Amendments to the "Rules for the Classification of Fast Patrol Vessels"

Effective from 1/1/2021

List of amendments:

Part/Chapter/Section/Paragraph amended	Reason
Pt B, Ch 6, Sec 3, new [2.1.3] to [2.1.5], [3.1.7] and [3.1.8] deleted, new [3.1.7] to [3.1.12], [3.2] deleted and replaced by new [3.2], new [3.3] and [3.4], Tables 1, 2 and 3 renumbered	to align the requirements for windows and sidescuttles with those in the latest revision of the Rules for the classification of Naval Ships and to add the possibility for vessel with L<24m to apply alternative criteria, i.e. the requierements of ISO 12216 "Small craft - Windows, portlights, hatches, deadlights and doors - Strength and watertightness requirements".

SECTION 3 ARRANGEMENTS OF HULL AND SUPERSTRUCTURE OPENINGS

1 General

1.1 Application

1.1.1 The requirements of this Section apply to the arrangement of hull and superstructure openings.

1.2 Definitions

1.2.1 Exposed zones

Exposed zones are the boundaries of superstructures or deckhouses set in from the vessel's side at a distance less than or equal to 0,04 B.

1.2.2 Unexposed zones

Unexposed zones are the boundaries of deckhouses set in from the vessel's side at a distance greater than 0,04 B.

2 External openings

2.1 General

2.1.1 All external openings leading to compartments assumed intact in the damage analysis, which are below the final damage waterline, are required to be watertight.

2.1.2 External openings required to be watertight in accordance with [2.1.1] are to be of sufficient strength and, except for cargo hatch covers, are to be fitted with indicators on the bridge.

2.1.3 Openings in the shell plating below freeboard deck are to be kept permanently closed while at sea. Should any of these openings be accessible during the voyage, they are to be fitted with a device which prevents unauthorised opening.

2.1.4 Notwithstanding the requirements of [2.1.3], the Society may authorise that particular doors may be opened at the discretion of the Master, if necessary for the operation of the ship and provided that the safety of the ship is not impaired.

2.1.5 Other closing appliances which are kept permanently closed at sea to ensure the watertight integrity of external openings are to be provided with a notice affixed to each appliance to the effect that it is to be kept closed. Manholes fitted with closely bolted covers need not be so marked.

3 Sidescuttles, windows and skylights

3.1 General

3.1.1 Application

The requirements in [3.1] to [3.4] apply to sidescuttles and rectangular windows providing light and air, located in positions which are exposed to the action of sea and/or bad weather.

3.1.2 Sidescuttle definition

Sidescuttles are round or oval openings with an area not exceeding 0,16 m^2. Round or oval openings having areas exceeding 0,16 m^2 are to be treated as windows.

3.1.3 Window definition

Windows are rectangular openings generally, having a radius at each corner relative to the window size in accordance with recognized national or international standards, and round or oval openings with an area exceeding 0,16 m^2.

3.1.4 Number of openings in the shell plating

The number of openings in the shell plating are to be reduced to the minimum compatible with the design and proper working of the vessel.

3.1.5 Material and scantlings

Sidescuttles and windows together with their glasses, deadlights and storm covers, if fitted, are to be of approved design and substantial construction in accordance with, or equivalent to, recognized national or international standards.

Non-metallic frames are not acceptable. The use of ordinary cast iron is prohibited for sidescuttles below the freeboard deck.

For vessels with length L < 15 m, Tasneef may contemplate to fit glued glass on the basis of practical tests carried out on simulacrum according to ISO-12216 standard.

3.1.6 Means of closing and opening

The arrangement and efficiency of the means for closing any opening in the shell plating are to be consistent with its intended purpose and the position in which it is fitted is to be generally to the satisfaction of Tasneef.

~~**3.1.7 Non-opening type sidescuttles**~~

~~Sidescuttles are to be of the non opening type where they become immersed by any intermediate stage of flooding or the final equilibrium waterplane in any required damage case for vessels subject to damage stability regulations~~

~~**3.1.8 Skylights**~~

~~Fixed or opening skylights are to have glass thickness appropriate to their size and position as required for sidescuttles and windows. Skylight glasses in any position are to be protected from mechanical damage and, where fitted in every positions, to be provided with permanently attached robust deadlights or storm covers.~~

3.1.7 Opening of sidescuttles

All sidescuttles, the sills of which are below the bulkhead deck for passenger ships or the freeboard deck for cargo ships, are to be of such construction as to prevent effectively any person opening them without the consent of the Master of the ship.

Sidescuttles and their deadlights which are not accessible during navigation are to be closed and secured before the ship leaves port.

The Society, at its discretion, may prescribe that the time of opening such sidescuttles in port and of closing and locking them before the ship leaves port is to be recorded in a log book.

3.1.8 Sidescuttles position

Sidescuttles may not be fitted in such a position that their sills are below a line drawn parallel to the freeboard deck at side and having its lowest point 0,025B or 0,5 m, whichever is the greater distance, above the summer load waterline.

3.1.9 Sidescuttles below 1,4+0,025B m above the water

Where in 'tweendecks the sills of any of the sidescuttles are below a line drawn parallel to the bulkhead deck at side and having its lowest point 1,4+0,025B m above the water when the ship departs from any port, all the sidescuttles in that 'tweendecks are to be closed watertight and locked before the ship leaves port, and they may not be opened before the ship arrives at the next port. In the application of this requirement, the appropriate allowance for fresh water may be made when applicable.

For any ship that has one or more sidescuttles so placed that the above requirements apply when it is floating at its deepest subdivision load line, the Society may indicate the limiting mean draught at which these sidescuttles are to have their sills above the line drawn parallel to the bulkhead deck at side, and having its lowest point 1,4+0,025B above the waterline corresponding to the limiting mean draught, and at which it is therefore permissible to depart from port without previously closing and locking them and to open them at sea under the responsibility of the Master during the voyage to the next port. In tropical zones as defined in the International Convention on Load Lines in force, this limiting draught may be increased by 0,3 m.

3.1.10 Non-opening type sidescuttles

Sidescuttles are to be of the non-opening type in the following cases:

- where they become immersed by any intermediate stage of flooding or the final equilibrium waterplane in any required damage case for ships subject to damage stability regulations
- where they are fitted outside the space considered flooded and are below the final waterline for those ships where the freeboard is reduced on account of subdivision characteristics.

3.1.11 Window arrangement

Windows may not be fitted below the freeboard deck, in first tier end bulkheads or sides of enclosed superstructures and in first tier deckhouses considered as being buoyant in the stability calculations or protecting openings leading below.

In the front bulkhead of a superstructure situated on the upper deck, in the case of substantially increased freeboard, rectangular windows with permanently fitted storm covers are acceptable.

3.1.12 Skylights

Fixed or opening skylights are to have glass thickness appropriate to their size and position as required for sidescuttles and windows. Skylight glasses in any position are to be protected from mechanical damage and, where fitted in positions 1 or 2, to be provided with permanently attached robust deadlights or storm covers.

~~**3.2 Glasses**~~

~~**3.2.1 General**~~

~~In general, toughened glasses with frames of special type are to be used in compliance with, or equivalent to, recognised national or international standards.~~

~~The use of clear plate glasses is considered by Tasneef~~ on ~~a case by case basis.~~

~~**3.2.2 Thickness of toughened glasses in sidescuttles**~~

~~The thickness of toughened glasses in sidescuttles is to be not less than that obtained, in mm, from Tab 1.~~

~~Type A, B or C sidescuttles are to be adopted according to the requirements of Tab 2, where:~~

- ~~Zone 1 is the zone comprised between a line, parallel to the sheer profile, with its lowest points at a distance above the summer load waterline equal to 0,025B m, or 0,5 m, whichever is the greater, and a line parallel to the previous one and located 1,4 m above it~~
- ~~Zone 2 is the zone located above Zone A and bounded at the top by the freeboard deck~~
- ~~Zone 3 is the first tier of superstructures or deckhouses~~
- ~~Zone 4 is the second tier of deckhouses~~
- ~~Zone 5 is the third and higher tiers of deckhouses.~~

~~3.2.3 Tempered glass thickness for rectangular windows~~

~~Tempered glass thickness for rectangular windows is given by the following formula:~~

$$\mathbf{t} = 0{,}005\,(\beta\,\mathbf{p})^{0,5}$$

~~where:~~

~~**p** design pressure in kN/m^2 for superstructure side with a window~~

~~**b** window's lower side, in mm~~

~~β = 0,54 **A** – 0,078 **A**^{2} – 0,17~~

~~= 0,75 per **A** > 3~~

~~where:~~

~~**A = a/b**~~

~~**a** = window's grater side in mm.~~

~~3.2.4 Non-hardened crystal material~~

~~Non-hardened crystal material shall be used for windows and portholes arranged on superstructures' walls except for the steerage windows.~~

~~Plates thicknesses shall be obtained multiplying the regulation hardened crystal thickness by 1,3 in case of polycarbonate plates and by 1,5 for acrylic plates.~~

~~In alternative thickness shall be determined by an hydraulic pressing test on simulacrum, showing that the provided thickness is capable to assure the watertight at a pressure not less than four times the calculation pressure.~~

3.2 Glasses

3.2.1 General

In general, the following materials may be used:

- toughened (thermally strengthened) monolithic or laminated glass,
- chemically strengthened laminated glass.

Polymethylmethacrylate (PMMA) or Polycarbonate (PC) may be used for windows and portholes arranged on superstructures' walls above the freeboard deck excluded the first tier end bulkheads and the sides of enclosed superstructures and deckhouses considered as being buoyant in the stability calculation or protecting openings leading below.

When chemically strengthened safety glass is used, exposed surfaces are to be subject to regular inspections.

Frames of special type are to be used in compliance with, or equivalent to, recognised national or international standards.

3.2.2 Thickness of toughened glasses in sidescuttles

The thickness of toughened glasses in sidescuttles is to be not less than that obtained, in mm, from Tab 2.

Type A, B or C sidescuttles are to be adopted according to the requirements of Tab 1, where:

- Zone 1 is the zone comprised between a line, parallel to the sheer profile, with its lowest points at a distance above the waterline corresponding to the deepest draught equal to 0,025B m, or 0,5 m, whichever is the greater, and a line parallel to the previous one and located 1,4 m above it
- Zone 2 is the zone located above Zone A and bounded at the top by the main deck
- Zone 3 is the first tier of superstructures or deckhouses
- Zone 4 is the second tier of deckhouses
- Zone 5 is the third and higher tiers of deckhouses.

Table 12 : Types of sidescuttles

Zone	Aft of 0,875 L from the aft end	Fwd of 0,875 L from the aft end
5	Type C	Type B
4	Protecting openings giving direct access to spaces below the freeboard deck: Type B	Type B
	Not protecting openings giving direct access to spaces below the freeboard deck: Type C	
	Exposed zones: Type B	

3	Unexposed zones	Protecting openings giving direct access to spaces below the freeboard deck: Type B	Type B
		Not protecting openings giving direct access to spaces below the freeboard deck: Type C	
2	Type B		Type A
1	Type A		Type A

Table 21 : Thickness of toughened glasses in sidescuttles

Clear light diameter of sidescuttle, in mm	Thickness, in mm		
	Type A Heavy series	Type B Medium series	Type C Light series
200	10	8	6
250	12	8	6
300	15	10	8
350	15	12	8
400	19	12	10
450	Not applicable	15	10

3.2.3 Thickness of toughened glasses in windows

The minimum required thickness, t_0, of glasses for windows with dimensions and materials are to be calculated according the following formulas:

Rectangular windows:

$$t_0 = b \cdot \sqrt{\frac{\beta \cdot p}{1000 \cdot \sigma_A}}$$

Circular windows:

$$t_0 = 0,5 \cdot d \sqrt{\frac{1,21 \cdot p}{1000 \cdot \sigma_A}}$$

where:

b is the shorter side of the rectangular windows, (mm).

d is the diameter of the circular windows (mm).

β is the coefficient given below:

- β for circular windows is to be taken as 0,284
- β for rectangular windows

β = 0,54*(a/b)-0,078(a/b)2 - 0,17 per (a/b)< 3

β = 0,75 per (a/b) > 3

a is the longest side of the glazing.

p is the lateral pressure, defined in Sec 4, [2.2.2].

σ_a is the flexural strength of the material, in (N/mm^2)

$$\sigma_A = \frac{\sigma_C}{\gamma}$$

γ is the safety factor to be taken equal to 4.

σ_c is the characteristic failure strength.

For thermally strengthened glasses the characteristic failure strength σ_c in general is equal to 160 N/mm^2.

For Polymethylmethacrylate (PMMA) the characteristic failure strength σ_c in general is equal to 100 N/mm^2.

For Polycarbonate (PC) the characteristic failure strength σ_c in general is equal to 90 N/mm^2.

Different values of σ_c can be calculated according [3.3.4].

For chemically strengthened glasses the characteristic failure strength σ_c in general is to be calculated in accordance to [3.3.4].

Different procedures for the evaluation of the characteristic failure strength may be considered by the Society on a case- by-case basis.

3.2.4 Calculation of the characteristic failure strength

The characteristic flexural strength of glass materials may be determined by flexural four point bending test according to ISO 1288-3.

A Declaration of conformity from the Manufacturer to the test according to ISO 1288-3 is to be provided for every glazing fitted on board. All the characteristics of the glass have to be declared to be at least equal or higher than those reported in the test report.

The test is valid for:

- the same thickness of monolithic glass or the same laminated cross section
- the same composition of glass and interlayer material
- the same treatment.

Different procedures for the evaluation of the characteristic failure strength may be considered by the Society on a case-by-case basis.

The breaking position is to occur inside the loading rolls. The specimens where the breaking occurs outside the loading rolls is to be disregarded. There shall be at least 10 specimens where the breaking occurred inside the loading rolls.

The characteristic failure strength, σ_c , determined by mechanical tests is:

$\sigma_c = \sigma_{av} (1 - Kn\ Cv)$

Where:

- σ_{av} average value;

$$\sigma_{av} = \frac{1}{N} \cdot \sum_{i=1}^{N} \sigma_i$$

where:

N = number of test specimens (at least 10).

σ_i breaking stress (MPa) for each test specimen tested in accordance with ISO 1288-3.

Kn statistic coefficient corresponding to 90% confidence limit. This value depends on the number of test specimens, N, according to the t-Student statistical distribution, see Tab 3.

Table 3

Number of test specimens N	Kn
10	1,833
11	1,812
12	1,796
13	1,782
14	1,771
15	1,761
20	1,729
25	1,711
30	1,699
40	1,685
60	1,671
100	1,660
∞	1,645

- CV coefficient of variation;

$$C_v = \frac{S_x}{\sigma_{av}}$$

where:

Sx standard deviation;

$$S_x = \sqrt{\frac{\sum_{i=1}^{N} (\sigma_i - \sigma_{av})^2}{N-1}}$$

When a laminated glass is made of two or more plies of different thickness, the smaller characteristic strength among the ones tested in accordance with ISO 1288-3 of different thickness is to be used in the calculation of to. The equivalent thickness teq of the laminated glass is to be calculated in accordance to [3.2.5] and the laminate construction is acceptable when $t_{eq} > t_o$.

The characteristic flexural strength of a laminated glass can be used for the calculation of the thickness required to defined in [3.2.3]. In this case, the physical thickness of the laminate tLam is acceptable when $t_{Lam} > t_o$.

3.2.5 Calculation of equivalent thickness of a laminated glass

Once the required monolithic thickness t_o is calculated, the following procedure is to be followed to check if the laminated glass proposed has an equivalent monolithic thickness higher than the required one and is therefore acceptable. This procedure takes into consideration the possibility of having independent plies or collaborating plies:

a) Independent plies:

When the mechanical properties of the interlayer material (the laminating adhesive material) are not known, the plies of the laminated glazing have to be considered as mechanically independent.

The equivalent thickness of laminates made of n independent plies of thicknesses:t_{p1}, t_{p2} , …, t_{pn}, shall be calculated and compared with the basic thickness, t_o , calculated as explained above.

The equivalent thickness of n independent plies shall be calculated as follows. The thickness of one ply of the laminate is indicated generically as, t_j, where the index j is ranging from 1 to n.

For each ply of the laminate a partial equivalent thickness, teq,j, is calculated as:

$$t_{eq,j} = \sqrt{\frac{\sum_{i=1}^{N} t_i^3}{t_j}}$$

and the equivalent thickness of the laminate t_{eq} shall be the minimum of the n $t_{eq,j}$ values:

$$t_{eq} = \min[t_{eq,j}]; \qquad j = 1, n$$

The laminate construction is accepted when $t_{eq} > t_0$

b) Collaborating plies:

When the mechanical properties of the interlayer are known in terms of shear modulus, G (N/mm2), at 25 °C for 60 s duration load, the equivalent thickness shall be calculated as follows:

$$t_{eq} = \min[t_{1ef,\sigma}, t_{2ef,\sigma}]$$

where:

$$t_{1ef,\sigma} = \sqrt[3]{\frac{t_{eq,w}^3}{t_1 + 2 \cdot \Gamma \cdot t_{s,2}}} \qquad t_{2ef,\sigma} = \sqrt[3]{\frac{t_{eq,w}^3}{t_2 + 2 \cdot \Gamma \cdot t_{s,1}}}$$

where:

- t_1 ply thickness (mm);
- t_1 ply thickness (mm);
- Γ Shear transfer coefficient evaluation:

$$\Gamma = \frac{1}{1 + 9,6 \cdot \frac{E}{G} \cdot \frac{Is}{hs^2} \cdot \frac{t_i}{b^2}}$$

t_i interlayer thickness (mm);

b shortest clear opening dimension of the glazing laminate (mm);

E Young's modulus of the glass ply (N/mm2);

Γ shear modulus of the interlayer at 25 °C (N/mm2).

Acceptable value for polyvinylbutyral (PVB) is: G = 1,6 N/mm2. For other interlayer materials the shear modulus value at 25 °C for short time duration load (60 s) shall be declared by the interlayer material Manufacturer in form of a Statement where evidence of the test carried out to calculate G is given.

In case this value is not known the plies shall be considered independent.

If for the interlayer a value is available only for Young's modulus, E (MPa), a shear modulus may be assumed as G = E/3.

$$Is = t_1 \cdot t_{s,2}^2 + t_2 \cdot t_{s,1}^2$$

where:

$$t_{s,2} = \frac{hs \cdot t_2}{t_1 + t_2}; \qquad t_{s,1} = \frac{hs \cdot t_1}{t_1 + t_2}$$

$$hs = 0,5 \cdot (t_1 + t_2) + t_i$$

- $t_{eq,w}$ Equivalent thickness evaluation:

$$t_{eq,w} = \sqrt[3]{t_1^3 + t_2^3 + 12 \cdot \Gamma \cdot Is}$$

In case of 3 or more plies the calculation is to be iterated.

The laminate construction is accepted when $t_{eq} > t_0$.

Laminate made of plies of different materials will be specially considered.

3.3 Deadlight arrangement

3.3.1 General

Sidescuttles to the following spaces are to be fitted with efficient, hinged inside deadlights:

- spaces below the freeboard deck
- spaces within the first tier of enclosed superstructures
- first tier deckhouses on the freeboard deck protecting openings leading below or considered buoyant in stability calculations.

Deadlights are to be capable of being closed and secured watertight if fitted below the freeboard deck and weathertight if fitted above.

3.3.2 Watertight deadlights

Efficient, hinged inside deadlights so arranged that they can be easily and effectively closed and secured watertight, are to be fitted to all sidescuttles except that abaft one eighth of the ship's length from the forward perpendicular and above a line drawn parallel to the bulkhead deck at side and having its lowest point at a height of 3,7+0,025B m above the deepest subdivision load line.

The deadlights may be portable in passenger accommodation other than that for steerage passengers, unless the deadlights are required by the International Convention on Load Lines in force to be permanently attached in their proper positions. Such portable deadlights are to be stowed adjacent to the sidescuttles they serve.

3.3.3 Openings at the side shell in the second tier

Sidescuttles and windows at the side shell in the second tier superstructure, protecting direct access to an opening loading below or considered buoyant in the stability calculations, are to be provided with efficient, hinged inside deadlights capable of being effectively closed and secured weathertight.

3.3.4 Openings set inboard in the second tier

Sidescuttles and windows set inboard from the side shell in the second tier, protecting direct access below to spaces listed in [3.3.1], are to be provided with either efficient, hinged inside deadlights or, where they are accessible, permanently attached external storm covers of approved design and substantial construction capable of being effectively closed and secured weathertight.

Cabin bulkheads and doors in the second tier and above separating sidescuttles and windows from a direct access leading below or in the second tier considered buoyant in the stability calculations may be accepted in place of fitted deadlights or storm covers fitted to the sidescuttles and windows.

Note 1: Deadlights in accordance with recognised standards are fitted to the inside of windows and sidescuttles, while storm covers of comparable specifications to deadlights are fitted to the outside of windows, where accessible, and may be hinged or portable.

3.3.5 Deckhouses on superstructures of less than standard height

Deckhouses situated on a raised quarterdeck or on the deck of a superstructure of less than standard height may be treated as being in the second tier as far as the provision of deadlights is concerned, provided the height of the raised quarterdeck or superstructure is not less than the standard quarterdeck height.

3.3.6 Openings protected by a deckhouse

Where an opening in a superstructure deck or in the top of a deckhouse on the freeboard deck which gives access to a space below the freeboard deck or to a space within an enclosed superstructure is protected by a deckhouse, then it is considered that only those sidescuttles fitted in spaces which give direct access to an open stairway need to be fitted with deadlights.

3.4 Alternative criteria for sidescuttles, windows and skylights for vessel with L < 24m

3.4.1

For vessels with L < 24 m, as alternative to the requirements indicated in [3.1], [3.2] and [3.3], it is possible to apply the requirements of ISO 12216 "Small craft - Windows, portlights, hatches, deadlights and doors - Strength and watertightness requirements", provided that the stability requirements of ISO 12217 Part 1 “Small craft – Stability and buoyancy assessment and categorisation - Non-sailing boats of hull length greater than or equal to 6 metres” are satisfied as specified in Pt B, Ch 3, Sec 2, [2.1.7].

4 Discharges

4.1 Arrangement of discharges

4.1.1 Inlets and discharges

All inlets and discharges in the shell plating are to be fitted with efficient and accessible arrangements for preventing the accidental admission of water into the vessel.

Normally every single discharge shall present an automatic non-return valve, with an active closing system over the bulkhead deck. Where the inboard end of the garbage chute exceeds 0,01 L above the summer load waterline, valve control from the freeboard deck is not required, provided the inboard gate valve is always accessible under service conditions. Where this vertical distance is more than 02 L, only one automatic non-return valve without the active closing system may be accepted. Means for the active manoeuvre of valves are to be easily accessible and provided with a device indicating the valve open or shut.

5 Freeing ports

5.1 General provisions

5.1.1 General

Where bulwarks on the weather portions of freeboard or superstructure decks form wells, ample provision is to be made for rapidly freeing the decks of water and for draining them.

A well is any area on the deck exposed to the weather, where water may be entrapped. Wells are considered to be deck areas bounded on four sides by deck structures; however, depending on their configuration, deck areas bounded on three or even two sides by deck structures may be deemed wells.

5.1.2 Freeing port areas

The overall section **A**, in m^2, of openings required for every side is not to be less than the one indicated in Tab 43 where **a** is the bulwark length, which is to assume not more than 0,7 **L**.

Table 43

Position	a [20 m	a∃ 20 m
Bulkhead deck	**0,7 + 0,035 a**	**0,07 a**
Superstructure deck	**0,35 + 0,0175 a**	**0.035 a**

For bulwarks higher than 1,2 m, the values indicated in Tab 3 are to be increased of 004 m^2 for each length meter and for every 0,1 m of greater height as regards 1,2 m. A similar reduction shall be apply for bulwarks high less than 0,90 m.

5.1.3 Freeing port arrangement

Where a sheer is provided, two thirds of the freeing port area required is to be provided in the half of the well nearer the lowest point of the sheer curve.

One third of the freeing port area required is to be evenly spread along the remaining length of the well.

Where the exposed freeboard deck or an exposed superstructure deck has little or no sheer, the freeing port area is to be evenly spread along the length of the well.

However, bulwarks may not have substantial openings or accesses near the breaks of superstructures, unless they are effectively detached from the superstructure sides.

5.1.4 Freeing port positioning

The lower edge of freeing ports is to be as near the deck as practicable, at not more than 100 mm above the deck.

All the openings in the bulwark are to be protected by rails or bars spaced approximately 230 mm apart.

5.1.5 Discharge from cockpits in vessels with Length L < 15 m

The possible cockpit is to be watertight and self empting, the bottom is to be settled at a full load waterline height such to assure the self empting of the cockpit itself with the full load waterline vessel.

Cockpit is to be provided with scuppers having an overall surface in accordance with ISO DIS 11812 standard for Design Category A.

Possible openings for rooms under the cockpit are to be provided with strong closings, arranged in permanent way, watertight to bad weather and presenting a coaming not less than a 100 mm.

6 Machinery space openings

6.1.1 Engine room skylights are to be properly framed, securely attached to the deck and efficiently enclosed by steel casings of suitable strength. Where the casings are not protected by other structures, their strength will be considered by Tasneef on a case by case basis.

6.1.2 Height of coamings and thresholds are to be in general not less than 380 mm, for the admissions to rooms watertight to bad weather over the bulkhead deck, and 100 mm, if arranged on decks over the bulkhead deck. For vessels with Length less or equal to 30 m, such heights shall be reduced till a value compatible with the vessel's safety, in Tasneef opinion.

6.1.3 Fiddly openings are to be fitted with strong covers of steel or other equivalent material permanently attached in their proper positions and capable of being secured weathertight.

6.1.4 Admissions to companions are to comply in general with the requirements given in Sec 2 [2.2] of the present Chapter.

6.1.5 Fiddly openings in machinery space are to satisfy the requirements given in [7].

7 Ventilation pumps

7.1.1 Wind scoops in rooms under bulkheads and closed superstructures decks are to be provided with strong coamings efficaciously connected to the deck. The coamings height shall be in general not less than 100 mm, for wind scoops in rooms watertight to bad weather over the bulkhead deck and less than 380 mm, elsewhere.

For vessels with Length less or equal to 30 m, height shall be reduced till a minimum value compatible with the vessel's safety.

7.1.2 Wind scoops with coamings bigger than 1 m on the deck, or arranged on decks over the bulkhead deck, are not required to be provided with closings, except where trimmed before or that such closings are specifically required by the Administration.

7.1.3 Except for what provided in 7.1.2, fiddly openings are to be provided of efficient closings watertight to bad weather.

7.1.4 Wind scoops openings, where possible shall be overlooked astern or towards the vessels sides.