

Tonnage Oversight Reviews

Procedure Number: C3-04

Revision Date: 02/27/2017

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Purpose To establish supplemental procedures for conducting oversight reviews on tonnage work performed by authorized classification societies (ACSs).

References

- a. BP 10, latest revision, *Oversight Procedures*
- b. MTN 04-03 as amended, *Technical Support and Oversight of Authorized Classification Societies*
- c. MTN 01-98, as amended, *Tonnage Administrative Policy*
- d. MTN 01-99, as amended, *Tonnage Technical Policy*
- e. TG 4, latest revision, *Registered Dimensions Under Formal Systems*
- f. WI C3-01, latest revision, *Generating Calculations and Certificates With TonCalc*
- g. BP 11, latest revision, *Tonnage Correspondence Guidelines*

Applicability This procedure applies to tonnage oversight reviews conducted by the Tonnage Division staff, and supplements the oversight procedures of reference (a). Refer to references (b) and (c) for related oversight requirements.

Responsibilities

Tonnage Division Chief:

- Assign tonnage oversight reviews and peer reviews to Tonnage Division staff members.
- Ensure the adequacy and effectiveness of tonnage oversight reviews, including compliance with this procedure.
- Discuss oversight outcomes with ACS managers, as appropriate.
- Sign and transmit oversight correspondence, as appropriate.

Tonnage Standards Manager:

- Select ACS tonnage work items, and request associated tonnage files for review, as directed by the Tonnage Division Chief.
- Conduct oversight reviews and peers reviews, as directed by the Tonnage Division Chief.
- Discuss oversight outcomes with ACS counterparts.
- Sign and transmit oversight correspondence, as appropriate.
- Complete required MASCOT uploads, log-outs and filing actions.
- Ensure ACS completion of required follow-up actions.
- Maintain follow-up action status in MASCOT.

Tonnage Oversight Reviews

Procedure Number: C3-04

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Tonnage Staff Reviewer:

- ❑ Conduct oversight and peer reviews in accordance with this Work Instruction.
 - ❑ Provide oversight results to the Tonnage Standards Manager.
 - ❑ Identify to the Tonnage Standards Manager any discrepancies encountered with oversight processes and tools, including *TonCalc* functionality, along with suggested areas for improvement.
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**Process
Overview**

The Tonnage Standards Manager requests a vessel tonnage file for oversight review, which is assigned by to a Tonnage Division staff member upon receipt. Depending on the scope of the required review, the reviewer examines the tonnage file, and verifies the tonnages, principal dimensions, and other information on the tonnage certificate(s). The reviewer enters any findings into the Tonnage Division Oversight Database, and the Tonnage Standards Manager drafts the correspondence documenting the oversight results, utilizing the Oversight Database to create a findings enclosure, if applicable. Once signed, the correspondence is transmitted to the ACS, and any paper tonnage files are returned. The results are also uploaded into MASCOT, which is used to track required follow-up actions. In conjunction with this process, associated MISLE tonnage data is reviewed for correctness.

**Request
Tonnage Files**

The Tonnage Standards Manager selects a reported tonnage work item, and requests the corresponding tonnage file for oversight, through MASCOT, as directed by the Tonnage Division Chief. Unless otherwise directed, only initial measurement and remeasurement work items are selected. Typically, oversight reviews are not conducted on identical sister vessels, for which an opportunity to conduct a review was previously available.

**Process
Submittals**

Upon receipt of the tonnage file from the ACS, the Tonnage Division Chief assigns oversight to a reviewer on the Tonnage Division staff. The assignment process includes logging the activity into MASCOT, setting up the electronic Project folder, and placing a copy of the forwarding correspondence and accompanying electronic documents in the folder. The folder is labeled using the MSC letter serial number, the vessel's name, and identification number (e.g., "C3-1300175 MARMAC 302 (ON 1240683)"). The Division Chief also prepares the oversight review package for routing to the reviewer, which consists of paper copies of the submittal forwarding correspondence, the associated tonnage certificate(s), and the applicable oversight review checklist(s) of Attachments 1 through 4 to this instruction.

Tonnage Oversight Reviews

Procedure Number: C3-04

Revision Date: 02/27/2017

Perform Oversight Review

The reviewer performs the review within the assigned timeframe by examining the tonnage file for compliance with references (c) and (d), and verifying the correct assignment of tonnages and main dimensions for the assigned review activity or activities, using the applicable checksheet(s) and references (e) and (f) as appropriate. The reviewer enters each finding, categorized in accordance with references (b) and (c), into the Oversight Database. For documented vessels, the reviewer also verifies correct MISLE tonnage data entry by the National Vessel Documentation Center (NVDC), including the assigned tonnages and dimensions. If a paper copy of the tonnage file is submitted, the reviewer stamps paper copies of tonnage file information used in the review with "RETAIN" to indicate they are not part of the ACS's tonnage file.

Perform Peer Review

Normally, the Division Chief will have the staff engineer's oversight work peer reviewed. This review focuses on verifying, from a broad perspective, that the oversight review was performed correctly, and ensuring there is sufficient objective evidence to support all findings. The peer review should also include a review of draft formal MSC correspondence documenting the oversight results.

Categorize and Discuss Findings

After categorizing all findings and discussing them with the Division Chief, the Tonnage Standards Manager discusses them with the appropriate ACS counterpart at the staff level, prior to the Division Chief discussion of the finding(s) with the appropriate ACS counterpart at the managerial level.

Evidence of Findings

For all oversight findings, the reviewer marks up electronic or paper copies of relevant portions of information from the vessel tonnage file or other sources, as necessary, to serve as objective evidence of the finding(s). Mark-ups of electronic copies should be retained in the Project folder (e.g., in an appropriately named Adobe .pdf file, with "sticky notes" highlighting the finding).

Prepare MSC Correspondence

The Tonnage Standards Manager drafts formal correspondence to document the outcome of the oversight review, with any oversight findings included in an enclosure generated using the Oversight Database. The signature level is prescribed by reference (a).

Tonnage Oversight Reviews

Procedure Number: C3-04

Revision Date: 02/27/2017

Sign, Log-Out & File

Once the oversight correspondence is signed, the Tonnage Standards Manager uploads the findings from the Oversight Database into MASCOT, logs the review out of both databases, and completes the following filing actions:

- Paper Records File the “Official File” copy of the signed MSC correspondence, along with a copy of the submittal correspondence, in the “Official File” binder. File a copy of the MSC correspondence in the “MSC-4 Oversight” binder corresponding to the appropriate ACS. File any paper copies of the oversight package pertinent to the oversight review and resulting findings (i.e., certificates, checklists, and calculations) in a folder in the Tonnage filing cabinets, labeled with the vessel’s name and number (e.g., MARMAC 302 (ON 1240683)).
 - Electronic Records Retain electronic copies of all ACS and MSC correspondence in the Project folder, along with any electronic documents, drawings, photos, and other supporting material that was used in the oversight review process.
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Transmittal and Follow-Up

The Tonnage Standards Manager or Division Chief, as appropriate, transmits the correspondence electronically per reference (g), ensuring acknowledgement of receipt. The Standards Manager monitors follow-up actions to ensure their timely completion, and maintains the status of follow-up actions in MASCOT. The Standards Manager also returns any paper tonnage files via overnight express to facilitate tracking.

Timeliness Performance

The business performance goal for completing tonnage oversight reviews is within 30 calendar days of receipt of the tonnage file submittal.

OVERSIGHT CHECK LIST ADMINISTRATIVE REVIEW (TTMA)

Vessel Name: _____

**Tonnage
File**

Verify Inclusion of Required Documents

- Profile and "amidships" drawings, with L_{OA}, L_{reg}, B_{reg} and D_{reg} shown
- Other supporting drawings/ graphical representations
- Tonnage calculations for applicable measurement systems
- Application for Formal Measurement
- Copies of superseded tonnage certificates issued by same ACS
- Records for assigned draft and passenger count (Convention only)
- Tonnage drawing and related framing details (Regulatory only)
- Water ballast justification and approval letter (if WB > 30% GRT_{adj}) (Regulatory only)
- Tonnage Mark Certification documentation (Regulatory Dual Measurement only)

**Convention
Calculations**

Verify Administrative Compliance

- Frame locations or equivalent specified for all dimensions (e.g., offsets or equivalent)
- IGES or STEP file included, if no offsets or equivalent
- Copy of sister calculations included (if applicable)

**Regulatory
Calculations**

Verify Administrative Compliance

- TonCalc format used
- Frame locations or equivalent specified for all dimensions
- All calculations shown (e.g., cannot specify a volume without a source)

**US Certificate
Front**

Vessel Information

- Number** ON, IMO or CG in this order of priority (e.g. ON 1222333, IMO 9320544 or CG 1269756)
- Type** As specified in list under § 3.3(b)(3) of MTN 01-98, as amended
- Builder** Name of individual, company or yard that constructed vessel
- Hull Number** HIN if assigned; Bldr No. if no HIN; "None", Dash, or similar if none/not available
- Built** Town, State (abbrev) if US ; Town, State/Region/Province and Country(no abbrev) if foreign
- Propulsion** Self-propelled (including sail power); or non-self-propelled
- Date** If in 1982 or 1994, complete date; otherwise, year only. Also, date if altered (e.g. "1981/1992")

Length, Breadth, Depth

- "X" in appropriate box (Convention, Overall or Pre-1990)
- Overall length specified in all cases (breadth/depth blank, unless these are registered dimensions)
- All feet in tenths, meters in hundredths & meters roughly agree with feet
- Dimensions transcribed properly from calculations/drawings

Gross Tonnage / Net Tonnage

- No decimals
- Tonnages transcribed properly from calculations, and correct Subpart

Signature block

- Certificate signed

**US Certificate
Reverse**

- Vessel assigned Convention tonnage?**
- Yes. Continue with next item in checklist below
 - No. Skip to **Measurement History** section

Spaces Included in Tonnage (Convention only)

- Underdeck location and length dashed
- All other spaces listed w/ frame location (or equiv) and length
- Lengths to hundredths of meters
- Asterisk if enclosed space includes excluded space
- On older forms, excluded spaces block must list excluded spaces
- Number of passengers agrees with MISLE, and matches calculations. Zero or similar if none
- Molded draft in hundredths of meter, and matches calculations

Measurement History

- Original measurement: ALWAYS completed (e.g. Jan 10, 1993 at St. Louis, MO or Victoria, Canada)
- Remeasurement: must be completed if vessel remeasured multiple times.

Remarks (only authorized remarks, as applicable)

- If ITC69 issued: "International Tonnage Certificate (1969) issued for this vessel."
- If US Cert reissued, reason is given. Examples:
 - "Certificate reissued to reflect addition of new deck structure."
 - "Certificate reissued to replace lost original."
 - "Certificate reissued to correct error in net tonnage."
 - "Certificate reissued to reflect issuance of International Tonnage Certificate (1969)"
- Great Lakes restrictions: "Assigned tonnage valid for Great Lakes voyages only."
- Portable Enclosed Spaces: "Assigned tonnages include YYYYYY . . . located FR ZZZZZ."
- Water Ballast > 30%: "Water ballast in excess of 30%.....valid for XXXXX service only."
- Vessel Not Issued US Cert: "A U.S. Tonnage Certificate was not and dimensions."
- Dual Measurement:
 - One deck: "Vessel measured as single deck....of the uppermost complete deck."
 - Two deck (single low tonnage): "Tonnage mark and Load Line...provisions of 46 CFR 69.179."
 - Two decks (high/low tonnage) : "Tonnage mark is assigned.....provisions of 46 CFR 69.179."
- IMO No. assigned (optional remark): "IMO Number is XXXXXXXX."
- Vessels ≥ 24 Meters / < 79 Feet - "For vessels that are 24.0 meters expressed in English units."

**ITC69
Front**

Eligibility for ITC69

- Convention length >= 79.0

Distinctive Number (one of following, in order of priority listed)

- IMO, ON, CG in this order of priority (e.g. ON 1222333, IMO 9320544 or CG 1269756)

Keel Laid/Altered Date

- If in 1982 or 1994, complete date; otherwise, year only

Main Dimensions (Length, Breadth, Molded Depth)

- All feet in tenths, meters in hundredths, and meters roughly agree with feet
- Annotation if novel craft dimensions used
- Dimensions transcribed properly from calculations/drawings

- ITC 69**
Front
(contd)
- Gross Tonnage / Net Tonnage**
- No decimals.
 - Tonnages transcribed properly from calcs.

- Signature**
- Certificate signed

- ITC69**
Reverse
- Spaces Included in Tonnage**
- Underdeck location and length are dashed
 - All other spaces listed w/ frame location (or equivalent) and length
 - All lengths to hundredths of meters
 - Asterisk if enclosed space includes excluded space
 - On older forms, excluded spaces block must list excluded spaces
 - Number of passengers agrees with MISLE, and matches calculations. Zero or similar if none
 - Molded draft in hundredths of meter, and matches calculations.

- Measurement History** (refers only to Convention measurement)
- Original measurement: ALWAYS completed: e.g. Jan 10, 1993 at St. Louis, MO or Victoria, Canada
 - Remeasurement: must be completed if vessel remeasured multiple times.

Remarks (only authorized remarks, as applicable)

All Vessels

- Overall length defined under Subpart E is XXXX m (YYYY ft)
- Vessel built by XXXX (if available)
- Hull number is YYYY (if available)
- Official number is ZZZZ (if available and not on front of certificate)

As applicable

- If ITC69 reissued, reason given. See checklist for US Cert above for examples.
- If GRT grandfathering applied, check date block on front to ensure eligibility:
 - Date on/before 18 July 1982 "The ship is remeasured according to Article 3(2)(d) GROSS TONNAGE . . . is ZZZZZ RT, according to the regulations of"
 - Date after 18 July 1982 "The ship is additionally measured according to [IMO Resolution YYYY] . . . GROSS TONNAGE . . . is ZZZZZ RT, according to the regulations of"
- Dedicated Clean Ballast Tanks: "This ship carries . . . clean ballast water: ZZZZZZ."
- Temporary Deck Equipment: "Assigned tonnages include YYYYYY . . . located FR ZZZZZ."
- Vessel Not Issued US Cert: "A U.S. Tonnage Certificate was not . . . tonnages and dimensions."
- Reduced Gross Tonnage Segregated Ballast: "The segregated ballast . . . is YYYYY. . . is ZZZZ."
- Reduced Gross Tonnage Open-Top Containerships: "In accordance with IMO . . . is ZZZZZ"

- MISLE**
- Verify Data Entered in MISLE**
- Measurement organization
 - Dimensions
 - COD indicator
 - Gross/Net Tonnage

Comments:

OVERSIGHT CHECK LIST CONVENTION TONNAGE REVIEW (TTMC)

Vessel Name: _____

**Vessel
Geometry**

Verify Geometry (e.g., use photos, approved plans etc.)

- Hull shape and configuration properly represented
- Appendages accounted for
- Large superstructure spaces included
- Small superstructure spaces included, as appropriate
- Cargo spaces included, as appropriate

**Excluded
Spaces**

Check Eligibility of Excluded Spaces

- Covered spaces meet opening criteria
- Uncovered spaces meet side height restrictions
- Securing devices absent in all spaces

Calculations

Check Calculation Inputs

- Hull principal dimensions correct
- Large superstructure principal dimensions correct
- Small superstructure dimensions correct, on sampling basis
- Cargo space dimensions correct, on sampling basis
- Passengers properly accounted for
- Molded depth and draft correct

**Tonnage
Assignment**

Verify Calculated Tonnages

- GT and NT properly calculated and rounded down
- GT comparable to estimate (e.g., $0.7 \cdot L_{reg} B_{reg} D_{reg} + DH_{vol} = 161.5 GT^{0.9691}$ (units of ft))
- NT comparable to estimate (e.g., $NT = 0.3 GT$)
- Overall length ≥ 79.0 ft (otherwise, ineligible)

**Certificate
Information**

Verify Space and Tonnage Information

- Enclosed space locations and lengths correct
- Excluded spaces properly identified
- Cargo space locations and lengths correct (if applicable)
- GT and NT match values in calculations

Comments:

OVERSIGHT CHECK LIST PRINCIPAL DIMENSIONS REVIEW (TTMD)

Vessel Name: _____

**Vessel
Characteristics**

Verify Profile and Section Drawing Against Photos / Other Information

- Hull profile agrees w/ photos, computer model, lines plan, etc.
- "Amidships" section agrees w/ photos, computer model, lines plan, etc.
- Bulwark/hull openings identified that could influence length measurements
- Rudder stock location verified
- Scaling of applicable drawings/photos verified

**Overall
Length**

Verify Certified Value

- 10% criterion for bulwark openings properly applied
- Termination points correct
- Overall length cross-checked against hull offsets
- Overall length correct

**Registered
Length**

Verify Certified Value

- 85% waterline correct w/ vessel trimmed on design waterline
- Criteria for ignoring certain deck discontinuities correctly applied
- Termination points correct
- Registered length correct

**Registered
Breadth**

Verify Certified Value

- Section at correct location ("amidships" of the registered length)
- Termination points correct
- Registered breadth cross-checked against hull offsets
- Registered breadth correct

**Registered
Depth**

Verify Certified Value

- Termination points correct
- Registered depth cross-checked against profile drawing depth
- Registered depth correct

**Molded
Draft**

Verify Certified Value

- Cross-check against profile drawing draft
- Molded draft correct

Comments:

OVERSIGHT CHECK LIST REGULATORY TONNAGE REVIEW (TTMR)

Vessel Name: _____

**Vessel
Geometry**

Verify Geometry (e.g., use photos, approved plans etc.)

- Hull shape and configuration properly represented
- Large superstructure spaces included
- Small superstructure spaces included, as appropriate
- Line of the uppermost complete deck properly established
- Line of the tonnage deck properly established
- Open vessel criteria properly applied, as appropriate

**Tonnage
Drawing**

Verify Accuracy

- Tonnage length correct
- Ordinary frames used as basis for measurements correct, at all stations
- Breadth and depth measurements correct, on sampling basis

**Under-Deck
Calculations**

Check Calculation Inputs

- Dimensions properly transcribed from tonnage drawing
- Water ballast space exemption correct, if applicable (see WI C3-XX under development)
- Eligibility of deducted spaces verified
- Calculation methodology correct (e.g., Simpson's vs. rectangular?)

**Above-Deck
Calculations**

Check Calculation Inputs

- Dimensions verified against drawings, photos, etc
- Eligibility of exempted spaces verified
- Eligibility of deducted spaces verified
- Calculation methodology correct

**Tonnage
Assignment**

Verify Calculated Tonnages

- GRT and NRT properly calculated and rounded down
- GT comparable to estimate (e.g., evaluate exemptions on TonCalc summary)
- NT comparable to estimate (e.g., evaluation deductions on TonCalc summary)

**Certificate
Information**

Verify Tonnage Information

- GRT and NRT properly transcribed

Comments: