



Food and Agriculture
Organization of the
United Nations

Insurance Guidelines

Checklists for Survey and Inspection of Small Fishing Vessels

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STRENGTH

STABILITY

SAFETY

With a focus on small fishing vessels

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ANNUAL SELF-CERTIFICATION

I, as Owner, will verify each year that the Vessel continues to comply with the requirements of _____ and sign this Annual Self-Certification form to Certify this has been done.

| | | | |
|-----------|--------------------|------|--|
| Signature | | Name | |
| | Signature of Owner | | |
| Date | | | |

Name of Owner

Address of Owner

Post Code

I CERTIFY, IN RESPECT OF THIS VESSEL THAT:

- i) The Vessel remains compliant with the requirements of _____

- ii) Such safety equipment carried is in sufficient numbers for the total persons specified on the Certificate
- iii) The Safety equipment has been properly maintained and serviced in accordance with manufacturer's recommendations
- iv) Where applicable, a risk assessment of work activities has been completed in accordance with _____

- v) the Vessel is fitted with the lights, shapes and sound signals to comply with the International Regulations for the Prevention of Collisions at Sea and is fitted with navigational equipment and carries nautical publications in accordance with _____
- vi) the radio communication equipment carried by the Vessel complies with _____

A. Examples of survey checklists - Generic

Hull survey of vessels of less than 12 m in length overall

| | | | | | |
|--|-------------------|-------------------|--|-------------------------|--|
| | Periodical survey | Additional survey | | Vessel registration No. | |
|--|-------------------|-------------------|--|-------------------------|--|

Name: _____ District No.: _____

Length overall: _____ m Place of survey: _____

Date of survey: _____ Validity of survey: _____ Meter No.: _____

Explanatory Notes for survey report

Generally, there are four options in giving a remark when filling out the survey report of the Icelandic Maritime Administration, notably 0, 1, 2 or 3. Remarks are given by putting an "X" in the relevant column for a specific item number.

A shaded box for a certain item number means that a remark is not allowed with regard to that particular item number. E.g., for item number 3204, remark 1 is not allowed.

| No. | Item inspected | 0 | 1 | 2 | 3 |
|------|----------------|---|---|---|---|
| 3204 | Fire alarm | | | | |

If a certain item number is not relevant, e.g. due to the type and use of the boat in question, it should be indicated by putting a "-" in the column for remark 0.

Definition of remarks:

| Remark | Definition | |
|--------|--|---|
| 0 | The item in question is in good working condition, as required in accordance with the relevant regulation, does not require repair / renewal / rectification. | |
| 1 | The item in question is not fully functional, as required in accordance with the relevant regulation, requires repair / renewal / rectification – does not constitute a hazard for vessel / crew. | Corrective action within 30 days by owner. |
| 2 | The item in question is not in good working condition or fully as required in accordance with the relevant regulation, requires repair / renewal / rectification, is not fully functional but in working order – does not constitute a hazard for vessel / crew. | To be repaired, rectified and surveyed again after a maximum of three months. |
| 3 | The item in question is not in good working condition or as required in accordance with the relevant regulation, requires repair / renewal / rectification, is not functional or a limited functionality – is hazardous for vessel / crew. | Detained. |

| Hull type: | | Wood | Fibre glass | Aluminium | Steel | | | | | |
|------------|------------------------|--------|-------------|-----------|-------|----------------|-------------------------------------|---|---|---|
| No. | Item inspected | Remark | | | No. | Item inspected | Remark | | | |
| 1000 | Hull | 0 | 1 | 2 | 3 | Hull | 0 | 1 | 2 | 3 |
| 1010 | Outer shell/planking | | | | | 1260 | Deck crane | | | |
| 1020 | Gel coat | | | | | 1270 | Emergency exit | | | |
| 1030 | Stem | | | | | 1280 | Sole | | | |
| 1040 | Keel | | | | | 1290 | Drain holes | | | |
| 1050 | Bilge keel | | | | | 1300 | Deck | | | |
| 1060 | Stem/wing | | | | | 1310 | Hatches | | | |
| 1070 | Hull <u>weldings</u> | | | | | 1320 | Box covers | | | |
| 1080 | Spikes/fastenings | | | | | 1330 | Freeing ports | | | |
| 1090 | Caulking | | | | | 1340 | Deck frame and stanchions | | | |
| 1100 | Stern box/board | | | | | 1350 | Frames | | | |
| 1110 | Rescue ladder | | | | | 1360 | Divisions/bulkheads | | | |
| 1120 | Rudder | | | | | 1370 | Engine casing | | | |
| 1130 | Rudder <u>step</u> | | | | | 1380 | Hatch cover and coaming | | | |
| 1140 | Propeller | | | | | 1390 | Means for securing weathertightness | | | |
| 1150 | Axle and bearings | | | | | 1400 | Transom flaps | | | |
| 1160 | Outboard drive | | | | | 1410 | Fastening device/bollards | | | |
| 1170 | Balance flaps | | | | | 1420 | Securing of fishing gear | | | |
| 1180 | Transducer | | | | | 1430 | Air pipes to tanks | | | |
| 1190 | Load lines | | | | | 1440 | Tank filling equipment | | | |
| 1200 | Superstructure | | | | | 1450 | Corrosion | | | |
| 1210 | Bulwark | | | | | 1460 | Engine foundations | | | |
| 1220 | Bulwark planking | | | | | 1990 | Other | | | |
| 1230 | Guard rails/handles | | | | | | | | | |
| 1240 | Ladders | | | | | | | | | |
| 1250 | Mast, boom, goose neck | | | | | | | | | |

Survey results

| | | | |
|--------------|---|--|-------------|
| 0 No remarks | 1 Rectification: Corrective action within 30 days | 2 To be surveyed again before: _____ 20 ____ | 3 Detention |
|--------------|---|--|-------------|

| | |
|-----------------|-------------------------------|
| Vessel surveyor | Remarks entered into: |
| | Inspection book _____ 20 ____ |
| | Book of remarks _____ 20 ____ |
| | Computer _____ 20 ____ |

Verification by customer that survey has taken place

| No. | Item inspected | Remark | No. | Item inspected | Remark | No. | Item inspected | Remark |
|------|------------------------------------|---------|------|---------------------------------|---------|------|--------------------------------|---------|
| 2000 | Engine | 0 1 2 3 | 2350 | Cool. water equip | 0 1 2 3 | 2700 | Aux. engine | 0 1 2 3 |
| 2010 | Eng. accrd. ship reg | | 2360 | Cool. water piping | | 2710 | Auxiliary engine | |
| 2020 | Engine is functional | | 2370 | Seaw. piping to eng. | | 2720 | Gauges | |
| 2030 | Water leaks | | 2380 | Seawater intake | | 2730 | Oil leaks | |
| 2040 | Oil leaks | | 2400 | Seawater/bilges | | 2800 | Electric equipment | |
| 2050 | Met.: Rpm/lub/heat | | 2410 | Hand pumps qty: | | 2810 | Gen. cond. el equip | |
| 2060 | Met. Exh. gas. nr gear. | | 2420 | El. pumps qty: | | 2820 | Gauges, fuse mark. | |
| 2070 | Engine controls | | 2430 | Eng. pumps qty: | | 2830 | Generator 1 charg. | |
| 2080 | Propeller gear | | 2440 | Bilge piping/valves | | 2840 | Generator 2 charg. | |
| 2090 | Engine fastenings | | 2450 | Alarm seawater in engine | | 2850 | Special survey demanded | |
| 2100 | Engine pads | | 2460 | Bilge filters | | 2900 | Engine room | |
| 2110 | Flexible junctions | | 2470 | Seaw. pump/deck | | 2910 | El. illumination | |
| 2120 | U-joint | | 2480 | Bottom valves | | 2920 | Orderliness | |
| 2130 | Steering engine | | 2490 | Seawater piping | | 2930 | Floors/soles | |
| 2200 | Fuel equipment | | 2500 | Fire/see equipm. | | 2940 | Servicing arrangement | |
| 2210 | Fuel filters | | 2550 | Exhaust piping | | 2950 | Safety covers | |
| 2220 | Fuel piping | | 2560 | Seawater cooling | | 2960 | Side valves | |
| 2230 | Fuel separator | | 2570 | Insulation | | 2990 | Other | |
| 2240 | Oil tank valves | | 2580 | Position | | | | |
| 2250 | Quantity gauges | | 2600 | Spares and tools | | | | |
| 2260 | Glass valves | | 2610 | Belts | | | | |
| 2270 | Quick closing valve | | 2620 | Hoses | | | | |
| 2300 | Air ducts | | 2630 | Lubrication filter | | | | |
| 2310 | Air ducts to engine | | 2640 | Fuel filter | | | | |
| 2320 | Air duct closures | | 2650 | Tools | | | | |
| 2330 | Height and position | | | | | | | |

| Survey results | | | |
|--|---|---|----------------|
| 0 No remarks | 1 Rectification: Corrective action within 30 days | 2 To be surveyed again before: _____ 20 _____ | 3 Detention |
| | | Remarks entered into: | |
| Vessel surveyor | | Inspection book | _____ 20 _____ |
| | | Book of remarks | _____ 20 _____ |
| | | Computer | _____ 20 _____ |
| Verification by customer that survey has taken place | | | |

| | Periodical survey | Additional survey | | Vessel registration No. | | | | |
|----------------------------|---------------------------------|---------------------------|---|-------------------------|---|------|------|-----|
| Name: _____ | | District No.: _____ | | | | | | |
| Registered length: _____ m | | Place of survey: _____ | | | | | | |
| Date of survey: _____ | | Validity of survey: _____ | | Meter No.: _____ | | | | |
| No. | Item inspected | Remark | | | | Date | Type | No. |
| 3100 | Equipment | 0 | 1 | 2 | 3 | | | |
| 3513 | Inflatable life raft | | | | | | | |
| 3513 | Inflatable life raft | | | | | | | |
| 3519 | Release mechanism for life raft | | | | | | | |
| 3510 | Immersion suits | | | | | | | |
| 3523 | Floatation work suits | | | | | | | |
| 3511 | Life jackets | | | | | | | |

| No. | Item inspected | Date | Qty. | Remark | | | | No. | Item inspected | Remark | | | |
|------|-------------------------------------|------|------|--------|---|---|---|------|------------------------------|--------|---|---|---|
| | | | | 0 | 1 | 2 | 3 | | | 0 | 1 | 2 | 3 |
| 3101 | Certificate of Measurement | | | | | | | 3430 | Torch light | | | | |
| 3202 | Magnetic compass | | | | | | | 3401 | Binoculars | | | | |
| 3206 | Medicine chest | | | | | | | 3413 | National flag | | | | |
| 3204 | Fire alarm | | | | | | | 3406 | Almanac | | | | |
| 3108 | Telecomm. equipment | | | | | | | 3405 | Charts | | | | |
| 3501 | Hand flares | | | | | | | 3426 | Nautical instruments | | | | |
| 3502 | Rocket parachutes | | | | | | | 3431 | Fog signalling apparatus | | | | |
| 3212 | Fire extinguishers | | | | | | | 3419 | Whistle and bell | | | | |
| 3205 | Fire-extinguishing syst. | | | | | | | 3209 | Inspection book | | | | |
| 3302 | Markings | | | | | | | 3211 | Stability information, date: | | | | |
| 3424 | Navigation lights | | | | | | | 3908 | Instruction cards | | | | |
| 3425 | Fishing lights | | | | | | | 3914 | Ventilation | | | | |
| 3515 | Fixed painter for life rafts | | | | | | | 3904 | Stove - fire prot. and fuse | | | | |
| 3516 | Inflatable life raft handle | | | | | | | 3909 | Lavatories | | | | |
| 3303 | Safety colour | | | | | | | 3706 | Watertight door | | | | |
| 3504 | Life buoys | | | | | | | 3524 | Rescue quoit | | | | |
| 1390 | Means for securing weathertightness | | | | | | | 3990 | Other | | | | |
| 3718 | Anchor-chain and rope | | | | | | | | | | | | |
| 3726 | Drop anchor | | | | | | | | | | | | |
| 3702 | Net winch safety equipment | | | | | | | | | | | | |
| 3715 | Freeing ports | | | | | | | | | | | | |
| 3604 | Emergency steering | | | | | | | | | | | | |
| 3712 | Fixed rescue ladder | | | | | | | | | | | | |

Survey results

B. Example of an inspection checklist

Example of inspection checklist with explanatory notes for vessels of design categories C & D of up to 7 m LOA

(Note: Numbering and annexes refer to the Safety Recommendations for Decked Fishing Vessels of Less than 12 metres in Length and Undecked Fishing Vessels)

| CHAPTER 1 - GENERAL PROVISIONS | | | Remarks/ Notes |
|--------------------------------|---|----------------------|-------------------|
| 1.1 | Purpose and scope | | |
| | Is the vessel covered by the scope of the recommendations? | | |
| 1.2.14 | In which design category is the vessel assessed to be operating in? | | |
| | Design category C | OR Design category D | |

| CHAPTER 2 - CONSTRUCTION, WATERTIGHT INTEGRITY AND EQUIPMENT | | | |
|---|---|--|-----------------|
| Part 1 | General | | |
| | Are the general requirements met? | | |
| 2.2 | Construction, material and structure | | |
| | What is hull construction material? | | Superstructure? |
| 2.2.1 | Is the construction of the hull and other structures sufficient to withstand all conditions of intended service? Note: See Annexes II, III, IV and V. | | |
| 2.3 | Inlets and discharges | | |
| 2.3.1 | Are sea inlets fitted with valves? | | |
| 2.3.2 | Are discharges passing through the hull fitted with non-return valves? | | |
| 2.3.6 | Are penetrations prone to damage protected? | | |
| 2.4 | Drainage of partial decks | | |
| 2.4.1 | Are partial decks adequately drained? | | |
| 2.5 | Securing of heavy items | | |
| 2.5.1 | Are heavy items of equipment secured in position? | | |
| 2.6 | Anchor and mooring equipment | | |
| 2.6.1 | Is anchor and mooring equipment designed for quick and safe operation? | | |
| | List size and weight of anchor and mooring equipment: | | |
| | Is anchor and mooring equipment suitably sized? | | |
| | Note: See Annex VI. | | |
| Part 3 | Decked vessels | | |
| 2.7 | Construction | | |
| | Are bulkheads fitted? | | How many? |
| | Is a collision bulkhead fitted? | | |
| 2.9 | Weathertight doors | | |
| 2.9.1 | Are openings in superstructures fitted with weathertight doors? | | |
| 2.9.2 | Are sills in doorways and companionways at least 380 mm in height? | | |
| 2.9.3 | Note: Heights may be reduced to 150 mm. And in design category D to 50 mm. | | |
| 2.10 | Hatchways | | |
| 2.10.1 | Are hatch coamings on the deck at least 300 mm in height? | | |
| 2.10.2 | Note: Coamings may be reduced or omitted. | | |
| 2.10.3 | Are covers fitted with clamping and gaskets? Note: Design category C only. | | |
| | Note: See Annex VII. | | |
| 2.12 | Other deck openings | | |
| 2.12.1 | Note: If essential for fishing operations, flush deck covers may be fitted. These should be capable of being closed watertight. | | |

| CHAPTER 2 - CONSTRUCTION, WATERTIGHT INTEGRITY AND EQUIPMENT | |
|--|--|
| 2.13 | Ventilators |
| 2.13.1 | Are coamings of ventilators at least 450 mm? Note: This may be reduced. |
| 2.14 | Air pipes |
| 2.14.2 | Is the height of air pipes at least 450 mm? Note: This may be reduced provided a non-return arrangement is fitted. |
| 2.17 | Freeing ports |
| 2.17.1 | Are freeing ports fitted? Note: Closing devices should not be lockable. |
| 2.17.3 | Are freeing ports sufficient to drain water from exposed deck? |
| | Note: See Annex VIII. |
| 2.18.1 | See 2.6. |

| CHAPTER 3 - STABILITY AND ASSOCIATED SEAWORTHINESS | | | |
|--|--|----|----|
| 3.1 | General | | |
| | Are the general requirements met? | | |
| | Evidence of stability compliance | | |
| | Does vessel meet a recognized stability standard <u>and</u> carry approved stability data? | Y1 | N1 |
| | If Y1, then: | | |
| | • name the standard | | |
| | • type of stability documentation available | | |
| | • stability approval valid until (dd/mm/yy) | / | / |
| | If N1, does vessel match a sister vessel ⁵ with approved stability? | Y2 | N2 |
| | If Y2, then | | |
| | • name the sister vessel | | |
| | If N2, then | | |
| | • Does vessel pass a practical stability test representing worst case operation? | Y3 | N3 |
| | If Y3, then vessel has passed either: | | |
| 3.3.6 | • offset load test (enclose form @ Annex C) | Y | |
| 3.7.2 | • heel test (enclose form @ Annex B) | Y | |
| 3.11.1 | • simplified flooded stability test (enclose form @ Annex D) | Y | |
| 3.11.2 | • practical buoyancy test (enclose relevant ISO 12217 worksheets) | Y | |
| | • alternative equivalent test (enclose appropriate report or form) | Y | |
| | If N3, then either | | |
| | • ops. restricted based on Wolfson Stability Guidance (enclose Wolfson Notice) | Y | |
| | • professional input is recommended to achieve compliance | Y | |

CHAPTER 4 - MACHINERY AND ELECTRICAL INSTALLATIONS

4.1

General

Are the general requirements met?

4.1.8

Are sufficient tools and parts carried as follows?

| Spare Parts | Motor: | Outboard | Inboard |
|--|--------|----------|---------|
| Manual for engine and other major equipment | | X | X |
| Parts for waterpump (impeller, gasket, etc.) | | X | X |
| Sparkplug | | X | |
| Shear pin for propeller | | X | |
| Split pins for propeller nuts | | X | |
| Starting rope | | X | |
| Propeller | | X | |
| Stern gland packing | | | X |
| Belts for alternators and pumps | | | X |
| Lub oil filter | | | X |
| Fuel oil filter (or cartridge) and filter spanner | | | X |
| Water repellent oil/spray | | X | X |
| Engine oil, gear oil and grease | | | X |
| Bolts, nuts, washers, screws, hoses and clamps to suit | | X | X |
| Glues, electrical tape, electrical wire, electrical connectors | | X | X |

CHAPTER 4 - MACHINERY AND ELECTRICAL INSTALLATIONS

Ropes and twine of varying types and diameters

X

X

Bulbs and fuses for lights including navigation and torches

X

X

Spare batteries for torches, radio equipment, etc.

X

X

Parts for bilge pump(s).

X

X

Tools

Motor:

Outboard

Inboard

Spanners

X

X

Socket set

X

Adjustable spanners

X

Spark plug spanner

X

Pliers

X

X

Screwdrivers

X

X

Knife

X

X

Multitester

X

Hydrometer

X

Hammer

X

Wire cutters

X

Hacksaw and spare blades

X

Cold chisel

X

Pipe wrench

X

Torch

X

X

Bailer

X

X

CHAPTER 4 - MACHINERY AND ELECTRICAL INSTALLATIONS

| | | |
|---------|---|--|
| 4.7.15 | Exhaust systems | |
| | See also Annex XVI. | |
| | Are exhausts discharging through the hull fitted with a non-return device? | |
| | Is a part of exhaust pipes at least 350 mm above waterline? | |
| | Are exhaust outlets at least 100 mm above the load waterline? | |
| 4.8 | Ventilation of engine room | |
| 4.8.1 | Are engine air intakes of adequate size? Note: See manufacturer's specifications. | |
| 4.10 | Emergency source of electrical power | |
| 4.10.1 | Is an emergency battery fitted? Notes: Required - 1) To supply emergency lights, radio and navigation lights for at least three <u>hours</u> ; 2) For vessels operating more than 20 nautical miles from a <u>safe haven</u> . | |
| 4.12 | Electrical systems | |
| 4.12.7 | Are batteries fitted in enclosed boxes with covers, and sufficient ventilation? Note: Batteries in accommodation should be sealed and ventilated to open air. | |
| 4.12.8 | Is battery or bank fitted with isolation switch? | |
| 4.12.9 | Is there a means of checking the charge of the batteries? | |
| 4.12.10 | Are batteries secured to avoid movement due to motion of the vessel? | |
| 4.12.12 | Are the batteries used for engine starting separate from the batteries used for other services? Note: Starter batteries should be capable of starting the engine at least 6 times without recharging. | |
| | Note: See Annex XVII. | |

| CHAPTER 5 - FIRE PROTECTION AND FIRE FIGHTING | | | | |
|--|---|------------------|-----------------|----------------|
| Part 1 | General | | | |
| | Are the general requirements met? | | | |
| 5.7 | Number of fire-fighting appliances - undecked vessels | | | |
| | Are the required fire-fighting appliances supplied/fitted? | | | |
| | Propulsion | No engine | Outboard | Inboard |
| | Fire extinguisher | 0 | 0 | 1 d) |
| | Fire bucket or bailer | 0 a) | 1 b) | 1 b) |
| | d) Not required where other water container (e.g. bailer) is carried. e) Not required where two or more extinguishers are carried. f) The smallest vessels may be exempt from this requirement. | | | |
| 5.8 | Number of fire-fighting appliances - decked vessels | | | |
| 5.8.1 | Are two fire extinguishers fitted? Notes: 1) One should be located near the machinery space; 2) If two fire extinguishers are provided, a bucket for <u>fire fighting</u> should also be carried. | | | |
| 5.8.2 | Note: Vessels with outboard engines may have only one fire extinguisher. | | | |

| CHAPTER 6 - PROTECTION OF THE CREW | | | |
|---|--|------------------|--------------------|
| 6.1 | General protective measures | | |
| | Are the general requirements met? | | |
| 6.2 | Deck openings and doors | | |
| | Are the requirements met? | | |
| 6.3 | Bulwarks, rails and guards | | |
| 6.3.1 | Are bulwarks, guard rails or gunwales fitted? Note: These should be 1 m unless this would interfere with fishing operations. | | |
| 6.10 | Medical services | | |
| 6.10.1 | Are medical supplies, equipment and instructions provided? | | |
| | Basic first-aid kit | Essential | Recommended |
| | Bandage, band aids, sterile dressings | X | |
| | Sterile gauze, adhesive tape | X | |
| | Scissors | X | |

CHAPTER 7 - LIFE-SAVING APPLIANCES

| | | | |
|--|---|--------------------------------|---------------------------------|
| Part 1 | General | | |
| | Are the general requirements met? | | |
| 7.12 | Recommendations for design categories | | |
| | Are the required life-saving appliances supplied/fitted? | | |
| Distance from <u>safe haven</u> : | ≤ 5 nm | ≤ 20 nm | ≤ 100 nm |
| Life raft | | | C [■] D [■] |
| Buoyant apparatus | | C1 [*] D [♣] | |
| Life jacket [*] | C [*] D ^{♣♣} | C [♣] D ^{♣♣} | C1 [♣] D ^{♣♣} |
| Distress signals: 2 hand flares | C D | C D | C D |
| Handrails or capsize rope | C D | C D | C D |
| Whistle, mirror and torch | C D | C D | C D |
| Means of recovering persons from the water | C D | C D | C D |
| Wheelhouse top painted in visible colour and with identification marks | C D | C D | C D |
| <p>* The life raft may be substituted with a buoyant apparatus. * Recommended.</p> <p>* For every person on board. * Life jacket may be substituted with a personal floatation device.</p> | | | |
| 7.114 | Is a handrail or capsize rope fitted? Note: To allow persons to hold on to capsized vessel? | | |

| CHAPTER 9 - RADIO COMMUNICATIONS | | |
|---|--|--|
| Part 1 | General | |
| | Are the general requirements met? | |
| 9.9 | Equipment requirement for design categories C & D | |
| | Is the required radio communications equipment supplied/fitted? | |
| | VHF or handheld VHF | |
| | Mobile (cellular) telephone. Note: In lieu of other requirements but only where local circumstances justify and for vessels exclusively within the coverage of a mobile telephone network. | |
| | Radio receiver to receive weather forecasts. | |
| | Note: See Annex XXVI. | |

FRP Hull Inspections

Hull

| | |
|--|---|
| Material | |
| Hand laid/chopper gun | |
| Solid/cored below water-line | |
| Stringers/stiffeners (athwartships, longitudinal) | |
| Hull/deck joint type | |
| Depressions / bulges / blisters / dry rot | |
| Paint | |
| Antifouling | |
| Bulkheads | |
| Resins used | polyester – cheap vinylester – water-resistance epoxy – expensive, best |
| Anti-blistering coating underwater (epoxy resin) | |
| Bilge (water in, access) | |

Wooden Hull ` inspection



| Area | Test | Defect | Action |
|---------------------------|---------------------------|--|--|
| Paintwork | Cracking along wood grain | Rot beneath | |
| Hull surface for rot | Hammer | Ringing sound – good Dull sound – rot beneath | Mark area |
| Visual timber check | Splitting | Hull dried out | |
| Caulking | Well bedded in seams | Good condition | |
| Plank fastening | Green or rust stains | Corrosion of fasteners | |
| Planking to Transom joint | Visual | Splitting | Repair |
| Planking at stem | As above | As above | As above |
| Frame ribs | Visual check for | Mid or top break /damage | Repair |
| Keel to Hull joint | Visual – check for | Gap or corrosion | |
| Keel band and bolts | Visual check | Condition | |
| Timber | Visual check | exposed | Rub down and apply undercoat before topcoats |
| Timber replacement | Humidity meter | Acceptable 12 – 16% | |

Steel and Aluminium Hull Inspections

Hull and deck

| Sr. No | Test | Defect | Action |
|--------|----------------------------------|--|--------|
| 1 | Visual | Damage | |
| 2 | Visual | Dents | |
| 3 | Visual chipping hammer | Corrosion | |
| 4 | Visual Chipping hammer | Pitting | |
| 5 | Visual hammer Dye penetrant | Cracking | |
| 6 | Visual Dye penetrant | Weld seams and butt cracks | |
| 7 | <u>Ultra sound</u> Test Holes | Plate thickness – record and compare to required | |
| 8 | Visual | Inspect Anodes | |

Annex B 'Example inspection checklist'

Example checklist for vessels up to 7m overall length:

FAO Cat C: Hs up to 2m (one 4m wave in 2000 encs.) and 24kts steady wind speed

FAO Cat D: Hs up to 0.3m (one 0.6m wave in 2000 encs.) and 14kts

| CHAPTER 3 - STABILITY AND ASSOCIATED SEAWORTHINESS | | |
|--|--|---------|
| 3.1 | General | |
| | Are the general requirements met? | |
| | Evidence of stability compliance | |
| | Does vessel meet a recognized stability standard <u>and</u> carry approved stability data? | Y1 N1 |
| | If Y1, then: | |
| | • name the standard | |
| | • type of stability documentation available | |
| | • stability approval valid until (dd/mm/yy) | / / |

if Y1 → PASS

Annex B 'Example inspection checklist' (cont.)

- Vessel does not meet a stability standard or does not carry an approved stability booklet. Refer to approved sister vessels, if any.

| | | | |
|--|--|----|----|
| | Does vessel meet a recognized stability standard <u>and</u> carry approved stability data? | Y1 | N1 |
| | If Y1, then: | | |
| | • name the standard | | |
| | • type of stability documentation available | | |
| | • stability approval valid until (dd/mm/yy) | / | / |
| | If N1, does vessel match a sister vessel ⁷ with approved stability? | Y2 | N2 |

- 'Match' means 'no evidence of alterations': same weight distribution, flotation, arrangements, fishing mode(s), lifting gear rating etc.

if Y2 → PASS

Annex B 'Example inspection checklist' (cont.)

- Vessel does not meet a stability standard or does not carry an approved stability booklet. It may not be matched to a sister vessel with approved stability. Perform a FAO stability test or equivalent.

| | | | |
|--|--|----|----|
| | If N1, does vessel match a sister vessel ⁷ with approved stability? | Y2 | N2 |
| | If Y2, then | | |
| | • name the sister vessel | | |
| | If N2, then | | |
| | • Does vessel pass a practical stability test representing worst case operation? | Y3 | N3 |

- Alternative, equivalent tests are permitted.
- National laws and regulations always prevail.

if Y3 → PASS

Annex B 'Example inspection checklist' (cont.)

- Vessel does not meet a stability standard, does not carry an approved stability booklet and does not match a sister vessel with approved stability. It fails the practical stability test. Restrict operation or seek professional input.

| | | | |
|--------|--|----|----|
| | If N2, then | | |
| | <ul style="list-style-type: none"> Does vessel pass a practical stability test representing worst case operation? | Y3 | N3 |
| | If Y3, then vessel has passed either: | | |
| 3.3.6 | <ul style="list-style-type: none"> offset load test (enclose form @ Annex E) | Y | |
| 3.7.2 | <ul style="list-style-type: none"> heel test (enclose form @ Annex D) | Y | |
| 3.11.1 | <ul style="list-style-type: none"> simplified flooded stability test (enclose form @ Annex F) | Y | |
| 3.11.2 | <ul style="list-style-type: none"> practical buoyancy test (enclose relevant ISO 12217 worksheets) | Y | |
| | <ul style="list-style-type: none"> alternative equivalent test (enclose appropriate report or form) | Y | |
| | If N3, then either | | |
| | <ul style="list-style-type: none"> ops. restricted based on Wolfson Stability Guidance (enclose Wolfson Notice) | Y | |
| | <ul style="list-style-type: none"> professional input is recommended to achieve compliance | Y | |

if N3 → operate with restrictions, or seek professional input

Annex F - FAO Simplified Flooded Stability Test Form

1. Basic data

- .1 Location of test Date of test/...../.....
.2 Vessel's Name
.3 Vessel's Identifier
.4 First test Repeat test

2. Checklist

- .1 Place empty vessel in calm water, then...
.2 ...add weights representing standard equipment at equipment CG, then...
.3 ...add weights representing motor at motor CG, then...
.4 ... add water ballast in ballast tanks if any. then...
.5 ...apply 25 x LOA x B (kg) on centreline amidships.
.6 Stow or secure loose items.
.7 Submerge gunwale or fill with water until equilibrium is reached.
.8 Apply 15kg on gunwale amidships on one side.
.8 Take photo of heeled boat at equilibrium.

3. Vessel's loading

- .1 Type of centreline weight used
.2 Length Overall (LOA) metres; Breadth (B)..... metres
.3 Centreline load = 25 x LOA x B = kg

4. Results

- .1 No capsize = Pass Capsize = Fail

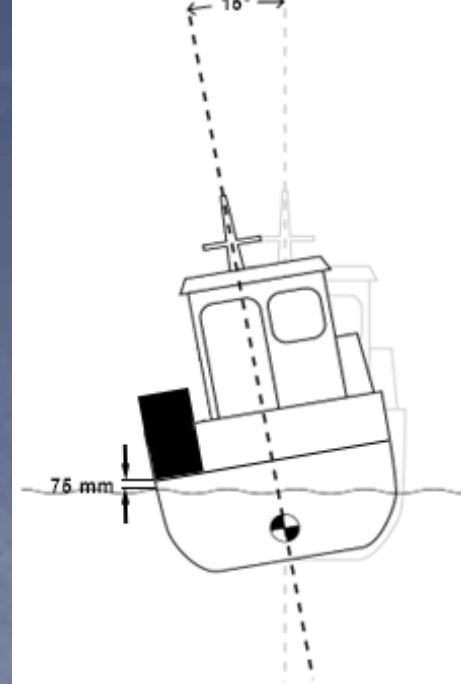


Scope: U12m undecked

Acceptance criterion:
Flooded vessel withstands applied load without capsizing.

Features:
Pass/fail only, hence unsuitable for monitoring stability changes over time.

Annex E - FAO Offset Load Test Form



1. Basic data

- .1 Location of test Date of test/..../....
.2 Vessel's Name
.3 Vessel's Identifier
.4 First test Repeat test
.5 If repeat test:
date of first test/...../.....
heel angle at first test deg
minimum freeboard at first test mm

3. Vessel's loading

- .1 Number of crew onboard at OLT
.2 Type of offset weight used
.3 Length Overall (LOA) metres: Breadth (B)..... metres
.4 Offset load, last stage = $25 \times \text{LOA} \times \text{B} =$ kg
.5 Fore/aft position of offset weight
.6 Port/Stbd position of offset weight

4. Results

- .1 Results referred to Stage no. 1 2 3 (circle as appropriate)
.2 Angle (measure with an inclinometer) deg
.2 Minimum freeboard mm
.3 Min. freeboard location..... metres from
.4 Pass Fail

- Acceptance criteria: equilibrium heel angle of 15 degrees or less **and** minimum freeboard not less than 75mm.
→ Each repeat test should be no more than 10% of the first test. If the percentage change is greater, then remedial actions are necessary. Seek professional advice.

Scope: U12m decked, no lifting & no gear over one side

Acceptance criteria:
Eq. heel angle 15° or less & min. freeboard no less than 75mm

Features:

- 3 stages
- suitable for monitoring stability changes over time.

Example Offset Load Test on 1:9 scale fishing cat

Length = 9.2m, Beam = 4m. → $25 \times 9.2 \times 4 = 920\text{kg}$ offset load



1st stage ~300kg on one side



2nd stage ~600kg on one side



3rd stage ~900kg on one side



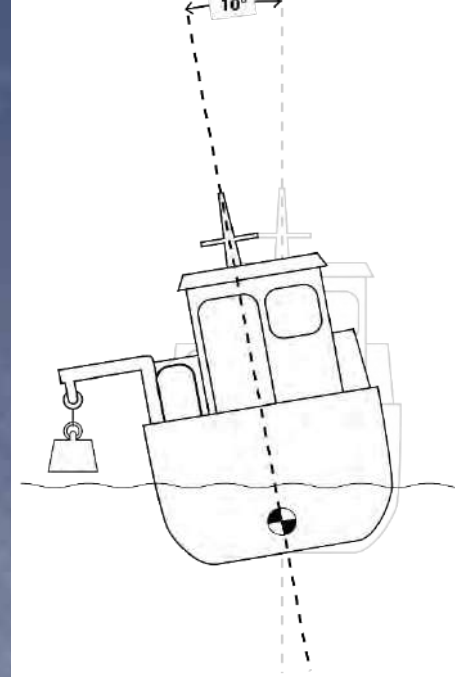
3rd stage

Results:

- 3° heel < 15°
- 260mm F > 75mm

PASS

Annex D - FAO Heel Test Form



1. Basic data

- .1 Location of test Date of test/..../....
.2 Vessel's Name
.3 Vessel's Identifier
.4 First test Repeat test
.5 If repeat test:
date of first test/...../.....
heel angle at first test deg
minimum freeboard at first test mm

3. Vessel's loading

- .1 Number of crew onboard at Heel Test
.2 Type of weight used
.3 Weight lifted (kg)
.4 Fore/aft position of block metres from
.5 Port/Stbd position of block metres from

4. Result

- .1 Angle (measure with an inclinometer) degrees
.2 Minimum freeboard mm
.3 Min. freeboard location metres from
.4 Pass Fail

→ Acceptance criterion: equilibrium heel angle of 10 degrees or less

→ Each repeat test should be no more than 10% of the first test. If the percentage change is greater, then remedial actions are necessary. Seek professional advice.

← Repeatability is key!

Scope: U12m decked, lifting or operating gear over side

Acceptance criterion:
Eq. heel angle 10° or less

Features:

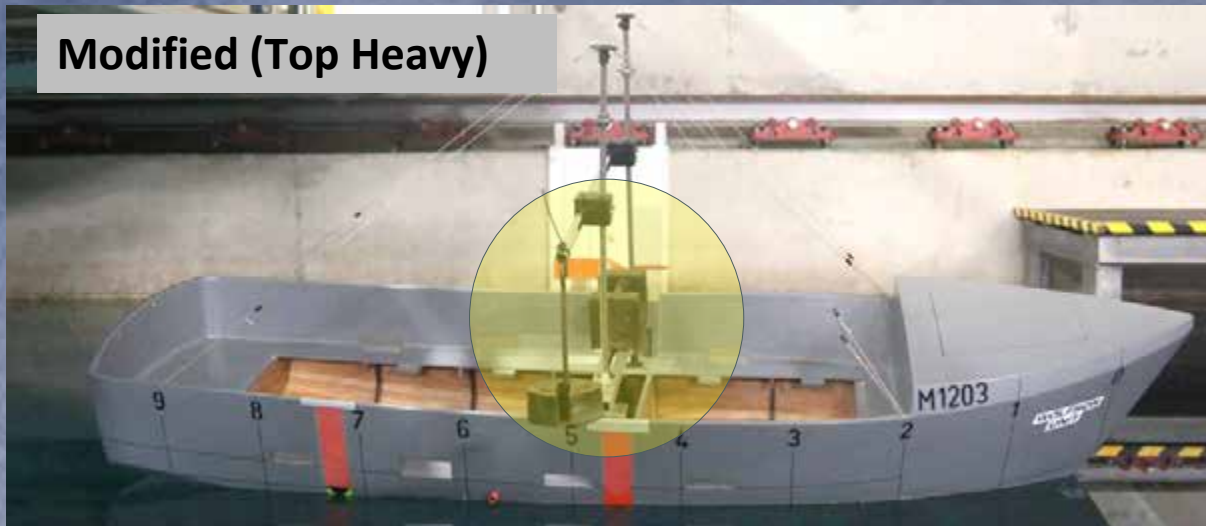
- suitable for monitoring stability changes over time
- can be used with Wolfson

Example Heel Test on 1:6 scale fishing monohull

As-designed



Modified (Top Heavy)



Length = 10.4 metres
Test Disp. = 9.4 tonnes

Results:

9.5° heel $< 10^\circ$

 **PASS**



incremental modifications
cause 220mm CoG rise
(full scale)



Results:

14.5° heel $> 10^\circ$

 **FAIL**

Example Heel Test on 1:6 scale fishing monohull

As-designed

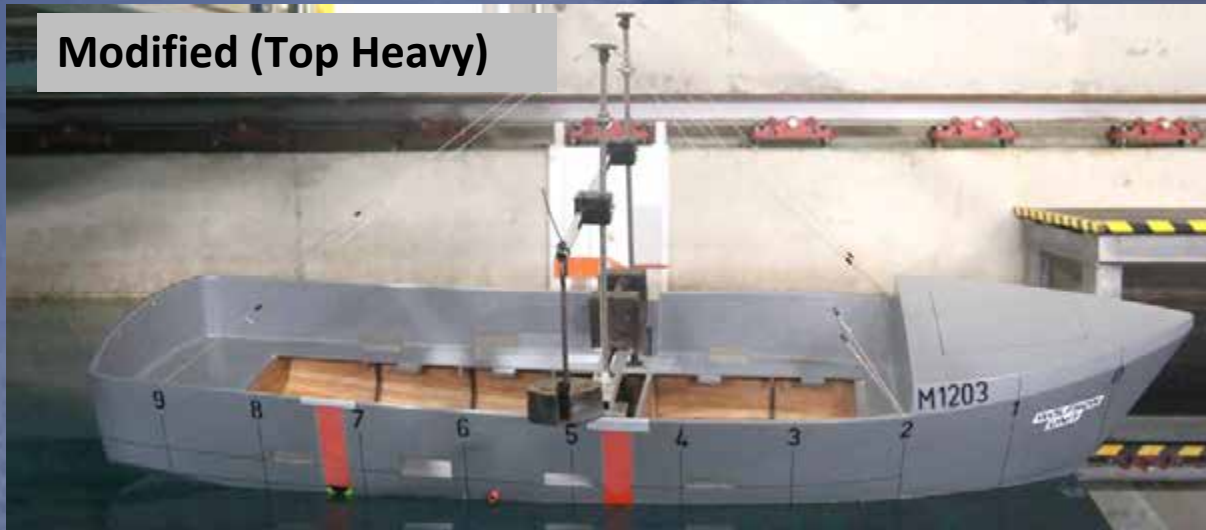


Modified (Top Heavy)

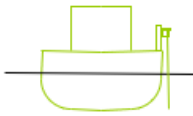




It failed the stability test, now what?

Modified (Top Heavy)



- Roll back to original, unmodified design under expert guidance, or
- De-risk lifting ops (eg reduce weight lifted, move lifting point downwards and inboard), or
- Be aware: only perform heavy lifts within Wolfson's maximum recommended seastate $H_s=0.6\text{m}$ (Lower end of Sea 3 'Slight').

| STABILITY NOTICE | | | | | |
|---|---|----------------------------|-----------------|-------------------|------------------------------|
| Name | 0 | Loading & Lifting Guidance | Safety Zone | Minimum Freeboard | Maximum Recommended Seastate |
| No. | M1203 | | | | |
| Owner | 0 | | | | |
| Length | 10.43 metres | | | | |
| Beam | 3.498 metres | | | | |
|  | Good margin of residual freeboard | Good margin of safety | At least 43 cm | | |
|  | Loading or lifting reduces minimum freeboard to less than 43 cm | Low level of safety | 21 to 43 cm | 1.3 metres | |
|  | Excessive loading or lifting reduces minimum freeboard to less than 21 cm | Danger of capsizing | Less than 21 cm | 0.6 metres | |

Thank You!

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