.20-10
  - Verify number of berths
 46 CFR 32.40-20  
46 CFR 72.20-20
  - Verify appropriate size
 46 CFR 32.40-20  
46 CFR 72.20-20
  - Verify accessibility to escape routes
 46 CFR 32.02-1  
46 CFR 72.10
  - Verify heating/cooling/ventilation
 46 CFR 32.40-50  
46 CFR 72.15-20, 72.20-50
  - Verify sanitary condition
 46 CFR 32.40-15  
46 CFR 72.20-15
  - Verify washrooms & toilets are suitable
 46 CFR 32.40-25  
46 CFR 72.20-25
  - Verify lighting
 46 CFR 32.40-45, 72.20-45  
46 CFR 92.20-45
  - Verify insect screens
 46 CFR 32.40-55  
46 CFR 72.20-55
  - Verify adequate exit (egress) lighting/markings
 46 CFR 199.110(d)  
46 CFR 111.75-15(c)
  - Verify compliance with garbage management plan
 33 CFR 151.57  
MARPOL V/9.2

78. Inspect galley spaces and messrooms

- Examine sanitary condition 46 CFR 32.40-15  
46 CFR 72.20-15
- Verify operation of electric stove & deep fryer disconnect 46 CFR 111.77  
IEEE 45/42.1.6
- Examine fire fighting equipment 46 CFR 34.50-10, 75.50-10  
46 CFR 95.50-10
- Verify operation of refrigerated spaces alarm(s) 46 CFR 113.45-5
- Verify installation of sea rails on range tops/griddles 46 CFR 110.10-1(j)(6)  
IEEE 45/19.1.7
- Verify ventilation 46 CFR 32.55-1  
46 CFR 72.05-50 & 92.07-10
- Examine condition of vents and ducts MSM II/B.1.N.9
- Verify compliance with garbage management plan 33 CFR 151.57  
MARPOL V/9.2
- Verify required sanitary inspections 46 CFR 31.10-45  
46 CFR 71.45-1

79. Inspect liquefied petroleum gas systems for cooking and heat

- Parent cites 46 CFR 31.30-1  
46 CFR 71.15-1
- Verify gas appliance approval(s) 46 CFR 58.16-10(a)
- Verify cylinder markings 46 CFR 58.16-10(b)
- Verify safety relief device and system component approvals 46 CFR 58.16-10(c) & (d)
- Examine system shutoff valves 46 CFR 58.16-15
- Examine reducing regulators 46 CFR 58.16-16
- Verify installation of cylinders, piping and appliances 46 CFR 58.16-17 & -18
- Verify performance of periodic leak tests 46 CFR 58.16-19(b)
- Verify space ventilation 46 CFR 58.16-20
- Review operating instructions and markings 46 CFR 58.16-30 & -35

- 80. Inspect hospital space
  - Verify presence of a designated space 46 CFR 32.40-35(a)  
46 CFR 72.20-35(a)
  - Verify space not used for stowage or berthing 46 CFR 32.40-35(b)  
46 CFR 72.20-35(b)
  - Verify suitable equipment and dedicated washroom 46 CFR 32.40-35(d)  
46 CFR 72.20-35(d)
  - Verify approved medicine chest Confirm page ILO -147 Guidelines pg.38 (26)
  
- 81. Inspect other crew spaces
  - Examine recreation space(s) 46 CFR 32.40-40(b)&(c)  
46 CFR 72.20-40(b)&(c)
  - Examine laundry facilities 46 CFR 32.40-40(a)  
46 CFR 72.20-40(a) & 92.20-40(a)
  
- 82. Inspect shower and eye wash station
  - Verify installation and operation 46 CFR 153.216(b) & (c)
  - Verify markings 46 CFR 153.216(c)(4)
  
- 83. Inspect Personnel emergency and safety equipment
  - Verify presence of equipment for lifting an injured person from a pumproom or a cargo tank. 46 CFR 153.214(a)
  - Verify presence of additional equipment 46 CFR 153.214(b)
  - Verify presence and condition of toxic vapor equipment 46 CFR 153.527
  - Verify presence of cargo antidotes 46 CFR 153.930  
MFAG guide

## Lifesaving Equipment

- 84. Inspect work vests
  - Verify type approval 46 CFR 35.03-5  
46 CFR 78.36-5
  - Verify stowage 46 CFR 35.03-15  
46 CFR 78.36-15
  - Examine condition and serviceability 46 CFR 35.03-20  
46 CFR 78.36-20
  - Examine hybrid work vests 46 CFR 35.03-25  
46 CFR 78.36-25
  
- 85. Inspect life jackets
  - Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
  - Verify type approval 46 CFR 199.70(b), .620a  
NVIC 08-04 Ch 1
  - Verify quantity 46 CFR 199.70(b)(1), .212(a)  
Table 199.610 a & b
  - Verify stowage 46 CFR 199.03(b)(2), .70(b)(2)  
46 CFR 199.212(b)
  - Verify stowage markings 46 CFR 199.70(b)(2)(iii)  
SOLAS 20 III/20.10
  - Verify operation of lights and whistles 46 CFR 199.70(b)(4)  
Tables 199.610a, 620a
  - Verify location and information for donning instructions 46 CFR 199.80(c)  
SOLAS 20 III/35.2.1
  - Examine condition and suitability 46 CFR 199.45(b)(3)  
46 CFR 199.190(a)(b)& (g)(2)



- 86. Inspect immersion suits
  - Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
  - Verify type approval 46 CFR 199.273(a)  
SOLAS 20 III/4
  - Verify quantity and size 46 CFR 199.03(b)(13), .70(c),  
.214  
46 CFR 199.273(a)(b), Table  
.610(b)(c)
  - Verify stowage 46 CFR 199.03(b)(2), .70(c)(2)  
46 CFR 199.273(b)
  - Verify stowage location markings 46 CFR 199.70(c) & (d)  
SOLAS 20 III/20.10
  - Examine lights 46 CFR 199.70(c)(4)(i), Table  
610(a)  
SOLAS 20 III/7.3, 32.3.2
  - Examine whistle 46 CFR 199.70(c)(4)(ii), Table  
.610(a)  
SOLAS 20 III/7.3, 22.4
  - Examine condition and suitability 46 CFR 199.45(b)(3)  
46 CFR 199.180(a)(2)
  - Verify location and information for  
donning instructions 46 CFR 199.180(a) (1) & (2)  
SOLAS 20 III/35.3.2

- 87. Inspect Emergency Position Indicating Radio Beacon (EPIRB)
  - Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
  - Verify registration 47 CFR 80.1061(e) & (f)
  - Verify stowage 46 CFR 199.510(b)  
SOLAS 20 IV/7.6
  - Verify hydro-static release  
expiration date 46 CFR 199.510  
SOLAS 20 IV/7.6
  - Verify battery date 46 CFR 199.190  
SOLAS 20 IV/7.6
  - Verify marking 46 CFR 199.60(b)
  - Validate testing 46 CFR 199.190

- 88. Inspect line throwing equipment
  - Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
  - Verify stowage, quantity and type approval 46 CFR 199.170  
46 CFR 160.031 & .040
  - Verify inventory list and equipment 46 CFR 199.170  
SOLAS 20 III/18
  - Verify markings on primer cartridges 46 CFR 160.031-6  
46 CFR 160.040-6
  - Verify presence of service and maintenance instructions 46 CFR 160.031-4  
46 CFR 160.040-4
  
- 89. Inspect distress signals
  - Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
  - Verify stowage and markings 46 CFR 199.60  
46 CFR 160.036
  - Verify quantity 46 CFR 199.60  
SOLAS 20 III/6.3
  - Verify expiration date 46 CFR 160.036  
LSA Code 1.2.3
  - Verify type approval 46 CFR 199.60  
46 CFR 160.036
  
- 90. Inspect lifebuoys
  - Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
  - Verify type approval 46 CFR 199.70(a)  
SOLAS 20 III/4
  - Verify quantity 46 CFR 199.271  
SOLAS 20 III/7.1.1.1
  - Verify stowage 46 CFR 199.70(a)(1)  
SOLAS 20 III/7.1.1.1
  - Verify markings 46 CFR 199.70(a)(2)  
SOLAS 20 III/7.1.4
  - Examine attachments and fittings 46 CFR 199.70(a)(3)  
SOLAS 20 III/7.1.2
  - Verify size/weight 46 CFR 160.050-4(e)  
SOLAS 20 III/7.1.1
  - Examine condition and suitability 46 CFR 199.70

91. Inspect inflatable liferaft installations

- Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
- Verify type approval 46 CFR 199.261(a)(3)  
SOLAS 20 III/4
- Verify quantity 46 CFR 199.261(b)(2)(i)& (ii)  
SOLAS 20 III/31.1.1.2
- Verify stowage & installation 46 CFR 199.130(a) & (c)  
SOLAS 20 III/13
- Verify markings 46 CFR 199.176(b)  
46 CFR 199.178
- Verify service dates 46 CFR 199.190(g)  
SOLAS 20 III/20.8.1
- Verify emergency instructions are posted 46 CFR 199.90  
SOLAS 20 III/9
- Examine embarkation ladder 46 CFR 199.110(f)  
SOLAS 20 III/11.7

92. Inspect lifeboats

- Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
- Verify type approval 46 CFR 199.261(a)(1)  
SOLAS 20 III/4
- Verify stowage 46 CFR 199.130(a)  
46 CFR 199.130(b)
- Verify markings 46 CFR 199.176(a)  
46 CFR 199.178
- Examine equipment 46 CFR 199.175  
LSA Code 4.4.8
- Examine condition 46 CFR 199.190  
SOLAS 20 III/20.2
- Verify operating instructions are posted 46 CFR 199.90  
SOLAS 20 III/9
- Examine embarkation ladder 46 CFR 199.110(f)  
SOLAS 20 III/17
- Verify operation MSM II/B.1.P
- Examine lifeboat release mechanisms SOLAS 20 III/1.5  
LSA Code 4.7.6.6
- Verify equipped with fire protection system 46 CFR 199.261(g) & .290(b)  
SOLAS 20 III/31.1.7
- Verify self-contained air support system 46 CFR 199.261(f)  
LSA Code 4.8 & 4.9

93. Inspect rescue boat

- Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
- Verify type approval 46 CFR 199.262  
SOLAS 20 III/4
- Verify stowage 46 CFR 199.140  
SOLAS 20 III/14
- Verify markings 46 CFR 199.176(a)  
LSA Code 5.1.3.4
- Examine equipment 46 CFR 199.175  
LSA Code 5.1.2
- Verify condition 46 CFR 199.190  
SOLAS 20 III/20.2
- Verify operation MSM II/B.1.P

94. Inspect survival craft davit(s) and appurtenances

- Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
- Examine condition 46 CFR 199.45(a)(1) & (a)(2),  
.153, .157  
MSM II/B.1.P
- Verify operating instructions posted 46 CFR 199.90  
SOLAS 20 III/9
- Verify launching and recovery  
arrangements of survival  
craft/rescue boat 46 CFR 199.153, .157 & .160  
SOLAS 20 III/16 & 17
- Verify limit switch operation/open  
limits 46 CFR 199.153  
MSM II/B.1.P
- Verify launching area lighting 46 CFR 199.150(f)(6)  
SOLAS 20 III/16

- 95. Witness davit weight test
  - Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
  - Verify test weights 46 CFR 199.190(i)(5)  
SOLAS 20 III/20.11.1.3
  - Verify dynamic test of winch brake 46 CFR 199.190(i)(2)  
MSM II/B1.P
  - Verify operational test of lifeboat and rescue boat release gear 46 CFR 199.190(i)(5)  
SOLAS 20 III/20.11.2.3
  - Examine brake pads and stressed structural parts MSM II/B.1.P  
NVIC 04-07
  - Verify operational test of gravity (or stored mechanical power) launching 46 CFR 199.150(d)  
SOLAS 20 III/16.1

- 96. Conduct garbage handling survey (MARPOL Annex V)
  - Verify compliance with plan 33 CFR 151.55, .57 & .63  
MARPOL V/9.2
  - Verify handling of garbage/refuse 33 CFR 151.61  
33 CFR 151.63
  - Verify placards posted 33 CFR 151.59  
MARPOL V/9.1

## Firefighting Systems

- 97. Review approved Safety Plan (Fire-Control Plan)
  - Parent cites 46 CFR 35.10-3(a)  
46 CFR 78.45-1(a)(1)
  - Verify location and approval 46 CFR 31.10-5(a), 71.65-5(d)  
46 CFR 91.55-5(d)
  - Verify equipment installation to approved plan SOLAS 20 II-2/15.2.4.1
  - Verify use of international symbols SOLAS 20 II-2/15.2.4  
IMO Res A.952(23)
  - Verify structural fire protection is identified SOLAS 20 II-2/15.2.4.1

- 98. Inspect areas for compliance with Structural Fire Protection (SFP) requirements
  - Verify installation in accordance with approved Fire Safety Plan
 46 CFR 35.10-3(a) & 78.45-1(a)(1)  
46 CFR 97.36-1(a) & NVIC 09-97 Ch-1
  - Verify equivalencies and design assumptions
 46 CFR 30.15, 70.15 & 90.15, SOLAS 20 I/5 & II-2/17
  - Verify type approval categories
 NVIC 09-97 Para 1.3
  - Verify approvals of structural fire protection materials
 NVIC 09-97 Chap 2
  - Verify bulkhead and deck classifications
 46 CFR 32.57-10, 72.05-10 & 92.07-10  
SOLAS 20 II-2/9.2.2, 2.3, 2.4 & 3
  - Verify condition of draft stops
 46 CFR 32.56-45, 72-05-10 (h), SOLAS 20 II-2/8.4
  - Verify configuration of atriums, balconies and multiple level spaces
 46 CFR 72.05-5 (m) & 92.07-10  
NVIC 09-97 para 3.8
  - Verify boundaries are maintained
 46 CFR 32.56, .57 & 72.05  
46 CFR 92.07-10
  - Verify no unapproved modifications
 46 CFR 32.56 & .57  
46 CFR 72.05 & 92.07-10

99. Inspect fire boundary closures

- Parent cites 46 CFR 31.30-1, 35-1  
46 CFR 70.20-1, 25-1
- Verify display of general arrangement plans 46 CFR 35.10-3(a)  
46 CFR 78.45-1(a)(1)
- Witness operation of local and remote controls of fire doors as listed on the approved Fire Safety Plan 46 CFR 32.56-35, 71.25-25(a)(3), 72.05-25(b)(9)  
46 CFR 92.07-10 (d)(4), 111.99-5 & 61.40-6, -10
- Witness operation of local and remote controls of fire damper as listed on the approved Fire Safety Plan 46 CFR 32.56-60 & 72.15-15(a)  
46 CFR 92.15-10(a) & 61.40-6, -10
- Verify dampers and fire doors close during power ventilation shutdowns as listed on the approved Fire Safety Plan 46 CFR 32.56-60(b), 72.15-15(b)  
46 CFR 92.15-10(b)
- Verify operation of closures for spaces protected by carbon dioxide or clean agent extinguishing system 46 CFR 34.15-35  
46 CFR 76.15-35
- Verify remote controls and fire dampers are marked 46 CFR 78.47-53  
46 CFR 111.103-1(b)(2), -7

100. Inspect primary fire main and pump(s)

- Verify number 46 CFR 34.10-5(a) & 76.10-5(a)  
46 CFR 95.10-5(a)
- Verify capable of providing adequate pressure 46 CFR 34.10-5(b), 76.10-5(c) & 95.10-5(c)  
SOLAS 20 II-2/10.2.1.6 & 2.2.4
- Verify fitted with relief valve(s) 46 CFR 34.10-5(d) & 76.10-5(d)  
46 CFR 95.10-5(d), NVIC 06-72  
Encl 1/I.A.6 & 1/C2.6
- Verify fitted with gauge 46 CFR 34.10-5(e)  
46 CFR 76.10-5(e) & 95.10-5(e)
- Verify distribution valves labeled 46 CFR 34.10-15(c)  
46 CFR 76.10-15(b)
- Verify condition of system piping, fittings, valves, flanges 46 CFR 31.10-18(f) & 19, 71.25-20(a)  
46 CFR 91.25-20(a) & 56.10 thru .25
- Verify operation of remote control(s) 46 CFR 31.10-18(f), 71.20-20, -25(a)(4), 91.15-1, .25-20(a)(3)  
46 CFR 61.40-6 & 62.35-15,.50-20(d)

101. Inspect fire stations

- Verify number of hydrants Y/Wye gates 46 CFR 34.10-10(h)  
46 CFR 76.10-10(d) & 95.10-10(d)
- Verify hoses meet required length, size, markings and quantity 46 CFR 32.05, 76.10-10  
46 CFR 95.10-10, SOLAS 14 II-2/10.2.3
- Verify compliance with periodic hydro testing 46 CFR 31.10-18(f), 71.25-20(a)(4) & 91.25-20(a)(4)  
SOLAS 20 II-2/14.2.2
- Verify operation of valves 46 CFR 31.10-18(e), 71.25-20(a)(3) & 91.25-20(a)(3)  
NVIC 06-72 Encl. 1/I.C.2.3
- Verify spanner 46 CFR 34.10-10(d), 76.10-10(g)  
46 CFR 95.10-10(g)
- Verify low velocity spray applicator 46 CFR 34.10-10(e)(f) & (o),  
34.10-90(a)(11) & (b)(2)  
46 CFR 76.10-10(j) & (k), 76.10-90(a)
- Verify markings 46 CFR 35.40-15  
46 CFR 78.47-20



- 102. Inspect portable fire extinguishers
  - Confirm locations with approved safety plan (Fire Control Plan) 46 CFR 35.10-3(a) & 78.45-1(a)(1)  
46 CFR 97.36-1(a)
  - Verify inspection/maintenance compliance 46 CFR 31.10-18(a), 71.25-20(a)(1), 78.17-80  
46 CFR 91.25-20(a)(1), NFPA 10 Chap 7 & 8
  - Examine condition of cylinders and hoses 46 CFR 31.10-18(a) & 71.25-20(a)(1)  
46 CFR 91.25-20(a)(1)
  - Verify type, quantity and locations 46 CFR 34.50-10, 76.50-10, 95.50-10  
46 CFR 147.45(i)2, MSM II/C.2.I.3 & .4
  - Verify markings 46 CFR 34.05-10(a), .35.40-25 & -40  
46 CFR 76.05-25(a), .78.47-30
  - Confirm spare charges 46 CFR Table 34.50-10(a), Table 76.50-10(a)  
46 CFR Table 95.50-10(a)

- 103. Inspect semi-portable fire extinguishers
  - Confirm locations with approved safety plan (Fire Control Plan) 46 CFR 35.10-3(a) & 78.45-1(a)(1)  
46 CFR 97.36-1(a)
  - Verify inspection/maintenance compliance 46 CFR 31.10-18(a), 71.25-20(a)(1), .78.17-80  
46 CFR 91.25-20(a)(1), NFPA 10 Chap 7 & 8
  - Examine stowage, condition of cylinders and hoses 46 CFR 31.10-18(a), 34.50-20  
46 CFR 71.25-20(a)(1), 76.50-20
  - Verify type, quantity and locations 46 CFR 34.50-10, 76.50-10  
46 CFR 95.50-10
  - Verify markings 46 CFR 34.05-10(a), 35.40-25 & -40  
46 CFR 76.05-25(a), 78.47-30

- 104. Inspect fireman's outfits
  - Verify type approval and quantity
    - 46 CFR 35.30-20 ,77.30-1 & .35-1
    - 46 CFR 96.35-5
  - Verify stowage and markings
    - 46 CFR 35.30-20 & 40-20
    - 46 CFR 77.30-5, 30-10(a) & .35-5(b)
  - Verify locations are marked on safety plan (Fire Control Plan)
    - 46 CFR 35.10-3(a) & 78.45-1(a)(1)
    - 46 CFR 97.36-1(a)
  - Verify condition
    - 46 CFR 35.30-20, 77.30-5 & 35-1
    - 46 CFR 96.35-5
  - Verify number of spare bottles
    - 46 CFR 35.30-20(c)(1), 77.30-15 & 35-20
    - 46 CFR 96.30-5 & 35-20

- 105. Inspect international shore connection
  - Verify presence
    - 46 CFR 34.10-15(d) & 76.10-10(c)
    - 46 CFR 95.10-10(c)
  - Verify gaskets and bolts are with the connection
    - 46 CFR 34.10-15(d) & 76.10-10(c)
    - 46 CFR 95.10-10(c), ASTM F 1121
  - Confirm location with safety plan (Fire Control Plan)
    - 46 CFR 35.10-3(a) & 78.45-1(a)(1)
    - 46 CFR 97.36-1
  - Verify symbols for international and domestic routes
    - 46 CFR 35.10-3(a), 78.45-1, & 97.36-1(a)
    - IMO Res A.654(16) & ASTM F 1626

106. Inspect fire and smoke detecting systems

- Parent cites 46 CFR 34.01-5(b)(2) & -10  
46 CFR 76.05-1
- Witness system servicing and testing 46 CFR 31.10-15(b) & 71.25-20  
46 CFR 91.25-20, 61.40-6 & -10
- Verify two sources of power 46 CFR 31.35-5, 70.25-1  
46 CFR 90.25-1, 113.10-9
- Verify operation of control unit's visual and audible alarms 46 CFR 76.27-1, 95.05-1  
46 CFR 161.002-8
- Verify markings 46 CFR 161.002-4(b)  
FSS Code 9.2.5.1.3 & 4
- Verify alarms sounds in required locations 46 CFR 76.27-5(d),(e) & (f),  
95.05-1  
46 CFR 161.002-10(b)

- 107. Inspect high pressure CO2 system
  - Parent SOLAS cite for steps 3-7 SOLAS 20 II-2/14.2.2.1
  - Review safety precautions prior to servicing system MSM II/C.2.I.5
  - Verify servicing 46 CFR 31.10-17(a),.10-18(d) &-19  
46 CFR 71.25-20(a)(2)&(3),  
91.25-20(a)(2) & (3)
  - Verify cylinder stowage/condition 46 CFR 34.15-20, 76.15-20  
46 CFR 95.15-20
  - Examine material condition of system components 46 CFR 34.15-15 & -20  
46 CFR 76.15-15,& -20
  - Verify piping & nozzles clear 46 CFR 34.15-15 & -25  
46 CFR 76.15-15 & -25, 95.15-15 & -25
  - Witness operational test of time delays & alarms 46 CFR 31.10-19, 76.25-20(a),(2) & (3)  
46 CFR 91.25-20(a),(2) & (3)
  - Verify markings & warning signs posted 46 CFR 35.40-7, -8 & -10  
46 CFR 78.47-9,-11,-15, -17 & -18, 97-37-9,-10,-11,-13
  - Verify operating instructions posted 46 CFR 34.15-10(h), 76.15-10(h)  
46 CFR 97.37-13
  - Verify access to locked supply valves/controls 46 CFR 34.15-10(i), 76.15-10(i)  
46 CFR 95.15-10(i),.16-40
  - Verify ventilation enclosure operation 46 CFR 34.15-35, 76.15-35  
46 CFR 95.15-35, 61.40-6 & -10
  - Verify lockout valve 46 CFR 34.15-50  
46 CFR 76.15-50
  - Verify presence of odorizing unit 46 CFR 34.15-60  
46 CFR 76.15-60

- 108. Inspect low pressure CO2 system
  - Examine system plan approval 46 CFR 34.15-1(b)  
46 CFR 76.15-1(b)
  - Verify servicing DIOM Manual  
46 CFR 61.40-6 & -10
  - Examine pressure gauge DIOM Manual
  - Verify no unapproved modifications or parts (DIOM & Approved Piping Plan) DIOM Manual  
Piping Plan
  - Examine refrigeration plant DIOM Manual
  - Inspect visual and audible alarms DIOM Manual
  - Verify CO2 Level and indicator DIOM Manual
  - Conduct visual inspection of external tank 46 CFR 61.10-5(g)
  - Witness hydrostatic test and internal 46 CFR 61.10-5(g) & (h)
  - Witness test of safety relief valves 46 CFR 61.10-5(i)
  - Witness functional test of time delays, alarms & shutdowns DIOM Manual
  - Verify warning signs, markings & operating instructions are posted DIOM Manual

- 109. Inspect automatic sprinkler system
  - Parent cites 46 CFR 34.30-1, 46 CFR 76.25-1
  - Verify amount and type of spare sprinklers NFPA 13/25.2.2
  - Verify type of pipe, fittings and pipe supports NFPA 13/25.2.4 & 25.2.5
  - Verify type location and markings of control valves NFPA 13/25.2.6 46 CFR 56.20
  - Verify installation of fire department and international shore connections NFPA 13/25.2.7
  - Verify relief valves for wet systems NFPA 13/25.3.1
  - Verify spare detection devices NFPA 13/25.3.2
  - Verify drain line connections NFPA 13/25.4.11
  - Verify installation of alarm signals and devices NFPA 13/25.4.12
  - Verify location of test connections NFPA 13/25.13
  - Verify water supplies NFPA 13/25.7.1
  - Verify pressure tank components NFPA 13/25.7.2

□ 110. Inspect automatic sprinkler system (con't)

- Verify fire pump operation NFPA 13/25.7.3
- Verify water supply configuration NFPA 13/25.7.4
- Verify operation test of system NFPA 13/25.8.3
- Verify system instructions records of inspection are presence NFPA 13/25.9

- 111. Inspect fixed foam firefighting systems
  - Review SOLAS requirements SOLAS 20 II-2/10.4.1.1.2  
SOLAS 20 II-2/20.6.1.3
  - Verify required foam quantity 46 CFR 34.17-5, 76.17-5  
46 CFR 95.17-5
  - Verify approval of foam agents, containers, measuring devices, etc. 46 CFR 34.17-10(a), 76.17-10(a)  
46 CFR 95.17.10(a)
  - Verify all controls, valve locations and markings 46 CFR 34.17-10(b) & (d),  
35.40-17  
46 CFR 76.17-10(b) & (d)
  - Verify pump start locations 46 CFR 34.17-10(b) & 76.17-10(b)  
46 CFR 95.17.10(b)
  - Review instructions and verify locations 46 CFR 34.17-10(c) & 76.17-10(c)  
46 CFR 95.17.10(c)
  - Examine maintenance plan, materiel condition of piping and discharge outlets 46 CFR 34.17-15 & -20, 76.17-15 & -20  
46 CFR 95.17-15 & -20
  - Verify additional requirements for machinery spaces 46 CFR 34.17-25, 76.17-25  
46 CFR 95.17-25
  - Verify system operation 46 CFR 31.10-18 (c) & (d)  
46 CFR 71.25-20(a)(2)
  - Review deck foam system details, controls, operation, testing and liquid certificate (D only) 46 CFR 31.10-18(d) & 34.20  
SOLAS 20 II-2/10.7.1.1, 8.1.1.2 & 9.1.2,

- 112. Inspect fire axes
  - Confirm locations with approved Safety Plan (Fire Control Plan) 46 CFR 34.60-10  
46 CFR 76.60-10
  - Verify quantity and condition 46 CFR 34.60-5(a)  
46 CFR 76.60-5(a)

- 113. Inspect fixed fire-extinguishing system(s) for cargo pump rooms
  - Verify type of agent and coverage 46 CFR 34.05-5(a)(4)  
SOLAS 20 II-2/10.9.1
  - Verify CO2 system compliance 46 CFR 34.15-5(d)  
SOLAS 20 II-2/10.9.1.1
  - Verify foam system compliance 46 CFR 34.17  
SOLAS 20 II-2/10.9.1.2
  - Verify water spraying system compliance 46 CFR 34.25  
SOLAS 20 II-2/10.9.1.3
  
- 114. Inspect fixed deck foam system
  - Verify presence 46 CFR 34.20-1  
SOLAS 20 II-2/10.8
  - Verify operation of fire main isolation valves SOLAS 20 II-2/10.8  
FSS Code 14.2.3.4
  - Verify presence of applicators and monitors 46 CFR 34.20-20 & .20-25  
FSS Code 14.2.2.2
  - Verify location of main operation station 46 CFR 34.20-10(b)  
FSS Code 14.2.3.1.1
  - Verify operating instructions 46 CFR 34.20-10(c).
  - Verify foam analysis maintenance reports MSM Vol II C.2.1.1  
FSS Code 14.2.2.1.4
  
- 115. Inspect additional emergency (fire fighting) outfits and equipment
  - Verify additional fire fighting outfits 46 CFR 35.30-20(a)  
SOLAS 20 II-2/10.10.2.3
  - Verify required equipment 46 CFR 35.30-20(c)
  - Verify additional spare charges for breathing apparatus 46 CFR 35.30-20(c)(1)  
SOLAS 20 II-2/10.10.2.5



# Electrical Systems

- 116. Inspect battery installation
  - Parent cites 46 CFR 31.35-1  
46 CFR 70.25-1
  - Determine categories 46 CFR 111.15-3
  - Verify installation 46 CFR 111.15-5(a)-(d)
  - Verify nameplates 46 CFR 111.15-5(e)
  - Verify liner spacing 46 CFR 111.15-5(f) & (g)
  - Verify ventilation 46 CFR 111.15-10
  - Verify operation of power ventilation interlock with charger 46 CFR 111.15-10(b)(4)
  - Verify connections 46 CFR 111.15-20
  - Verify presence of overload and reverse current protective device 46 CFR 111.15-25
  - Verify means of charging 46 CFR 111.15-30
  
- 117. Inspect motor controllers
  - Parent cites 46 CFR 31.35-1  
46 CFR 70.25-1
  - Verify installation 46 CFR 111.70-3(a)
  - Verify marking(s) 46 CFR 111.70-3(d)(1)
  - Verify wiring diagram in enclosure 46 CFR 111.70-3(d)(2)
  - Verify interlocks 46 CFR 111.70.7(d)
  - Verify drip-proof/watertight 46 CFR 111.01-3(a)  
46 CFR 111.01-9(a)
  - Verify low voltage release motor controller for vital systems 46 CFR 111.70-3(b)
  
- 118. Inspect lighting systems/fixtures
  - Parent cites 46 CFR 31.35-1  
46 CFR 70.25-1
  - Verify lighting 46 CFR 111.75-15  
SOLAS 20 II-2/41
  - Examine condition and installation of fixtures 46 CFR 111.75-20
  - Verify lighting branch circuits 46 CFR 111.75-5

119. Inspect emergency lighting

- Parent cites 46 CFR 31.35-1  
46 CFR 70.25-1
- Verify location 46 CFR 112.05-5, .15-1 & .43  
46 CFR 111.75-15(c)(2)
- Verify operation 46 CFR 111.75-15(c)(2)  
SOLAS 20 II-1/43
- Verify operation of embarkation station lighting 46 CFR 111.75-16  
SOLAS 20 II-1/43
- Verify markings 46 CFR 35.40-6  
46 CFR 78.47-33

120. Inspect panelboards (distribution panels)

- Parent cites 46 CFR 31.35-1  
46 CFR 70.25-1
- Verify presence of dead front (blanks), panel construction and rating 46 CFR 111.40-1, -5 & -13
- Verify accessibility 46 CFR 111.40-7
- Verify operation of locking device 46 CFR 111.40-9
- Review breaker numbering and information on directory card 46 CFR 111.40-11

121. Inspect electrical cables and fixtures

- Parent cites 46 CFR 31.35-1  
46 CFR 70.25-1
- Verify supports for vertical and horizontal installations 46 CFR 111.60-5  
IEEE 45-2002 25.5
- Verify radius of bends IEEE 45-2002 25.6
- Verify no hazardous conditions exist 46 CFR 111.60-17 & -19
- Verify condition of outlets 46 CFR 111.79-1  
46 CFR 111.81-1
- Verify use of flexible cords 46 CFR 111.60-13  
IEEE 45-2002 24.6.1
- Verify material condition/installation of fixtures 46 CFR 111.75-20
- Verify wire type and conductor size 46 CFR 111.60-1 thru -4 & -11

- 122. Inspect components installed in designated hazardous locations
  - Parent cites 46 CFR 31.35-1  
46 CFR 70.25-1
  - Verify hazardous areas 46 CFR 111.105-1 & -3  
46 CFR 111.105-9 & -11  
46 CFR 111.105-41 & -43
  - Verify equipment for hazardous locations 46 CFR 111.105-7 & -19
  - Verify equipment integrity 46 CFR 111.105-5 & -15
  - Verify wiring methods 46 CFR 111.105  
46 CFR 32.45-1
  - Verify ventilation fan non-sparking 46 CFR 111.105-21
  - Verify wiring methods for hazardous locations
  - Verify design and conditions of fixtures are appropriate 46 CFR 111.105-29  
46 CFR 111.105-31
  - Verify installation on combustible liquid cargo carriers 46 CFR 111.105-29
  - Verify installation on flammable or combustible cargo below 140 degrees F 46 CFR 111.105-31

## Structural/Watertight Integrity

123. Inspect hatches and Class-1 watertight doors
- Parent cites 46 CFR 31.10-30  
46 CFR 72.30-1
  - Verify condition of knife edges MSM II/B.1.E.5
  - Verify condition of gasket material MSM II/B.1.E.5
  - Verify watertight integrity between gasket and knife edge 46 CFR 170.270(a) &(b)  
MSM II/B.1.E.5
  - Verify location, condition and operation of hinges and dogging devices 46 CFR 170.255(a)  
MSM II/B.1.E.5
  - Verify design ,operation, installation and testing of quick-acting closing-device 46 CFR 170.270  
46 CFR 170.255(d)
  - Verify operation of indicator lights at the control station 46 CFR 170.255(e)  
46 CFR 170.270(e)
  - Verify doors are installed in permissible locations 46 CFR 170.255
  - Verify markings (H & I only) 46 CFR 78.47-37 (a)& (b)  
46 CFR 97.37-60
124. Inspect Class 2 & 3 watertight doors
- Parent cites 46 CFR 31.10-30  
46 CFR 72.30-1
  - Verify operation of remote/local controls 46 CFR 170.270(c)(2)  
ASTM F1197/7.1
  - Verify design ,operation, installation and testing of quick-acting closing-device 46 CFR 170.270(c)(1)  
ASTM F1196/6.3
  - Verify operation of alarms 46 CFR 170.270(c)(1) & (2)  
ASTM F1197/11.5
  - Verify closing times are in compliance 46 CFR 170.270(c)(1) & (2)  
ASTM F1197/11.2 & 11.4
  - Verify markings 46 CFR 170.270(c)(1) & (2)  
46 CFR 78.47-37(a)
  - Verify watertight integrity 46 CFR 170.270(c)(1) & (2)  
ASTM F1196/S1
  - Verify operation of doors under reserve power 46 CFR 170.270(c)(3)  
46 CFR 170.015
  - Verify watertight doors are installed in permissible locations 46 CFR 170.260 & .265  
SOLAS 20 II-2/13-1

125. Inspect watertight bulkhead penetrations

- Parent cites 46 CFR 31.10-30  
46 CFR 71.25-35
- Verify locations 46 CFR 171.111(g)
- Verify ability to seal 46 CFR 56.50-1  
MSM II/B.1.B.5
- Verify sealing material approvals 46 CFR 56.50-1  
SOLAS 20 II-2/11

126. Inspect hull structure

- Examine for damage, wastage and fractures 46 CFR 32.60-1 & 72.01-15 &  
46 CFR 92.01-10
- Verify no unauthorized repairs 46 CFR 31.10-25  
46 CFR 71.55-5

## Pollution Prevention

127. Inspect pollution prevention equipment

- Verify communication between participants in transfer operations 33 CFR 155.785
- Verify transfer hoses tested and marked 33 CFR 155.800  
33 CFR 154.500
- Verify locations of pollution/MARPOL placards 33 CFR 155.450
- Verify condition of hose and manifold connections 33 CFR 156.130 & 170(1)
- Verify condition and size of containment 33 CFR 155.320  
MSM II/B.6.D.6
- Verify containment closures 33 CFR 156.120(n)  
33 CFR 156.120(o)
- Verify sufficient lighting 33 CFR 155.790
- Verify signed copies of Declaration of Inspection are present 33 CFR 156.150(f)  
MSM II/B.6.E.6

128. Conduct garbage handling survey (MARPOL Annex V)

- Verify compliance with plan 33 CFR 151.55, .57 & .63  
MARPOL V/9.2
- Verify handling of garbage/refuse 33 CFR 151.61  
33 CFR 151.63
- Verify placards posted 33 CFR 151.59  
MARPOL V/9.1

- 129. Conduct an international air pollution prevention (MARPOL Annex VI) survey
  - Verify equipment/systems containing chlorofluorocarbons (CFCs), hydro CFCs and volatile organic compounds (VOCs) are on certificate MARPOL VI/12
  - Verify presence of equipment on certificate, approvals and equivalencies MARPOL VI/4  
IMO Res A.1076(28)
  - Verify compliance with Emission Control Area (ECA) MARPOL VI/13 & 14  
MARPOL VI/App-VII
  - Review exhaust cleaning systems equivalency documentation MARPOL VI/4
  - Review delivery notes MARPOL VI/18.5 & App V
  - Verify samples MARPOL VI/18.8.1
  - Verify compliance with NO<sub>x</sub> and SO<sub>x</sub> MARPOL VI/13 & 14  
40 CFR 1043.30
  - Review notification(s) of fuel oil availability and quality MARPOL VI/18.2.4

- 130. Inspect deck containment
  - Verify adequate containment 33 CFR 155.310(a)  
33 CFR 156.120(n)
  - Verify adequate peripheral cargo deck coamings 33 CFR 155.310(c)(4)  
33 CFR 156.120(n)
  - Verify means of drainage 33 CFR 155.310(a)(2)  
33 CFR 156.120(o)
  - Verify mechanical means of closing drains or scuppers 33 CFR 155.310(a)(3)  
33 CFR 156.120(o)

## **Topside Equipment**

- 131. Inspect freeing ports and scuppers
  - Parent cites 46 CFR 31.25-1  
46 CFR 72.01-5
  - Verify no modifications 46 CFR 31.10-25 & 30, 71.55 &  
72.30-1  
46 CFR 91.45 & 93.01-1
  - Verify unobstructed 46 CFR 35.35-10  
46 CFR 42.15-60 & -70

- 132. Inspect ground tackle and related equipment
  - Examine condition of anchor 46 CFR 32.15-15(b)  
46 CFR 77.07-5(a) & 96.07-5(a)
  - Examine anchor chain 46 CFR 32.15-15(b)  
46 CFR 77.07-5(a)
  - Examine ground tackle connection points and condition (windlass, capstan, cats paw, etc.) ABS 7-3-2/1.1.7
  - Examine towing/mooring equipment and lines SOLAS 20 II-1/3-8.2  
ABS 3-5-1.15
  
- 133. Inspect air ports, covers and natural vent openings
  - Parent cites 46 CFR 31.25-1  
46 CFR 72.01-5
  - Verify covers are readily available and operational 46 CFR 42.15-45 & 65
  - Examine condition 46 CFR 42.15
  - Inspect covers for proper fit and seal 46 CFR 42.15  
ICLL I/23
  
- 134. Inspect tank vents
  - Parent cites 46 CFR 31.30-1  
46 CFR 70.20-1
  - Verify condition and location 46 CFR 56.50-85
  - Verify installation and condition of flame screens 46 CFR 56.50-85(a)(8)
  - Verify permanently attached means for closing tank vents 46 CFR 56.50-85(a)(7)
  
- 135. Inspect rails and guards
  - Verify rail heights and courses 46 CFR 32.02-10(a)  
46 CFR 72.40-5 & 92.25-5
  - Verify condition of storm rails 46 CFR 32.02-10(d), 72.40-10  
46 CFR 92.25-10 & 42.15-75
  - Verify guards in dangerous places 46 CFR 32.02-15  
46 CFR 72.40-20
  - Verify guards for vehicular ferries 46 CFR 72.40-15

- ☐ 136. Inspect access to bow and emergency towing arrangements
  - Verify safe access SOLAS 20 II-1/3-3.2  
ICLL 25(4) & 26(2)
  - Verify emergency towing arrangements 33 CFR 155.235  
NVIC 08-89
  - Verify design is approved by the Administration 33 CFR 155.235  
SOLAS 20 II-1/3-4.2.2

## Cargo Systems

- ☐ 137. Inspect portable tank(s)
  - Verify tank(s) approved 46 CFR 98.30-4 & .30-5  
49 CFR 172.101 Table
  - Verify stowage and segregation 46 CFR 98.30-12  
49 CFR 172.326
  - Verify additional fire fighting equipment 46 CFR 98.30-37
  - Verify fill and discharge requirement(s) complied with 46 CFR 98.30-23, -25 & -27  
46 CFR 98.30-29
  - Verify secured in accordance with vessel's cargo securing manual 46 CFR 97.12-10
  - Verify warning signals and sign 46 CFR 98.30-33  
46 CFR 98.30-35
  - Verify material condition 46 CFR 98.30-3 & .30-4  
49 CFR 173.32 & .241(c)
  
- ☐ 138. Inspect packaged hazardous material(s)
  - Review Dangerous Cargo Manifest 49 CFR 176.30  
SOLAS 20 XII/4
  - Verify packaging 49 CFR 172.101 Table  
IMDG Code Vol. I & II
  - Verify marked and labeled 49 CFR 172.300 - .338  
49 CFR 172.400 - .450
  - Verify placarding 49 CFR 172.500 - .560  
IMDG Code I/5
  - Verify stowage and segregation 49 CFR 176.57 - .78  
49 CFR 176.80 - .84



139. Inspect dry-bulk cargo system

- Verify compliance with the Enhanced Survey Program or Critical Areas Inspection Plans SOLAS 20 XII/3  
MSM II/B.4
- Verify survey and maintenance requirements SOLAS 20 XII/7
- Verify cargo information and solid bulk cargo density declaration 46 CFR 97.12-3  
SOLAS 20 VI/2
- Verify loading manual and loading instrument SOLAS 20 XII/11
- Verify hold, ballast and dry space water ingress alarms SOLAS 20 XII/12
- Verify pumping systems SOLAS 20 XII/13
- Verify load/stowage requirements SOLAS 20 VI/1-2  
SOLAS 20 VI/7
- Verify grain load/stowage requirements SOLAS 20 VI/9  
Grain Code
- Verify ventilation SOLAS 20 II-2/19.3.4
- Verify condition of holds, structural members, and ladders 46 CFR 91.20-15  
IMO MSC/Circ. 1117
- Verify watertight closures for ventilators and cargo ports 46 CFR 42.15-45  
46 CFR 42.15-55
- Verify electrical equipment and wiring 46 CFR 111.105-7 thru -19

140. Inspect break bulk cargo system

- Verify survey and maintenance requirements SOLAS 20 XII/7
- Verify loading manual and loading instrument SOLAS 20 XII/11
- Verify hold, ballast and dry space water ingress alarms SOLAS 20 XII/12
- Verify operation of ventilation SOLAS 20 II-2/19.3.4
- Examine condition of holds, structural members, and ladders 46 CFR 91.20-15  
MSC/Circ. 1117
- Verify watertight closures for ventilators and cargo ports 46 CFR 42.15-45 & -55
- Examine electrical equipment and wiring 46 CFR 111.105-7 thru-19
- Verify monitoring for vehicles in enclosed locations 46 CFR 97.80

- 141. Inspect Ro-Ro cargo decks
  - Verify ramp closure/watertight seal 46 CFR 97.15-17  
SOLAS 20 II-1/15-1
  - Verify ventilation functionality and condition SOLAS 20 II-2/19.3.4
  - Examine condition of sprinkler heads SOLAS 20 II-2/20.6.1.5
  - Verify egress SOLAS 20 II-2/13.6
  - Verify air sampling 46 CFR 95.05-1  
SOLAS 20 II-2/19.4.2
  - Verify ventilation SOLAS 20 II-2/20.3.1
  - Examine electrical equipment and wiring SOLAS 20 II-2/20.3.2  
SOLAS 20 II-2/20.3.3
  - Verify no risk of ignition source SOLAS 20 II-2/20.3.4
  - Verify scuppers and discharges SOLAS 20 II-2/20.3.5
  - Verify operation of fire detection and alarm capabilities 46 CFR 95.05-1  
SOLAS 20 II-2/20.4
  - Examine structural fire protection SOLAS 20 II-2/20.5
  - Verify fire extinguishing capabilities SOLAS 20 II-2/20.6

- 142. Inspect cargo hatches
  - Verify weathertightness 46 CFR 42.15-20  
MSM II/B.1.E.5
  - Verify condition of hatch covers 46 CFR 42.15-20  
MSM II/B.1.E.5
  - Verify condition of coamings 46 CFR 42.15-20  
MSM II/B.1.E.5
  - Verify condition of dogs/closure devices 46 CFR 42.15-20  
MSM II/B.1.E.5
  - Examine condition of gaskets 46 CFR 42.15-20  
MSM II/B.1.E.5
  - Verify opening/closure of hatch covers where machinery is provided 46 CFR 42.15-30  
MSM II/B.1.E.5

143. Inspect container systems

- Examine lashings/securing devices 46 CFR 91.25-25  
SOLAS 20 VII/5
- Verify stowage/segregation 49 CFR 172.101  
49 CFR 176
- Examine condition of holds,  
structural members and guide rails 46 CFR 91.20-15
- Verify ventilation SOLAS 20 II-2/19.3.4
- Examine electrical equipment and  
wiring 46 CFR 111.105-7 thru -19
- Verify fire detection and alarm  
capabilities 46 CFR 95.05-1  
SOLAS 20 II-2/19.3.3

144. Inspect cargo tank venting arrangements

- Verify materiel condition 46 CFR 32.55-20
- Verify condition of flame screens  
and arresters 46 CFR 32.20-10  
MSM II/F.3.F.17
- Verify height of tank venting  
system 46 CFR 32.55-20
- Verify horizontal distance from air  
intakes and openings 46 CFR 32.55-20(b)  
SOLAS 20 II-2/4.5.3.4.1
- Verify operation of visual indicators 46 CFR 56.50-1(g)(2)(iii)  
SOLAS 20 II-2/4.5.3.2.2
- Verify presence of blank flanges SOLAS 20 II-2/4.5.3.5
- Verify operation of  
pressure/vacuum valves 46 CFR 32.20-5
- Verify operation of vapor line  
pressure sensors and alarms 46 CFR 39.2013  
SOLAS 20 II-2/11.6.3.2

- 145. Inspect cargo pump room
  - Verify Marine Chemist Certificate prior to entry MSM I/10 App. A
  - Verify operation and condition of ventilation system 46 CFR 32.60-20  
46 CFR 32.55-1
  - Verify lighting/ventilation interlock SOLAS 20 II-2/4.5.10.1.2
  - Verify operation of hydrocarbon gas monitoring system SOLAS 20 II-2/4.5.10.1.3  
SOLAS 20 II-2/1.6.7
  - Verify operation of bilge monitoring devices 46 CFR 153.334(b)(2)  
SOLAS 20 II-2/4.5.10.1.4
  - Verify electrical equipment 46 CFR 32.65-20  
SOLAS 20 II-1/45.11
  - Verify fixed fire extinguishing system 46 CFR 34.05-5(a)(4)  
SOLAS 20 II-2/10.9.1 & .2
  - Examine spool piece MARPOL I/1.18 UI 3.1
  - Verify bulkhead between pump room and engine room is gas tight 46 CFR 32.60-20(a)  
SOLAS 20 II-2/9.2.4 Table 9.7
  - Verify hoisting arrangements 46 CFR 153.332
  - Verify presence of toxic vapor protection 46 CFR 153.526(b)  
46 CFR 153.336(b)
  
- 146. Inspect designated observation area
  - Verify location 33 CFR 157.13
  - Verify means to stop discharge of effluent 33 CFR 157.13(b)(1)
  - Verify communications 33 CFR 157.13(b)(2)
  
- 147. Inspect liquid cargo transfer systems
  - Examine condition of piping and hose(s) 46 CFR 156.170
  - Verify operation of cargo pump remote shutdown devices 46 CFR 153.296 (a) - (f)  
33 CFR 155.780
  - Verify hoses are marked 33 CFR 155.800  
33 CFR 154.500(e) & (f)
  - Verify hose and hose assembly 33 CFR 154.500 (a)-(d)  
33 CFR 155.800
  - Verify transfer equipment tests and inspections 33 CFR 156.170(c)(1)
  - Verify warning signals and signs 46 CFR 35.30-1  
46 CFR 153.296(g)

148. Inspect Vapor Collection System (VCS)

- Examine vapor piping 46 CFR 39.2001  
46 CFR 39.2014
- Verify electrically bonded 46 CFR 39.2001(c)
- Examine drain lines 46 CFR 39.2001(d)
- Verify system can be isolated from Inert Gas System 46 CFR 39.2001(e)
- Verify presence of isolation valve and indicator 46 CFR 39.2001(g)
- Verify markings on vapor piping 46 CFR 39.2001(h)
- Verify presence of flange stud 46 CFR 39.2001(j)
- Verify closed gauging system 46 CFR 39.2003(a)
- Verify pressure indicator for main vapor collection line 46 CFR 39.2013(a)
- Verify operation of pressure alarms 46 CFR 39.2013(b)

149. Inspect tank liquid high level and overflow protection

- Verify overflow alarms 46 CFR 39.2007(a)  
SOLAS 20 II-2/11.6.1
- Verify high level alarm settings 46 CFR 39.2007(c)(1)
- Witness operational test of audible and visual alarm indicators 46 CFR 39.2007(c)(3)  
46 CFR 39.2007(d)(3)
- Verify high level alarm markings 46 CFR 39.2007(c)(2)
- Verify tank overflow alarm markings 46 CFR 39.2007(d)(2)

150. Inspect fixed/portable vapor detection instruments

- Verify operation of flammable vapor device 46 CFR 35.30-15 & 153.465  
SOLAS 20 II-2/4.5.7.1
- Verify operation of oxygen content device SOLAS 20 II-2/4.5.7.1 & 7.2.1  
FSS Code 16.2.2.3.2
- Verify means to calibrate fixed and portable instruments SOLAS 20 II-2/4.5.7.1  
FSS Code 16.2.2.3.4
- Verify operation of fixed gas sampling line system SOLAS 20 II-2/4.5.7.2.2 & .3  
FSS Code 16.2.2.3.4
- Verify presence of toxic vapor detection device(s) 46 CFR 153.526(a)

□ 151. Inspect Inert Gas System (IGS)

- Parent cites 46 CFR 32.53-10  
SOLAS 20 II-2/4.5.5
- Verify presence 46 CFR 32.53-1(a) & (b)  
SOLAS 20 II-2/4.5.5.1.1 & .2
- Determine type installed SOLAS 20 II-2/4.5.5.3.2  
FSS Code 15.2.2.1.4
- Verify volume of inert gas being delivered 46 CFR 32.53-30  
SOLAS 20 II-2/4.5.5.3.2
- Verify oxygen content of inert gas in IGS supply main SOLAS 20 II-2/4.5.5.3.2  
FSS Code 15.2.2.1.2.5 & .4.2.2
- Verify oxygen content of inert gas forward of non-return devices FSS Code 15.2.2.1.2.1  
MSM II C.5.E
- Verify arrangements within gas-safe zone (i.e. scrubbers, blowers) FSS Code 15.2.3.1.3 & .4  
MSM II C.5.E
- Verify arrangement of pressure/vacuum breaking device SOLAS 20 II-2/11.6.3.4  
MSM II C.5.E
- Verify arrangement of water seal on deck 46 CFR 32.53-10(b)(1)  
FSS Code 15.2.2.3.1.3, .7 & .9
- Verify arrangement of non-return valve on deck FSS Code 15.2.2.3.1.3  
MSM II C.5.E
- Verify ability to connect inert gas main to an external supply of inert gas FSS Code 15.2.2.3.2.6

- 152. Witness tests of Inert Gas System (IGS) audible and visual alarms and shutdowns
  - Parent cites 46 CFR 32.53-10  
SOLAS 20 II-2/4.5.5
  - Witness low water pressure or low water flow to the cooling & scrubbing arrangement test FSS Code 15.2.3.2.2.3  
FSS Code 15.2.2.2.2
  - Witness high water level in flue gas scrubber alarm test FSS Code 15.2.3.2.2.4  
FSS Code 15.2.2.2.2
  - Witness high temperature alarm shutdown FSS Code 15.2.3.2.2.5  
FSS Code 15.2.2.2.2 & .2.3.2.1
  - Witness IGS blower failure alarm & automatic shutdown of main or regulating valve FSS Code 15.2.3.2.2.6  
FSS Code 15.2.2.2.2
  - Witness test of high oxygen content alarm in IGS main FSS Code 15.2.2.4.5.1.1  
FSS Code 15.2.2.4.5.2
  - Witness test of failure of power to auto controlled system for gas regulating valve and indicating devices alarms FSS Code 15.2.2.4.5.1.2  
FSS Code 15.2.2.4.5.1.5
  - Witness test for low water alarm for water seal 46 CFR 32.53-10(b)(1)  
FSS Code 15.2.3.2.2.7
  - Witness test for low gas pressure in IG main forward of all non-return devices alarm FSS Code 15.2.2.4.5.1.3 & 5.2  
MSM II/C.5.F.3.A(2)
  - Witness test for high gas pressure in IG main forward of all non-return devices alarm(s) FSS Code 15.2.2.4.5.1.4  
FSS Code 15.2.2.4.2
  - Verify fuel oil supply alarm FSS Code 15.2.3.2.2.1  
FSS Code 15.2.2.2.2
  - Verify nitrogen generator alarms FSS Code 15.2.4.2.2

- 153. Inspect oil discharge monitoring and control system (ODME)
  - Verify approval 33 CFR 157.12  
MARPOL 1/31.1
  - Verify operation of recording device 33 CFR 157.12d(a)(4)(viii)  
MARPOL 1/31.2
  - Verify approved operation manual 33 CFR 157.12g(c)  
MARPOL I/31.4
  - Verify recording device records 33 CFR 157.12d(h)

- 154. Inspect Crude Oil Washing (COW) system
  - Verify presence 33 CFR 157.10(e)  
MARPOL 1/33
  - Verify approved 33 CFR 157.112 & .116
  - Review Operations and Equipment Manual 33 CFR 157.116  
MARPOL 1/35

- 155. Inspect vessel stability instrument
  - Verify presence MARPOL Annex I /28.6
  - Confirm contents are for particular vessel MARPOL Annex I /28 6.2
  - Verify approval MARPOL Annex I /28 6.3

- 156. Inspect leak detection system
  - Verify location of sensors 46 CFR 38.15-10(a)
  - Verify location of detection system instruments 46 CFR 38.15-10(b)
  - Verify operation of audio and visual alarms 46 CFR 38.15-10(b)
  - Verify detector sampling intervals 46 CFR 38.15-10(b)

## Helo Deck

- 157. Inspect helicopter deck
  - Parent policy NVIC 09-81
  - Examine landing area 46 CFR 108.235(d)
  - Examine safety netting 46 CFR 108.235(e)
  - Verify location of access/egress routes 46 CFR 108.235(f)  
SOLAS 20 II-2/18.4
  - Examine fuel storage tanks 46 CFR 108.237(a)  
SOLAS 20 II-2/18.7.1 - .4
  - Examine fuel transfer equipment 46 CFR 108.239(a)  
SOLAS 20 II-2/18.7.5 - .13
  - Verify visual aids 46 CFR 108.241(a) & (b)



- ☐ 158. Inspect fire fighting system(s) for helicopter deck
  - Parent policy NVIC 09-81
  - Verify location(s) of hydrants 46 CFR 108.486
  - Verify amount of fire extinguishers 46 CFR 108.489(b)  
SOLAS 20 II-2/18.5.1.1 & .2
  - Verify foam use and foam making capability 46 CFR 108.487(a) & (b)  
46 CFR 108.489
  - Examine nozzles and hoses 46 CFR 108.487(d)  
SOLAS 20 II-2/18.5.1.5
  - Examine operating controls 46 CFR 108.487(c)
  - Examine fire fighting outfits SOLAS 20 II-2/18.5.1.6
  - Verify presence of equipment SOLAS 20 II-2/18.5.1.7
  - Verify location of drainage SOLAS 20 II-2/18.6
  - Verify presence of operation manual SOLAS 20 II-2/18.8
  - Verify annual foam test report(s) MSM II/B.4

## Emergency Drills

- ☐ 159. Evaluate fire drill
  - Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
  - Witness drill 46 CFR 199.250  
SOLAS 20 III/19.2.1
  - Verify crew's ability to organize 46 CFR 199.180(f)  
SOLAS 20 III/19.3.4.2.1
  - Verify crew's familiarity with their duties and use of equipment 46 CFR 199.180(f)  
SOLAS 20 III/19.3.4.2.1
  - Verify firefighting gear is compatible and complete 46 CFR 199.180(f)(3)  
SOLAS 20 III/19.3.4.2.3
  - Verify operation of alarms 46 CFR 199.180(f)(3)  
SOLAS 20 III/19.3.4.2.1- .6
  - Verify effective communication with master 46 CFR 199.180(f)(2)(iv)  
SOLAS 20 III/19.3.4.2.4

160. Evaluate abandon ship drill

- Parent cites 46 CFR 31.36-1  
46 CFR 71.25-15
- Witness drill 46 CFR 199.180(d)  
SOLAS 20 III/19.3.3
- Verify general alarm and public address announcements 46 CFR 199.180(d)  
SOLAS 20 III/19.3.3.1.1
- Verify crew's familiarity with assigned duties 46 CFR 199.180(b)  
SOLAS 20 III/19.3.3.1.2
- Evaluate crew are suitably dressed and proficient in donning lifejackets and/or immersion suits 46 CFR 199.180(d)  
SOLAS 20 III/19.3.3.1.3 & .4
- Witness operation of davit launching lifeboat or rescue boat 46 CFR 199.180(d)  
SOLAS 20 III/19.3.3.1.5
- Witness operation of lifeboat or rescue boat engine 46 CFR 199.180(d)  
SOLAS 20 III/19.3.3.1.6
- Witness operation of davit launching liferafts 46 CFR 199.180(d)  
SOLAS 20 III/19.3.3.1.7

161. Evaluate security drill

- Review procedures contained in security plan 33 CFR 104.230(b)(2)  
ISPS Code A/9.4.4
- Witness drill 33 CFR 104.230(a)  
SOLAS 20 XI-2/4.2
- Evaluate crew's response 33 CFR 104.220  
ISPS Code A/13.3
- Verify control and communication 33 CFR 104.245  
ISPS Code A/7.2.7
- Verify implementation of plan procedures 33 CFR 104.230(a)  
ISPS Code A/9.4

## Internal Structural

- 162. Verify confined spaces are safe for entry
  - Review Marine Chemist Certificate 29 CFR 1915.12(f)  
CIM 5100.47C 13.B.3
  - Verify Competent Person has maintained Marine Chemist Certificate 29 CFR 1915.15  
CIM 5100.47C 13.B.8
  - Verify no changes to vessel's condition 29 CFR 1915.15(b)
  - Verify forced ventilation is provided 29 CFR 1915.13(b)(3)
  - Verify condition of space access point 29 CFR 1915.76
  - Verify compliance with competent person program MSM II/A.5.H.6
  
- 163. Inspect internal structures
  - Parent cites 46 CFR 31.10-1 & -25-1  
46 CFR 70.35-1 & 71.15-1
  - Examine internal structures 46 CFR 31.10-20(b) & -21(c)  
46 CFR 71.50-3(d) & 91.40-3(c)
  - Examine coamings, closures and other fittings 46 CFR 42.09-25(b)(2)  
MSM II/B.3.B
  - Verify wastage discovered is within acceptable limits ABS 7-A-4/27  
NVIC 07-68 III(C)
  - Verify unsatisfactory condition(s) are resolved 46 CFR 42.09-45

## Weld Repairs

- 164. Evaluate structural repair proposals
  - Parent cites 46 CFR 31.10-1 & 32.60-1  
46 CFR 70.35-1
  - Evaluate extent of damage and/or wastage/corrosion 46 CFR 42.09-50  
ABS 7-A-4/17
  - Review repair proposal 46 CFR 42.09-50 & ABS 7-A-4/29  
MSM II/A.1.F.2.a
  - Verify repair materials 46 CFR 42.09-50(c)  
ABS 7-A-4/29
  - Verify welding procedures 46 CFR 42.09-50(c)  
46 CFR 2.75-70

- 165. Verify welding Procedure Qualification Records (PQR)
  - Parent cites 46 CFR 31.10-1, .30-1 & 32.60-1  
46 CFR 70.20-1 & .35-1
  - Confirm need for qualified welding procedure 46 CFR 2.75-70  
46 CFR 57.02-2(a)(1)
  - Verify variables on PQRs to the Welding Procedure Specification (WPS) ASME IX/QW-200.1(b)  
ASME IX/QW-483
  - Verify tests and results ASME IX/QW-200.2(b)
  
- 166. Verify welder is qualified to perform repair work
  - Parent cites 46 CFR 31.10-1, .30-1 & 32.60-1  
46 CFR 70.20-1 & .35-1
  - Confirm need for qualified welding procedure 46 CFR 2.75-70  
46 CFR 57.02-2(a)(1)
  - Verify Welder Performance Qualification (WPQ) is valid 46 CFR 57.02-3  
ASME IX/QW-322.1
  - Verify variables on WPQ(s) ASME IX/QW-301.2  
ASME IX/QW-301.4
  - Verify tests are satisfactory ASME IX/QW-302.1  
ASME IX/QW-484(a)
  
- 167. Inspect fit-up
  - Parent cites 46 CFR 31.10-1 & 32.60-1  
46 CFR 70.35-1
  - Examine material and verify it is fitted to approved joint detail 46 CFR 42.09-50  
ANSI/AWS D3.5-93
  - Verify materials (base, filler, gas) 46 CFR 57.02-5  
ABS 2-1-1/1.1
  - Verify welding processes ABS 2-4-1/1.7
  
- 168. Inspect back gouge
  - Parent cites 46 CFR 31.10-1 & 32.60-1  
46 CFR 70.35-1
  - Examine welds for defects (discontinuity) ABS 2-4-1/5.9  
NVIC 07-68 V(G)(2)
  - Verify weld sequencing ANSI/AWS D3.5-93  
NVIC 07-68 V(F)
  - Verify joints are cleaned interpasses ABS 2-4-1/3.5  
NVIC 07-68 V(H)

- 169. Inspect welds
  - Parent cites 46 CFR 31.10-1 & 32.60-1  
46 CFR 70.35-1
  - Examine welds for uniformity and reinforcement ABS 2-4-1/5.15.1  
NVIC 07-68 V
  - Examine welds for defects (discontinuity) ABS 2-4-1/5.15.1  
NVIC 07-68 V(H)
  - Examine adjacent base metal for injurious arc strikes, spatter, undercut, overlap, slag and irregular and/or sharp edges ABS 2-4-1/5.15.1
  - Verify workmanship through an nondestructive test ABS 2-4-1/5.15.2  
ABS NDT Guide
  
- 170. Verify welding Procedure Qualification Record(s) (PQR)
  - Parent cites 46 CFR 31.10-1 & 32.60-1  
46 CFR 70.35-1
  - Confirm need for qualified welding procedure 46 CFR 2.75-70  
NVIC 07-68
  - Verify variables on PQR(s) to the Welding Procedure Specification (WPS(s)) 46 CFR 2.75-70
  - Verify tests and results 46 CFR 2.75-70
  
- 171. Verify welder is qualified to perform repair work
  - Parent cites 46 CFR 31.10-1 & 32.60-1  
46 CFR 70.35-1
  - Confirm need for qualified welding procedure 46 CFR 2.75-70
  - Verify Welder Performance Qualification (WPQ) is valid 46 CFR 2.75-70
  - Verify variables on WPQs 46 CFR 2.75-70
  - Verify tests are satisfactory 46 CFR 2.75-70

## Nondestructive Testing

- 172. Inspect nondestructive testing (NDT) using the liquid (dye) penetrant method
  - Parent cites 46 CFR 31.10-1 & 32.60-1  
46 CFR 70.35-1
  - Verify technician's qualification and certification ABS 2-4-1/5.17  
NDT Guide 4/5.3
  - Verify application technique NDT Guide 4/5.5
  - Witness application procedures ABS NDT Guide 4/5.7
  - Witness visible penetrant examination ABS NDT Guide 4/7.5
  - Witness fluorescent penetrant examination ABS NDT Guide 4/7.7
  - Evaluate test results or technician's report ABS NDT Guide 4/9 & 11
  
- 173. Inspect nondestructive testing (NDT) using the magnetic particle method
  - Parent cites 46 CFR 31.10-1 & 32.60-1  
46 CFR 70.35-1
  - Verify technician's qualification and certification ABS 2-4-1/5.17  
NDT Guide 7/5.3
  - Verify inspection technique ABS NDT Guide 7/5.5
  - Verify equipment and magnetic field strength ABS NDT Guide 7/5.7.1 & .2
  - Witness application of visible magnetic particles ABS NDT Guide 7/5.7.3
  - Witness application of fluorescent particles ABS NDT Guide 7/5.7.4
  - Witness technician examine/interpret readings ABS NDT Guide 5/5.7 & 9
  - Evaluate test results or review technician's report ABS NDT Guide 5/5.7 & 9

- 174. Verify nondestructive testing (NDT) using the radiography (gamma rays or x-rays) method
  - Parent cites 46 CFR 31.10-1 & 32.60-1  
46 CFR 70.35-1
  - Verify technician's qualification and certification ABS 2-4-1/5.17  
NDT Guide 2/5.1
  - Verify inspection technique ABS NDT Guide 2/5.3
  - Verify film identification markings ABS NDT Guide 2/5.5
  - Verify radiography quality level ABS NDT Guide 2/5.7
  - Verify Image Quality Indicator (IQI) ABS NDT Guide 2/5.9
  - Witness technician examine/interpret readings ABS NDT Guide 2/5.15
  - Review technician's report ABS NDT Guide 2/9 & 11

- 175. Verify nondestructive testing (NDT) using the ultrasonic method
  - Parent cites 46 CFR 31.10-1 & 32.60-1  
46 CFR 70.35-1
  - Verify technician's qualification, certification and techniques ABS 2-4-1/5.17  
ABS NDT Guide 3/3
  - Verify calibrate block's material and thickness ABS NDT Guide 3/3.5
  - Verify type of equipment/instrument used ABS NDT Guide 3/3.7
  - Verify equipment is calibrated ABS NDT Guide 3/3.9
  - Witness technician examine/interpret readings ABS NDT Guide 3/3.11
  - Evaluate test results or review technician's report ABS NDT Guide 3/3.13

- 176. Inspect nondestructive testing (NDT) using the hydro-static method (Pressure Vessels)
  - Parent cites 46 CFR 31.10-1, .30-1 & 32.60  
46 CFR 70.20-1
  - Verify requirement for test 46 CFR 54.10-10(a)
  - Verify ready for testing 46 CFR 54.10-10(b)
  - Verify air has been purged 46 CFR 54.10-10(b)
  - Verify piping components are isolated 46 CFR 54.10-10(b)
  - Verify test pressure 46 CFR 54.10-10(b)  
46 CFR 54.10-20
  - Verify test pressure is attained and maintained 46 CFR 54.10-10(c)
  - Witness test 46 CFR 54.10-10(c)
  
- 177. Inspect nondestructive testing (NDT) using the hydro-static method (Piping Systems)
  - Parent cites 46 CFR 31.10-1, .30-1 & 32.60  
46 CFR 70.20-1
  - Verify test pressure of nonstandard piping components 46 CFR 56.97-5
  - Verify system is ready for testing 46 CFR 56.97-25
  - Verify air has been purged 46 CFR 56.97-30(a)
  - Verify test medium 46 CFR 56.97-30(b)
  - Verify piping components are isolated 46 CFR 56.97-30(c)
  - Verify test pressure 46 CFR 56.97-30(e) & (f)
  - Witness test 46 CFR 56.97-30(d)
  - Verify test pressure is attained and maintained 46 CFR 56.97-30(g)
  - Verify pressures for Installation tests 46 CFR 56.97-40



- 178. Inspect nondestructive testing (NDT) using the hydro-static method (Tanks and Bulkheads)
  - Parent cites 46 CFR 31.10-1, .30-1 & 32.60  
46 CFR 70.20-1
  - Verify tanks/space is ready for testing ABS 3-7-1/3.5.4(a) & (b)
  - Verify test medium being used ABS 3-7-1/3.5.4(a) & (b)
  - Verify piping components are isolated ABS 3-7-1/3.5.4(a) & (b)
  - Verify test pressure ABS 3-7-1/3.5.4(a) & (b)
  - Witness test ABS 3-7-1/3.5.4(a) & (b)
  
- 179. Inspect nondestructive testing (NDT) using the pneumatic method (Pressure Vessels)
  - Parent cites 46 CFR 31.10-1, .30-1 & 32.60  
46 CFR 70.20-1
  - Determine suitability for test 46 CFR 54.10-15(a) & (b)
  - Ensure all safety precaution are taken 46 CFR 54.10-15(g)
  - Verify test pressure 46 CFR 54.10-15(c)
  - Witness gradual pressure increase 46 CFR 54.10-15(d)
  - Witness test 46 CFR 54.10-15(e)

- 180. Inspect nondestructive testing (NDT) using the pneumatic method (Piping Systems)
  - Parent cites 46 CFR 31.10-1, .30-1 & 32.60  
46 CFR 70.20-1
  - Verify test medium and temperature 46 CFR 56.97-35(b)
  - Verify piping components are isolated 46 CFR 56.97-35(c)
  - Verify test pressure 46 CFR 56.97-35(f) & (g)
  - Witness gradual pressure increase 46 CFR 56.97-35(d)
  - Verify test pressure is attained and maintained 46 CFR 56.97-35(h)
  - Witness test 46 CFR 56.97-35(e)
  
- 181. Inspect nondestructive testing (NDT) using the tank air test (pneumatic) method (Tanks and Bulkheads)
  - Parent cites 46 CFR 31.10-1, .30-1 & 32.60  
46 CFR 70.20-1
  - Verify tanks/space is ready for testing ABS 3-7-1/3.5.4(d)
  - Verify piping components are isolated ABS 3-7-1/3.5.4(d)
  - Verify test pressure ABS 3-7-1/3.5.4(d)
  - Verify presence of leak indicating solution ABS 3-7-1/3.5.4(d)
  - Verify calibration of means to measure pressure ABS 3-7-1/3.5.4(d)
  - Witness initial test ABS 3-7-1/3.5.4(d)
  - Witness secondary test ABS 3-7-1/3.5.4(d)
  
- 182. Inspect nondestructive testing (NDT) using the hose test method (Tanks and Bulkheads)
  - Parent cites 46 CFR 31.10-1, .30-1 & 32.60  
46 CFR 70.20-1
  - Verify tanks/space is ready for testing ABS 3-7-1/3.5.4(c)
  - Verify nozzle size ABS 3-7-1/3.5.4(c)
  - Verify water pressure ABS 3-7-1/3.5.4(c)
  - Verify nozzle distance from joints/seams during test ABS 3-7-1/3.5.4(c)
  - Witness test ABS 3-7-1/3.5.4(c)

- 183. Inspect nondestructive testing (NDT) using the vacuum box method (Tanks and Bulkheads)
  - Parent cites 46 CFR 31.10-1, .30-1 & 32.60  
46 CFR 70.20-1
  - Verify tanks/space is ready for testing ABS 3-7-1/3.5.4(f)
  - Verify condition of gauge and injector ABS 3-7-1/3.5.4(f)
  - Verify presence of leak indicating solution ABS 3-7-1/3.5.4(f)
  - Verify test gauge pressure ABS 3-7-1/3.5.4(f)
  - Witness test ABS 3-7-1/3.5.4(f)

## Follow Up

- 184. Verify vessel compliance with the International Safety Management (ISM) Code
  - Verify master's oversight 33 CFR 96.250  
SOLAS 20 IX/3.2
  - Verify maintenance program for vital equipment 33 CFR 96.250  
ISM Code A/10.4
  - Verify compliance of Safety and Environmental Policy 33 CFR 96.250  
ISM Code A/2
  - Verify record keeping compliance 33 CFR 96.220(a)(3)  
ISM Code A/10.2.4
  - Verify company responsibilities and authority are defined 33 CFR 96.250  
ISM Code A/3
  - Verify crew can identify and contact information of designated person(s) ashore 33 CFR 96.250  
ISM Code A/4
  - Review audit documentation and ensure follow-up actions 33 CFR 96.250  
ISM Code A1.4.6, A/9 & 12
- 185. Issue control action(s)
  - Determine control action(s) 46 USC 3313(b)
  - Conduct reports and notifications (when applicable) MMS CVC-PR-001(2)
  - Issue control action(s) MMS CVC-PR-001(2)  
CG-835V
  - Explain control action(s) to responsible parties/stakeholders MMS CVC-PR-001(2)  
CG-835V

186. Issue deficiencies

- Determine when worklists may be used MMS CVC-PR-001(2)
- Document "self reported" deficiencies MMS CVC-PR-001(2)
- Determine deficiency's reference cite 46 USC 3313(b)  
MSM II/A.2.C.4
- Discuss deficiencies and corrective measures/timeframe with vessel's master or representative MSM II/A.2.C.2
- Issue signed CG-835V to vessel's master or representative 46 CFR 2.01-10(a)  
MSM II/A.2.C

187. Issue/Endorse vessel's certificates

- Issue/Endorse certificates, as applicable 46 CFR 31.40-1 & 71.75-1  
46 CFR 91.60-1
- Obtain a copy of all endorsed certificates for the unit's vessel file MSM I/12.E.7

188. Complete Maritime Information for Safety and Law Enforcement (MISLE) Activity

- Open existing activity in MISLE MSM I/12.G.2.a  
IMO Res A.1076(28)
- Update inspection results MSM I/12.H.1 / MSM II/A.2.C.2.d  
MMS PR-009(2)
- Update activity narrative special notes MSM I/12.H.1  
MMS PR-009(2)
- Update vessel details MSM I/12.H.1  
MMS PR-009(2)
- Amend Certificate of Inspection MSM I/12.H.1  
MMS PR-009(2)
- Print new or amended Certificate of Inspection and Deficiency Letter MSM II/A.2.C.6  
MMS PR-009(2)
- Change activity status to "Open - Submitted for Review" MSM I/12.H.1  
MISLE User Guide

189. Conduct deficiency check

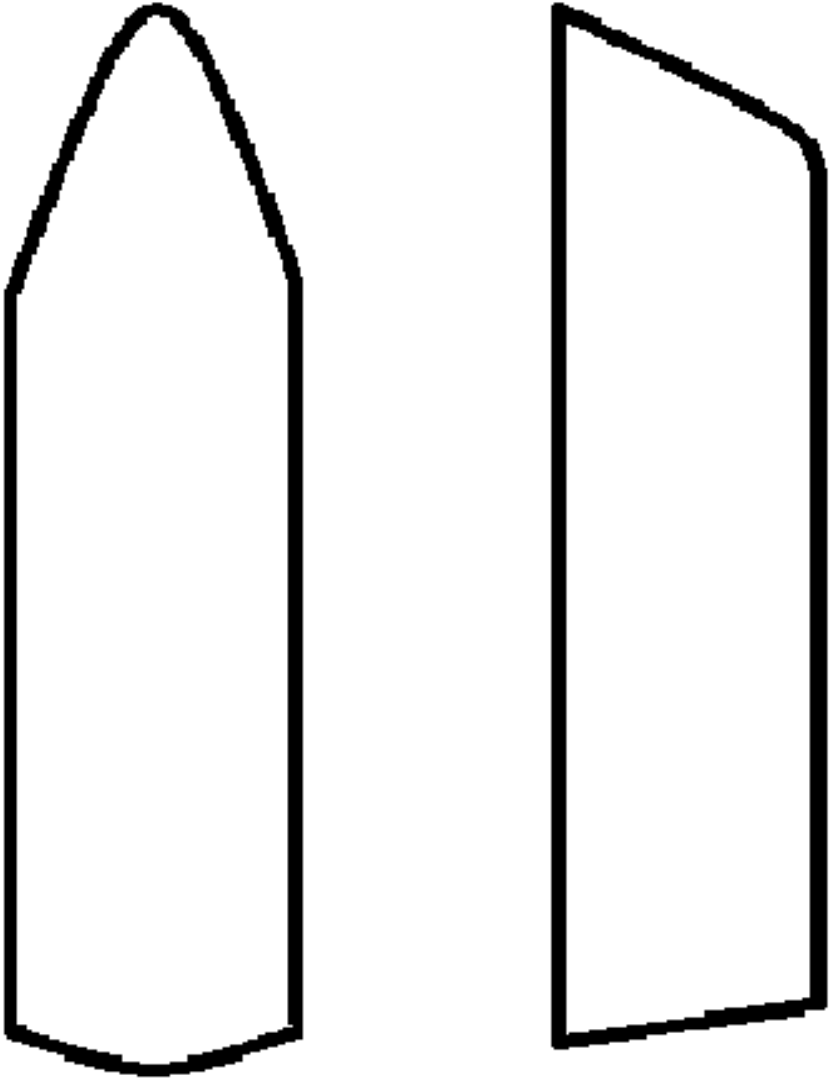
- Determine an appropriate verification method for identified deficiencies MSM II/A.2.C.4
- Verify corrections meet appropriate regulations MSM II/A.2.C.4.a
- Clear deficiencies in MISLE activity MSM II/A.2.C.2.d  
MISLE User Guide
- Remove control action(s) MISLE User Guide

190. Issue or endorse vessel's Certificate of Inspection

- Issue and/or endorse COI 46 CFR 31.05-1  
46 CFR 2.01-5
- Verify COI endorsements are accurate 46 CFR 31.05-15  
46 CFR 153.8

## Appendices

### Vessel Layout:



**Recommended US Vessel Deficiency Procedures:**

Step	Action								
1	Identify deficiency								
2	Inform vessel representative								
3	Record on the Deficiency Summary Worksheet (next page)								
4	If deficiency is corrected prior to end of inspection, go to step 6								
5	<p>If deficiency is unable to be corrected prior to end of inspection, issue CG-835 in accordance with the table below:</p> <table border="1" data-bbox="187 475 951 1341"> <thead> <tr> <th data-bbox="187 475 578 524">IF deficiency:</th> <th data-bbox="578 475 951 524">THEN issue CG-835V:</th> </tr> </thead> <tbody> <tr> <td data-bbox="187 524 578 760"> <p>Does NOT immediately impact crew/passenger safety, hull seaworthiness or the environment, e.g.,</p> <ul style="list-style-type: none"> <li>• Missing placards</li> <li>• Non-metallic expansion joints if more than 10 years in service</li> </ul> </td> <td data-bbox="578 524 951 760"> <p>That provides a specific time for correcting deficiency, e.g.,</p> <ul style="list-style-type: none"> <li>• “X” number of days</li> <li>• At next drydock</li> </ul> </td> </tr> <tr> <td data-bbox="187 760 578 1019"> <p>Allows Vessel operations to be MODIFIED to meet less stringent requirements, e.g.,</p> <ul style="list-style-type: none"> <li>• Expired international certificates</li> <li>• Automation defect</li> <li>• Insufficient lifesaving equipment</li> </ul> </td> <td data-bbox="578 760 951 1019"> <p>That restricts operation of vessel to meet current vessel conditions, e.g.,</p> <ul style="list-style-type: none"> <li>• Reduced route</li> <li>• Increased crew</li> <li>• Fewer offshore workers</li> </ul> </td> </tr> <tr> <td data-bbox="187 1019 578 1341"> <p>DOES immediately impact crew/passenger safety, hull seaworthiness, or the environment and cannot be modified to meet less stringent requirements, e.g.,</p> <ul style="list-style-type: none"> <li>• Missing or defective firefighting equipment</li> <li>• Structural defect or damage</li> </ul> </td> <td data-bbox="578 1019 951 1341"> <p>That requires the deficiency to be corrected prior to operating vessel (“NO SAIL” item), e.g.,</p> <ul style="list-style-type: none"> <li>• Prior to carrying offshore workers</li> <li>• Prior to carrying cargo</li> </ul> </td> </tr> </tbody> </table>	IF deficiency:	THEN issue CG-835V:	<p>Does NOT immediately impact crew/passenger safety, hull seaworthiness or the environment, e.g.,</p> <ul style="list-style-type: none"> <li>• Missing placards</li> <li>• Non-metallic expansion joints if more than 10 years in service</li> </ul>	<p>That provides a specific time for correcting deficiency, e.g.,</p> <ul style="list-style-type: none"> <li>• “X” number of days</li> <li>• At next drydock</li> </ul>	<p>Allows Vessel operations to be MODIFIED to meet less stringent requirements, e.g.,</p> <ul style="list-style-type: none"> <li>• Expired international certificates</li> <li>• Automation defect</li> <li>• Insufficient lifesaving equipment</li> </ul>	<p>That restricts operation of vessel to meet current vessel conditions, e.g.,</p> <ul style="list-style-type: none"> <li>• Reduced route</li> <li>• Increased crew</li> <li>• Fewer offshore workers</li> </ul>	<p>DOES immediately impact crew/passenger safety, hull seaworthiness, or the environment and cannot be modified to meet less stringent requirements, e.g.,</p> <ul style="list-style-type: none"> <li>• Missing or defective firefighting equipment</li> <li>• Structural defect or damage</li> </ul>	<p>That requires the deficiency to be corrected prior to operating vessel (“NO SAIL” item), e.g.,</p> <ul style="list-style-type: none"> <li>• Prior to carrying offshore workers</li> <li>• Prior to carrying cargo</li> </ul>
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6	Enter CG-835V data in MISLE								

**Deficiency Summary Worksheet:**

Name of Vessel	
Deficiency	Req't. Issued/ Date Cleared







Notes

**Conversions:**

<b>Distance and Energy</b>							
Kilowatts (kW)	X	1.341	=	Horsepower (hp)			
Feet (ft)	X	3.281	=	Meters (m)			
Long Ton (LT)	X	.98421	=	Metric Ton (t)			
<b>Liquid</b> ( <i>NOTE: Values are approximate.</i> )							
Liquid	bb/LT	m <sup>3</sup> /t	bb/m <sup>3</sup>	bb/t			
Freshwater	6.40	1.00	6.29	6.29			
Saltwater	6.24	.975	6.13	5.98			
Heavy Oil	6.77	1.06	6.66	7.06			
DFM	6.60	1.19	7.48	8.91			
Lube Oil	7.66	1.20	7.54	9.05			
<b>Weight</b>							
1 Long Ton	=	2240 lbs	1 Metric Ton	= 2204 lbs			
1 Short Ton	=	2000 lbs	1 Cubic Foot	= 7.48 gal			
1 Barrel (oil)	=	5.61 ft = 42 gal = 6.29 m <sup>3</sup>	1 psi	= .06895 Bar = 2.3106 ft of water			
<b>Temperature: Fahrenheit = Celsius</b> ( $^{\circ}\text{F} = 9/5\ ^{\circ}\text{C} + 32$ and $^{\circ}\text{C} = 5/9\ (^{\circ}\text{F} - 32)$ )							
0	=	-17.8	80	= 26.7	200	=	93.3
32	=	0	90	= 32.2	250	=	121.1
40	=	4.4	100	= 37.8	300	=	148.9
50	=	10.0	110	= 43.3	400	=	204.4
60	=	15.6	120	= 48.9	500	=	260
70	=	21.1	150	= 65.6	1000	=	537.8
<b>Pressure: Bars = Pounds per square inch</b>							
1 Bar	=	14.5 psi	5 Bars	= 72.5 psi	9 Bars	=	130.5 psi
2 bars	=	29.0 psi	6 Bars	= 87.0 psi	10 Bars	=	145.0 psi
3 Bars	=	43.5 psi	7 Bars	= 101.5 psi			
4 Bars	=	58.0 psi	8 Bars	= 116.0 psi			