CONSTRUCTION STANDARDS FOR COMMERCIAL FISHING VESSELS

Construction Requirements (Watertight and Weathertight Integrity and Hull Arrangement)

Section 3.0

**Structural (3.2)**

Present requirements:
- None.

Proposed requirements:
- As per good practices, recognized standards.
- Of a design with good history (existing vessels only).
- As an alternative to scantling methods or where no rules exist, calculations or proof of tests shall be documented.

Notes:
- Ice strengthening as per recognized standards.
- In certain circumstances, increase of scantlings by 15% or 20%.
Structural (3.2)

Impact:
- Low, good practices already in place.
- Demonstration of the strength to be made.
- Based on standards/references.
- Some vessels will have to be limited with regards to operations in ice.

Fittings and Through-hull Openings (3.3)

Present requirements:
- Various (solidity, tightness and means of closure).

Proposed requirements:
- Watertight below the freeboard deck (closed construction).
- Watertight below the top of gunwale (open construction).
- Degree of watertightness 2 as per ISO 12216 (new vessels).
- Water jet test to be done.
- Be kept to a minimum and fitted with means of closure.
- Adequate local stiffening, equivalent resistance.

Impact:
- Low, some adjustments to be made (gaskets).
**Watertight and Weathertight Integrity and Hull Arrangement (3.4)**

- Buoyancy
- Bulkheads
- Weather Decks
- Doors, Windows, and Port Lights
- Hatches, Access Openings and Coamings
- Openings in Watertight Bulkheads
- Sliding Watertight Doors fitted in Watertight Bulkhead
- Sea Inlets and Discharges
- Ventilators and Air Pipes
- Water Freeing Arrangement
- Portable Decks
- Cargo Security
- Shaft Acesses
- Sounding Devices

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**Watertight and Weathertight Integrity and Hull Arrangement (3.4)**

**Buoyancy (3.4.1)**

Update to be done.

Subject covered by the Stability Standard.
**Watertight and Weathertight Integrity and Hull Arrangement**

### Bulkheads (3.4.2)

**Present requirements:**
- More than 15 GT: 2 watertight bulkheads (closed construction).
- Gastight (15.5 m to 24.4 M).

**Proposed requirements:**
- Closed construction 15 m and more: 3, of which one is a collision bulkhead.
- Closed construction < 15 m: 2.
- Shall enclose the E/R, separate the fish hold from other compartments (E/R, accommodation, steering gear).

**Impact:**
- Low, good practices already in place.
- Position of the collision bulkhead is defined.
- No fuel oil forward of the collision bulkhead.
- Existing ships, where practicable.

### Weather Decks (3.4.3)

**Present requirements:**
- None.

**Proposed requirements:**
- Freeboard decks, enclosed superstructures and enclosed shelters: watertightness 2 as per ISO 12216.
- Requirements for open wells or cockpits.

**Impact:**
- Low, some adjustments to be made (gaskets).
Watertight and Weathertight Integrity and Hull Arrangements
Doors, Hatches, Windows, and Port Lights (3.4.4)

Present requirements:
- Door sill height depending on position.
- Portholes below deck : deadlights.
- Wheelhouse window thickness : 6mm.
- Storm shutters if operations > 20 NM.

Proposed requirements:
- Closing appliances : gaskets, means of securing.
- Access closures : water tightness degree 2 of ISO 12216 (new vessels).
- Door sill height (300 mm or 150 mm) depending on position and zone.
- Portholes/windows : Requirements concerning position, type, thickness, surfaces, storm shutters. Portholes (non-opening, hinged deadlights).

Impact:
- Major, at construction, thickness and surfaces of windows.
- Portholes : major on costs.

Watertight and Weathertight Integrity and Hull Arrangements
Hatches, Access Openings and Coamings (3.4.5)

Present requirements:
- Minimum scantling of coamings.
- Means of closing and ensuring water tightness.
- Requirements for deck scuttles (watertight, solid and fixed).
- 2 means of escape (position, window, quantity, size).

Proposed requirements:
- Hatches and access openings : gaskets, means of closing, coamings and covers (water tightness degree 2 as per ISO 12216).
- Coaming height (depending on position and zone) : 300, 450 or 600 mm.
- Coaming height may be reduced under certain conditions.
- Main access openings : 600 mm X 600 mm. Sill (foredecks) = min 610 mm.
- Means of escape, see Section 10.0.

Impact:
- Few adjustments on new constructions.
Watertight and Weathertight Integrity and Hull Arrangement

Openings in Watertight Bulkheads (3.4.6)

Present requirements:
- Doors or covers of similar construction to the bulkhead.

Proposed requirements:
- Openings: Kept to a minimum, as high as possible, bolted watertight covers.
- Doors: Approved, watertight, strength, operation from both sides, indicators.
- Valves: None alone, no sluice valves.
- Heat sensitive material: None.
- Collision bulkhead: Only one pipe under certain conditions.
- E/R bulkheads: Only one door, position.
- Pipes and electrical cables: Valves and watertight glands.

Impact:
- Low, good practices already in place.

Watertight and Weathertight Integrity and Hull Arrangement

Sliding watertight doors fitted in Watertight Bulkheads (3.4.7)

Requirements for passenger vessels.

Quebec Region will recommend removal of these requirements.
**Watertight and Weathertight Integrity and Hull Arrangement**

**Sea Inlets and Discharges (3.4.8)**

**Present requirements:**
- Below the freeboard deck: valves or cocks.
- Exceptions (dia < 38 mm, scupper pipes, cooling water system, sanitary discharges).
- Connection methods (steel, wooden).

**Proposed requirements:**
- Almost the same requirements, a few more details.
- Labelling (function, open/closed).

**Impact:**
- Low, good practices already in place.

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**Ventilators and Air Pipes (3.4.9)**

**Present requirements:**
- None. Means of closing required by fire protection.

**Proposed requirements:**
- Ventilator coaming height or air pipes, other than E/R, depending on position (600 mm ou 300 mm).
- Strength, closing appliances.
- Air pipes: strength, gooseneck and closing appliances.

**Impact:**
- Low.
**Watertight and Weathertight Integrity and Hull Arr**

**Water Freeing Arrangement (3.4.10)**

**Present requirements:**
- As per formula, about 20% of the bulwark surface.
- If depth > 300 mm, spacing of bars : max 230 mm.

**Proposed requirements:**
- Freeing ports (evacuation of water).
- Depth > 300 mm, spacing of bars max 230 mm.
- Requirements for closing appliances and lift-ups.
- Minimum Area = min 7% of bulwark area (each side).
- Requirements for superstructure deck (min half or 75%, if fishing).

**Impact:**
- Low, good practices already in place.

**Portable Decks (3.4.11)**

**Present requirements:**
- None.

**Proposed requirements:**
- Same strength as the hull.
- Does not impose undue stresses on the hull structure.
- Does not adversely affect stability.
- Is not watertight (drainage into bilge).
- Does not change vessel category (open to closed construction).

**Impact:**
- New practice now regulated. To be monitored.
**Watertight and Weathertight Integrity and Hull Arrangements**

**Cargo Security (3.4.12)**

**Present requirements:**
- Portable fish hold divisions (herring or capelin).
- Requirements defined in Schedule VIII.

**Proposed requirements:**
- Longitudinal and transverse bulkheads in the hold.
- Conform with rules, codes or standards.

**Impact:**
- Low, good practices already in place.

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**Shaft Acesses (3.4.13)**

**Present requirements:**
- Fitted and secured to prevent dislodgment.

**Proposed requirements:**
- Cover: fitted and secured.

**Impact:**
- Low.
**Watertight and Weathertight Integrity and Hull Arrt**

**Sounding Devices (3.4.14)**

**Present requirements:**
- None.

**Proposed requirements:**
- Means of sounding all tanks, cofferdams and small compartments.
- Requirements concerning sounding pipes (position, striking plate, means of closing).

**Impact:**
- Medium, changes in the construction practices = costs.

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**Precautions against Fall (3.5)**

**Present requirements:**
- Around weather deck: bulwarks, rails, etc. Height of 760 mm.
- If interfering with fishing ops, portable or dispensed with.
- Lower height in way of deckhouses if handrails are fitted.

**Proposed requirements:**
- Perimeter of exposed deck (bulwarks, guardrails, stanchions, etc...)
- Non-skid surfaces.
- As necessary, grab rails (outside deckhouses, casings and passageways).
- Height of 915 mm, spacing between rails max 230 mm or netting.
- Alternatives if impeding working (portable or folding equipment).
- Wheelhouse tops, toe rail of a minimum height of 75 mm.
- Requirements for working over the stern.

**Impact:**
- Changes on height of bulwarks and spacing between rails.
- In general, vessels are already complying with these requirements.
**Ballast (3.6)**

**Present requirements:**
- None.

**Proposed requirements:**
- Ballast to be secured.

**Impact:**
- None, good practices already in place.

**Navigation Lights (3.7)**

**Present requirements:**
- Same as proposed.

**Proposed requirements:**
- Refer to the Collision Regulations.

**Impact:**
- None.
Pollution Discharge Advisory (3.8)

Actual requirements:
- Present as proposed.

Proposed requirements:
- Refer to:
  * 3 regulations on pollution prevention (sewage water).
  * Provincial laws.
  * TP1332, Appendix 3.

Impact:
- Major.
- New requirements to come for all ships in the St-Lawrence River.
- In discussion for all fishing vessels in the Gulf.

Thank you

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