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Editorial Correction for Technical Rules and Guidance

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About this document:

This document is a compilation of corrections of editorial corrections of the Society's Technical Rules.

Errata in this document refer to corrections that do not change the requirements, intent, or technical background of the requirements specified in the rules and guidance, e.g., correction of typographical errors or references.

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Rules for the survey and construction of steel ships Part C Part 1 Chapter 3 3.5.2.9-1

| Correction | Present | Note |
|---|---|--------------------|
| 1 The depth of web h_{w-gr} (<i>mm</i>) of edge stiffeners fitted | 1 The depth of web h_{w-gr} (<i>mm</i>) of edge stiffeners fitted | Wording correction |
| in way of openings (<i>See</i> Fig. 3.5.2-1) is to satisfy the following | in way of openings (See Fig. 3.5.2-1) is to satisfy the following | i orang correction |
| expression: | expression: | |
| $h_{w-gr} \ge \max\left(50, 0.05l\sqrt{\frac{\sigma_Y}{235}}\right)$ | $h_{w-gr} \ge \max\left(50, 0.05l\sqrt{\frac{\sigma_Y}{235}}\right)$ | |
| <i>l</i> : Length of edge stiffener in way of opening as | l: Length of edge stiffener in way of opening as | |
| defined in Fig. 3.5.2-1 (<i>mmm</i>) | defined in Fig. 3.5.2-1 (<i>m</i>) | |
| 2 The thickness of the web and flange of the edge | 2 The thickness of the web and flange of the edge | |
| stiffener is to satisfy the requirements specified in 3.5.2.2 and | stiffener is to satisfy the requirements specified in 3.5.2.2 and | |
| 3.5.2.3. | 3.5.2.3. | |

Rules for the survey and construction of steel ships Part C Part 1 Chapter 14 14.11.1.4

| Correction | Present | Note |
|--|--|----------------------|
| 1 The design pressure of side scuttles and rectangular | 1 The design pressure of side scuttles and rectangular | |
| windows are to be less than the maximum allowable pressure | windows are to be less than the maximum allowable pressure | |
| (See Table 14.11.1-1 and Table 14.11.1-2) determined by | (See Table 14.11.1-1 and Table 14.11.1-2) determined by | |
| their nominal diameters and grades. The design pressure | their nominal diameters and grades. The design pressure | |
| P(kPa) is to be determined using the following equation. | P(kPa) is to be determined using the following equation. | Wording correction |
| $P = \frac{10ac}{ac}(bf - y)$ | P = 10ac(bf - y) | |
| a, c, b and f : As <u>Coefficients as</u> specified in | a, c, b and f : As specified in 4.9.2.2 the value of | |
| 4.9.2.2 the. The value of coefficient | coefficient "a" for side scuttles for | |
| "a" for side scuttles for spaces | spaces below the freeboard deck or | |
| below the freeboard deck or spaces | spaces within superstructures may | |
| within superstructures may be | be determined using the formula for | |
| determined using the formula for the | the first tier deckhouse in the | |
| first tier deckhouse in the | requirements of 19.2.1-1 | |
| requirements of <u>194.9</u> .2. <u>1-12</u> | | Reference correction |
| y: Vertical distance (m) from side scuttle sill to | y: Vertical distance (m) from side scuttle sill to | |
| summer load line (or timber load | summer load line (or timber load | |
| line if given) | line if given) | |
| 2 Notwithstanding the requirement of -1 above, the | 2 Notwithstanding the requirement of -1 above, the | |

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| design pressure is not to be less than the minimum design | design pressure is not to be less than the minimum design | |
|---|---|--|
| pressure given in Table 14.11.1-3. | pressure given in Table 14.11.1-3. | |

Rules for the survey and construction of steel ships Part C Part 2-1 Chapter 5 5.4.2

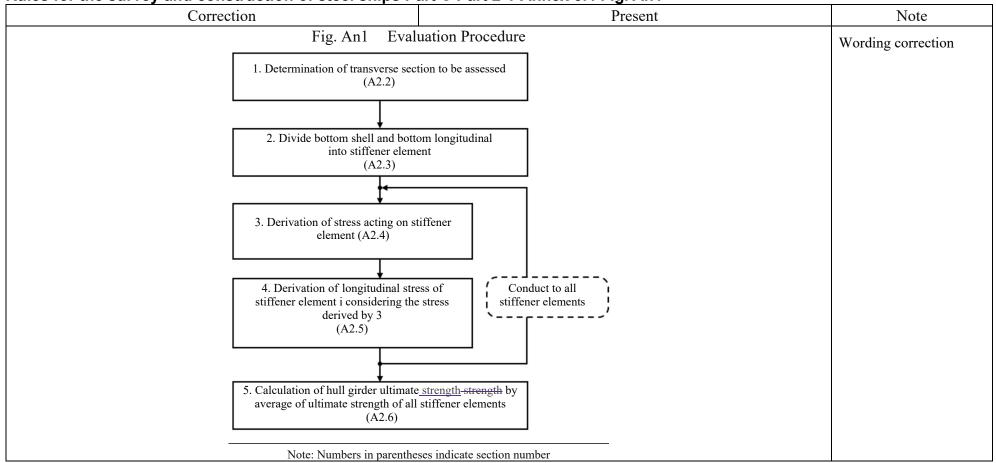
| Correction | Present | Note |
|---|--|--------------------|
| The following formula is to be satisfied. | The following formula is to be satisfied. | Wording correction |
| $\gamma_S M_S + \gamma_W M_W \le \frac{M_U}{\gamma_M \gamma_{DB}}$ | $\gamma_S M_S + \gamma_W M_W \le \frac{M_U}{\gamma_M \gamma_{DB}}$ | |
| | | |
| γ_s : Partial safety factor for the vertical still water | γ_s : Partial safety factor for the vertical still water | |
| bending moment, to be taken as follows. | bending moment, to be taken as follows. | |
| $\gamma_s = 1.0$ | $\gamma_s = 1.0$ | |
| γ_W : Partial safety factor for the vertical wave bending | γ_W : Partial safety factor for the vertical wave bending | |
| moment, to be taken as follows. $x_{1} = 1.2$ | moment, to be taken as follows. y = 1.2 | |
| $\gamma_w = 1.2$ | $\gamma_w = 1.2$ | |
| M_s , M_w : Vertical still water bending moment and vertical wave bending moment (<i>kN-m</i>) for the | M_s , M_w : Vertical still water bending moment and vertical wave bending moment (<i>kN-m</i>) for the | |
| load cases "hogging" and "sagging" as specified | load cases "hogging" and "sagging" as specified | |
| in 4.2.2.5 | in 4.2.2.5 | |
| M_{II} : The hull girder ultimate bending moment | M_{II} : The hull girder ultimate bending moment | |
| $\frac{1}{2}$ capacitystrength (kN-m), which is to be obtained | capacity $(kN-m)$, which is to be obtained by the | |
| by the method specified in Annex 5.4, Part 1. | method specified in Annex 5.4, Part 1. However, | |
| However, instead of the load-end shortening | instead of the load-end shortening curves formula | |
| curves formula $\sigma_{CR5} - \epsilon$ specified in An2.3.8, | $\sigma_{CR5} - \epsilon$ specified in An2.3.8, Annex 5.4, Part | |
| Annex 5.4, Part 1, the following is to be used. | 1, the following is to be used. | |
| $\begin{pmatrix} \sigma_{YP}\Phi \\ \Gamma & (\sigma_{P}\sigma_{P} + \sigma_{P}) \end{pmatrix}$ | $\begin{pmatrix} \sigma_{YP}\Phi \\ \Gamma & (2,27,1,27) \end{pmatrix}$ | |
| $\sigma_{CR5} = \min \left\{ \phi \sigma_{YP} \left[\frac{s}{l} \left(\frac{2.25}{\beta_E} - \frac{1.25}{\beta_E^2} \right) + 0.1 \left(1 - \frac{s}{l} \right) \left(1 + \frac{1}{\beta_E^2} \right)^2 \right] \right\}$ | $\sigma_{CR5} = \min\left\{ \Phi \sigma_{YP} \left \frac{s}{l} \left(\frac{2.25}{\beta_E} - \frac{1.25}{\beta_E^2} \right) + 0.1 \left(1 - \frac{s}{l} \right) \left(1 + \frac{1}{\beta_E^2} \right) \right $ | |
| σ_{YP} :Standard minimum yield stress of plate | σ_{YP} : Standard minimum yield stress of plate | |
| material (N/mm^2) | material (N/mm ²) | |
| Φ, β_E, s, l : As prescribed in An2.3.8, Annex | Φ, β_E, s, l : As prescribed in An2.3.8, Annex | |
| 5.4, Part 1. | 5.4, Part 1. | |
| γ_M : Partial safety factor for the hull girder ultimate | γ_M : Partial safety factor for the hull girder ultimate | |
| strength, to be taken as follows. | strength, to be taken as follows. | |
| $\gamma_M = 1.05$ | $\gamma_M = 1.05$ | |
| γ_{DB} : Partial safety factor for the hull girder ultimate bending moment capacitystrength, considering | γ_{DB} : Partial safety factor for the hull girder ultimate bending moment capacity, considering the effect | |
| bending moment capacitysucingui, considering | bending moment capacity, considering the effect | |

| 4 | £ 1 | |
|---|--|--|
| the effect of double bottom bending given by the | | |
| following formula. However, for cross sections | formula. However, for cross sections where the | |
| where the double bottom breadth of the inner | double bottom breadth of the inner bottom is less | |
| bottom is less than that at amidships or where the | than that at amidships or where the double bottom | |
| double bottom structure differs from at amidships | structure differs from at amidships (e.g. engine | |
| (e.g. engine rooms), the factor γ_{DB} for hogging | rooms), the factor γ_{DB} for hogging condition may | |
| condition may be reduced subject to approval by | be reduced subject to approval by the Society. | |
| the Society. | | |
| For hogging condition, $\gamma_{DB} = 1.15$ | For hogging condition, $\gamma_{DB} = 1.15$ | |
| For sagging condition, $\gamma_{DB} = 1.0$ | For sagging condition, $\gamma_{DB} = 1.0$ | |

Rules for the survey and construction of steel ships Part C Part 2-1 Chapter 5 5.4.3

| Correction | Present | Note |
|--|---|--------------------|
| For ships not less than 300 m in length L_c or which | For ships not less than 300 m in length L_c or which | Wording correction |
| exceed $32.26 m$ in breadth <i>B</i> , in addition to the requirements | exceed 32.26 m in breadth B , in addition to the requirements | |
| specified in 5.4.2, the hull girder ultimate bending moment | specified in 5.4.2, the hull girder ultimate bending moment | |
| capacitystrength is to satisfy the following formula for the | capacity is to satisfy the following formula for the hogging | |
| hogging condition. Notwithstanding the requirements under | condition. Notwithstanding the requirements under this | |
| this paragraph, the effect of whipping and the hull girder | paragraph, the effect of whipping and the hull girder ultimate | |
| ultimate strength considering the effect of lateral loads can be | strength considering the effect of lateral loads can be | |
| calculated more directly where deemed appropriate by the | calculated more directly where deemed appropriate by the | |
| Society. This requirement applies to the transverse section | Society. This requirement applies to the transverse section | |
| located in the vicinity of the centre of the cargo hold at | located in the vicinity of the centre of the cargo hold at | |
| midship. | midship. | |
| $\gamma_S M_{SV-max} + \gamma_{Wh} M_{WV-h-Mid} \le M_{U_DB}$ | $\gamma_S M_{SV-max} + \gamma_{Wh} M_{WV-h-Mid} \le M_{U_DB}$ | |
| γ_S : Partial safety factor for the vertical still water | γ_S : Partial safety factor for the vertical still water | |
| bending moment, to be taken as follows. | bending moment, to be taken as follows. | |
| $\gamma_S = 1.0$ | $\gamma_S = 1.0$ | |
| γ_{Wh} : Partial safety factor for the vertical wave | γ_{Wh} : Partial safety factor for the vertical wave | |
| bending moment, considering the effect of | bending moment, considering the effect of | |
| whipping, to be taken as follows: | whipping, to be taken as follows: | |
| $\gamma_{Wh} = 1.5$ | $\gamma_{Wh} = 1.5$ | |
| M_{SV-max} : Permissible maximum vertical still | M_{SV-max} : Permissible maximum vertical still | |
| water bending moment $(kN-m)$ at the cross | water bending moment $(kN-m)$ at the cross | |

| section under consideration while at sea | section under consideration while at sea | |
|--|--|--|
| prescribed in 4.2.2.2. | prescribed in 4.2.2.2. | |
| $M_{WV-h-Mid}$: Vertical wave bending moment | $M_{WV-h-Mid}$: Vertical wave bending moment | |
| (kN-m) in the amidship calculated according to | (kN-m) in the amidship calculated according to | |
| the provision of 4.2.2.3 . | the provision of 4.2.2.3 . | |
| $M_{U_{DB}}$: Hull girder ultimate bending moment | M_{U_DB} : Hull girder ultimate bending moment | |
| capacitystrength (kN-m), considering the effect | capacity (kN-m), considering the effect of lateral | |
| of lateral loads, to be obtained according to the | loads, to be obtained according to the | |
| requirements of Annex 5.4. | requirements of Annex 5.4. | |



Rules for the survey and construction of steel ships Part C Part 2-1 Annex 5.4 Fig. An1

Rules for the survey and construction of steel ships Part C Part 2-1 Annex 5.4 An2.6

| Correction | Present | Note |
|--|--|--------------------|
| An2.6 Calculation of Hull Girder Ultimate Bending Moment CapacityStrength | An2.6 Calculation of Hull Girder Ultimate Bending Moment Capacity | Wording correction |
| An2.6.1 | An2.6.1 | |
| Hull girder ultimate bending moment capacitystrength | Hull girder ultimate bending moment capacity | |

| considering the effect of lateral loads $M_{U DB}$ (kN-m) is to be | considering the effect of lateral loads $M_{U DB}$ (kN-m) is to be | |
|---|---|--|
| taken as follows: | taken as follows: | |
| $M_{U_DB} = \alpha_U \sigma_{US_avg} Z_B 10^3$ | $M_{U_DB} = \alpha_U \sigma_{US_avg} Z_B 10^3$ | |
| σ_{US_avg} : Average of ultimate strength (<i>N/mm²</i>) of all | σ_{US_avg} : Average of ultimate strength (N/mm ²) of all | |
| stiffener elements, to be taken as follows: | stiffener elements, to be taken as follows: | |
| $\sum_{i=1} (\sigma_{USi} A_i)$ | $\sum_{i=1} (\sigma_{USi} A_i)$ | |
| $\sigma_{US_avg} = \frac{\sum_{i=1} (\sigma_{USi} A_i)}{\sum_{i=1} A_i}$ | $\sigma_{US_avg} = \frac{\sum_{i=1} (\sigma_{USi} A_i)}{\sum_{i=1} A_i}$ | |
| σ_{USi} : As specified in An2.5.1 above. | σ_{USi} : As specified in An2.5.1 above. | |
| A_i : Area (cm^2) of stiffener element <i>i</i> to be taken | A_i : Area (cm^2) of stiffener element <i>i</i> to be taken | |
| as follows: | as follows: | |
| $A_i = A_P + A_S$ | $A_i = A_P + A_S$ | |
| α_U : Correction factor, to be taken as follows: | α_U : Correction factor, to be taken as follows: | |
| $\alpha_U = 1.25$ | $\alpha_U = 1.25$ | |

Rules for the survey and construction of steel ships Part C Part 2-5 Chapter 4 4.3.1.1

| Correction | Present | Note |
|--|---|--------------------|
| The loads to be considered in the requirements of strength of primary supporting structures specified in Chapter 7 and Chapter 7, Part 1 are also to be in accordance with 4.3. Additional requirements for loads in the maximum load condition are to be in accordance with 4.3.2. <u>3</u> The loads in the harbour condition may not be considered. | strength of primary supporting structures specified in Chapter 7 and Chapter 7, Part 1 are also to be in accordance with 4.3. | Wording correction |

Rules for the survey and construction of steel ships Part CSR-B&T Part 1 Chapter 5 Section 1 3.4.5

| Correction | Present | Note |
|---|--|--------------------------------------|
| 3.4.5 Vertical force on double bottom | 3.4.5 Vertical force on double bottom | Wording correction |
| The maximum vertical resulting force on the double | The maximum vertical resulting force on the double | the of anning control to the officer |
| bottom in a tank, F_{db} is in no case to be less than that given by | bottom in a tank, F_{db} is in no case to be less than that given by | |
| the minimum conditions given in Table 5. | the minimum conditions given in Table 5 . | |
| The maximum resulting force on the double bottom in | The maximum resulting force on the double bottom in | |
| a tank, F_{db} in kN , is to be taken as: | a tank, F_{db} in kN , is to be taken as: | |
| $F_{db} = g W_{CT} + W_{CTBT}W_{CWBT} - \rho b_2 \ell_{tk}T_{mean} $ | $F_{db} = g W_{CT} + W_{CTBT} - \rho b_2 \ell_{tk} T_{mean} $ | |
| where: | where: | |
| <i>W</i> _{CT} : Weight of cargo, in tonnes, as defined in Table | W_{CT} : Weight of cargo, in tonnes, as defined in Table | |
| 6. | 6. | |
| <i>W</i> _{CWBT} : Weight of ballast, in tonnes, as defined in | W_{CWBT} : Weight of ballast, in tonnes, as defined in | |
| Table 6. | Table 6. | |
| b_2 : Breadth, in <i>m</i> , as defined in Table 6 . | b_2 : Breadth, in <i>m</i> , as defined in Table 6 . | |
| ℓ_{tk} : Length of cargo tank, in <i>m</i> . | ℓ_{tk} : Length of cargo tank, in <i>m</i> . | |
| T_{mean} : Draught at the mid length of the tank for the | T_{mean} : Draught at the mid length of the tank for the | |
| loading condition considered, in <i>m</i> . | loading condition considered, in <i>m</i> . | |

Rules for the survey and construction of steel ships Part L Chapter 7 7.1.4-1

| Correction | Present | Note |
|--|--|--------------------|
| 1 Main frame, glassholder, glass retaining ring and | 1 Main frame, glassholder, glass retaining ring and | Wording correction |
| deadlight | deadlight | 8 |
| The materials used for the main components of the side | The materials used for the main components of the side | |
| scuttles (main frame, glassholder, glass retaining ring and | scuttles (main frame, glassholder, glass retaining ring and | |
| deadlight) are to be in accordance with the requirements as | deadlight) are to be in accordance with the requirements as | |
| given in Table L7.4 . These materials are to have the following | given in Table L7.4. These materials are to have the following | |
| properties in (1) and (2). | properties in (1) and (2). | |
| (1) resistant corrosion; | (1) resistant corrosion; | |
| (2) minimum mechanical properties as given in Table | (2) minimum mechanical properties as given in Table | |
| L7.5. (One tensile test specimen is to be taken from | L7.5. (One tensile test specimen is to be taken from | |
| each cast. Where the number of <u>castingcastings</u> from | each cast. Where the number of casting from one cast | |
| one cast exceeds 50, an additional specimen is to be | exceeds 50, an additional specimen is to be taken from | |
| taken from each 50 castings of or fraction thereof. For | each 50 castings of fraction thereof. For aluminium | |
| aluminium extruded shapes, one tensile test specimen | extruded shapes, one tensile test specimen is to be | |
| is to be taken per each lot. Extruded shapes of similar | taken per each lot. Extruded shapes of similar | |
| thickness made from the same melting and heat | thickness made from the same melting and heat | |
| treated simultaneously are treated as one lot. Where | treated simultaneously are treated as one lot. Where | |
| the numbersize of identical lots a lot exceeds 50, an | the number of identical lots exceeds 50, an additional | |
| additional specimen is to be taken for each 50 lots or | specimen is to be taken for each 50 lots or fraction | |
| fraction thereof.) | thereof.) | |

Rules for the survey and construction of steel ships Part L Chapter 7 7.1.4-2

| Correction | Present | Note |
|---|---|------------------------|
| 2 Closing device | 2 Closing device | Wording correction |
| The materials used for the closing devices of the side | The materials used for the closing devices of the side | vioranig concentration |
| scuttles (swingbolts, pins and nuts) are to have the following | scuttles (swingbolts, pins and nuts) are to have the following | |
| properties in (1) to (3). For aluminium alloy side scuttles, the | properties in (1) to (3). For aluminium alloy side scuttles, the | |
| swingbolts and hinge pins are to be made of non-corrodible | swingbolts and hinge pins are to be made of non-corrodible | |
| steel, stainless steel or such alloys which are not likely to cause | steel, stainless steel or such alloys which are not likely to cause | |
| corrosion of side scuttles, bolts or pins. | corrosion of side scuttles, bolts or pins. | |
| (1) resistant to corrosion; | (1) resistant to corrosion; | |
| (2) no effect on the corrosion resistance of other parts; | (2) no effect on the corrosion resistance of other parts; | |

| (3) | minimum mechanical properties as given in Table | (3) | minimum mechanical properties as given in Table | |
|-----|---|-----|--|--|
| | L7.6. (One tensile test specimen is to be taken from | | L7.6. (One tensile test specimen is to be taken from | |
| | each cast. Where the number of castingcastings from | | each cast. Where the number of casting from one cast | |
| | one cast exceeds 50, an additional specimen is to be | | exceeds 50, an additional specimen is to be taken from | |
| | taken from each 50 castings of or fraction thereof. For | | each 50 castings of fraction thereof. For aluminium | |
| | aluminium extruded shapes, one tensile test specimen | | extruded shapes, one tensile test specimen is to be | |
| | is to be taken per each lot. Extruded shapes of similar | | taken per each lot. Extruded shapes of similar | |
| | thickness made from the same melting and heat | | thickness made from the same melting and heat | |
| | treated simultaneously are treated as one lot. Where | | treated simultaneously are treated as one lot. Where | |
| | the numbersize of identical lots a lot exceeds 50, an | | the number of identical lots exceeds 50, an additional | |
| | additional specimen is to be taken for each 50 lots or | | specimen is to be taken for each 50 lots or fraction | |
| | fraction thereof.) | | thereof.) | |

Rules for the survey and construction of steel ships Part L Chapter 8 8.1.4-1

| Correction | Present | Note |
|--|--|--|
| 1 Main frame, glassholder and glass retaining frame | 1 Main frame, glassholder and glass retaining frame | Wording correction |
| The materials used for the main components of the | The materials used for the main components of the | ······································ |
| rectangular windows (main frame, glassholder and glass | rectangular windows (main frame, glassholder and glass | |
| retaining frame) are to be in accordance with the requirements | retaining frame) are to be in accordance with the requirements | |
| as given in Table L8.3. These materials are to have the | as given in Table L8.3. These materials are to have the | |
| following properties in (1) and (2). | following properties in (1) and (2). | |
| (1) resistant corrosion; | (1) resistant corrosion; | |
| (2) minimum mechanical properties as given in Table | (2) minimum mechanical properties as given in Table | |
| L8.4. (One tensile test specimen is to be taken from | L8.4. (One tensile test specimen is to be taken from | |
| each cast. Where the number of <u>casting</u> from | each cast. Where the number of casting from one cast | |
| one cast exceeds 50, an additional specimen is to be | exceeds 50, an additional specimen is to be taken from | |
| taken from each 50 castings of <u>or</u> fraction thereof. For | each 50 castings of fraction thereof. For aluminium | |
| aluminium extruded shapes, one tensile test specimen | extruded shapes, one tensile test specimen is to be | |
| is to be taken for one piece per each lot. Extruded | taken for one piece per each lot. Extruded shapes of | |
| shapes of similar thickness made from the same | similar thickness made from the same melting and | |
| melting and heat treated simultaneously are treated as | heat treated simultaneously are treated as one lot. | |
| one lot. Where the numbersize of identical lotsa lot | Where the number of identical lots exceeds 50, an | |
| exceeds 50, an additional specimen is to be taken for | additional specimen is to be taken for each 50 lots or | |
| each 50 lots or fraction thereof.) | fraction thereof.) | |

Rules for the survey and construction of steel ships Part L Chapter 8 8.1.4-2

| Correction | Present | Note |
|---|---|------------------------|
| 2 Closing device | 2 Closing device | Wording correction |
| The materials used for the closing devices of the rectangular | The materials used for the closing devices of the rectangular | in or using concernent |
| windows (bolts, pins and nuts) are to have the following | windows (bolts, pins and nuts) are to have the following | |
| properties in (1) to (3). For aluminium alloy rectangular | properties in (1) to (3). For aluminium alloy rectangular | |
| windows, the swingbolts and hinge pins are to be made of non- | windows, the swingbolts and hinge pins are to be made of non- | |
| corrodible steel, stainless steel or such alloys which are not | corrodible steel, stainless steel or such alloys which are not | |
| likely to cause corrosion of rectangular windows, bolts or pins. | likely to cause corrosion of rectangular windows, bolts or pins. | |
| (1) resistant to corrosion; | (1) resistant to corrosion; | |
| (2) no effect on the corrosion resistance of other parts; | (2) no effect on the corrosion resistance of other parts; | |
| (3) minimum mechanical properties as given in Table | (3) minimum mechanical properties as given in Table | |
| L8.5. (For casting, one tensile test specimen is to be | L8.5. (For casting, one tensile test specimen is to be | |
| taken from each cast. Where the number of | taken from each cast. Where the number of casting | |
| castingcastings from one cast exceeds 50, an | from one cast exceeds 50, an additional specimen is | |
| additional specimen is to be taken from each 50 | to be taken from each 50 castings of fraction thereof. | |
| castings <u>ofor</u> fraction thereof. For aluminium | For aluminium extruded shapes, one tensile test | |
| extruded shapes, one tensile test specimen is to be | specimen is to be taken for one piece per each lot. | |
| taken for one piece per each lot. Extruded shapes of | Extruded shapes of similar thickness made from the | |
| similar thickness made from the same melting and | same melting and heat treated simultaneously are treated as one lot. Where the number of identical lots | |
| heat treated simultaneously are treated as one lot. Where the numbersize of identical lots a lot exceeds | exceeds 50, an additional specimen is to be taken for | |
| 50, an additional specimen is to be taken for each 50 | each 50 lots or fraction thereof.) | |
| lots or fraction thereof.) | | |
| | | |

Rules for the Survey and Construction of Passenger Ships Part 3 Chapter 5 5.3.1-2

| Correction | Present | Note |
|---|---|----------------------|
| 2 Where decks are supported by longitudinal beams and web beams, the section modulus of tween deck frames supporting web beams is not to be less than that obtained from the following formula, in addition to those in -1. | 2 Where decks are supported by longitudinal beams and web beams, the section modulus of tween deck frames supporting web beams is not to be less than that obtained from the following formula, in addition to those in -1. | |
| $4.17K\left\{1.10 + 0.56n\frac{h_1}{h}\left(\frac{l_1}{l}\right)^2\right\}Shl^2 \ (cm^3)$ | $4.17K\left\{1.10 + 0.56n\frac{h_1}{h}\left(\frac{l_1}{l}\right)^2\right\}Shl^2 (cm^3)$ | |
| Where : | Where : | |
| n: Ratio of spacing of web beams to tween deck | n: Ratio of spacing of web beams to tween deck | |
| frame spacing. | frame spacing. | Reference correction |
| h_1 : Deck load stipulated in 8.21 for the deck beam at the top of frame $(h_1)/(m^2)$ | h_1 : Deck load stipulated in 8.2 for the deck beam at the top of frame (kN/m^2) | Kelefenee correction |
| the top of frame (kN/m^2) . l_1 : Horizontal distance from ship's side to deck girder | the top of frame (kN/m^2) . l_1 : Horizontal distance from ship's side to deck girder | |
| supporting deck transverse, bulkhead or pillar | supporting deck transverse, bulkhead or pillar | |
| (m). | (<i>m</i>). | |
| h: Vertical distance from the middle of l to the point | h: Vertical distance from the middle of l to the point | |
| d + 0.038 L' above top of keel (m). Where, | d + 0.038 L' above top of keel (m). Where, | |
| however, h is to be greater than the following | however, h is to be greater than the following | |
| value according to the location of tween deck | value according to the location of tween deck | |
| frame. $0.02L(m)$, where the tween deals frame is | frame. $0.02L$ (m) , where the tween deals frame is | |
| 0.03L(m): where the tween deck frame is located below freeboard deck. | 0.03L(m): where the tween deck frame is located below freeboard deck. | |
| | | |
| $0.03L\sqrt{\frac{D}{D+2h_s}}(m)$: Where the tween deck frame | $0.03L\sqrt{\frac{D}{D+2h_s}}(m)$: Where the tween deck frame | |
| is located at the superstructure side shell | is located at the superstructure side shell | |
| plating until the level at a height of $2h_s$ | plating until the level at a height of $2h_s$ | |
| above the freeboard deck. | above the freeboard deck. | |
| $0.03L\sqrt{\frac{D}{D_S}}(m)$: Where the tween deck frame is | $0.03L\sqrt{\frac{D}{D_S}}(m)$: Where the tween deck frame is | |
| located at the superstructure side shell | located at the superstructure side shell | |
| plating until the level at a height of $2h_s$ | plating until the level at a height of $2h_s$ | |

| above the freeboard deck below the strength | above the freeboard deck below the strength | |
|--|--|--|
| deck. | deck. | |
| K, h_s, S and l : Values stipulated in -1. | K, h_s, S and l : Values stipulated in -1. | |

Rules for the Survey and Construction of Passenger Ships Part 5 Chapter 2 2.3.8-1

| Correction | Present | Note |
|--|---|----------------------|
| 1 The depth of bilge wells constructed in double bottom | 1 The depth of bilge wells constructed in double bottom | |
| and the height from the bottom plating to the bottom of bilge | and the height from the bottom plating to the bottom of bilge | |
| wells are to comply with the requirements in 4.21.1-4, Part 3. | wells are to comply with the requirements in 4.2.1-4, Part 3. | Reference correction |

Rules for the Survey and Construction of Inland Waterway Ships Part 2 Chapter 1 1.4.5-1

| Correction | Present | Note |
|---|--|----------------------|
| 1 Inclining Test | 1 Inclining Test | |
| Where alterations or repairs which might greatly affect the | Where alterations or repairs which might greatly affect the | |
| ship's stability have been made and/or the Surveyor deems it | ship's stability have been made and/or the Surveyor deems it | |
| necessary, 2.53.1-25, Part B of the Rules for Survey and | necessary, 2.5.1-2, Part B of the Rules for Survey and | Reference correction |
| Construction of Steel Ships is to be followed to determine | Construction of Steel Ships is to be followed to determine | |
| the need for re-inclining tests, and the need for amending | the need for re-inclining tests, and the need for amending | |
| stability information. | stability information. | |

Rules for Marine Engine Emission Verification Chapter 1 1.2.1

| | Correction | | Present | Note |
|-----|--|-----|--|----------------------|
| | Terms used in the Rules are defined as follows: | | Terms used in the Rules are defined as follows: | |
| (1) | "Engine" means diesel engine of rating exceeding 130 <i>kW</i> . | (1) | "Engine" means diesel engine of rating exceeding 130 <i>kW</i> . | |
| (2) | "Diesel engine" means any reciprocating internal combustion engine operating on liquid or dual fuel or that which is gas fuelled, including booster/compound systems. | (2) | "Diesel engine" means any reciprocating internal combustion engine operating on liquid or dual fuel or that which is gas fuelled, including booster/compound systems. | |
| (3) | <i>"NOx Technical Code"</i> means the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines adopted by the International Conference of Parties to <i>MARPOL</i> 73/78 in 1997 as resolution 2, as amended by the <i>IMO</i> , provided that such amendments are adopted and brought into force in accordance with the provisions of article 16 of the present Convention. | (3) | <i>"NOx Technical Code"</i> means the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines adopted by the International Conference of Parties to <i>MARPOL</i> 73/78 in 1997 as resolution 2, as amended by the <i>IMO</i> , provided that such amendments are adopted and brought into force in accordance with the provisions of article 16 of the present Convention. | |
| (4) | "Engine manufacturer, etc." means the engine manufacturer or other responsible party who applies for the emission verification, component confirmation, emission testing, document examination and survey, etc. listed in 2.2.1(2) of the Rules and 2.1. $34-5(3)(b)$, Part 2 of the Rules for Marine Pollution Prevention Systems. | (4) | "Engine manufacturer, etc." means the engine manufacturer or other responsible party who applies for the emission verification, component confirmation, emission testing, document examination and survey, etc. listed in 2.2.1(2) of the Rules and 2.1.3-5(3)(b), Part 2 of the Rules for Marine Pollution Prevention Systems. | Reference correction |
| (5) | "Measurement procedures for emission verification on a test bed" means procedure specified in Chapter 5 of the <i>NOx Technical Code</i> . | (5) | "Measurement procedures for emission verification on a test bed" means procedure specified in Chapter 5 of the <i>NOx Technical Code</i> . | |
| (6) | "On-board simplified measurement method" means method specified in 6.3 of the <i>NOx Technical Code</i> . | (6) | "On-board simplified measurement method" means method specified in 6.3 of the <i>NOx Technical Code</i> . | |
| (7) | "On-board direct measurement and monitoring method" means method specified in 6.4 and Appendix VIII of the <i>NOx Technical Code</i> . | (7) | "On-board direct measurement and monitoring method" means method specified in 6.4 and Appendix VIII of the <i>NOx Technical Code</i> . | |
| (8) | "Engine Family" means a series of engines to which the guidance specified in 4.3.8 of the <i>NOx Technical</i> | (8) | "Engine Family" means a series of engines to which the guidance specified in 4.3.8 of the <i>NOx Technical</i> | |

| | Code applies. These engines are series produced, | | Code applies. These engines are series produced, | |
|---------|--|-------|--|--|
| | proven to have similar NOx emission characteristics | | proven to have similar NOx emission characteristics | |
| | through their design, used as produced, and, during | | through their design, used as produced, and, during | |
| | installation on board, and require no adjustments or | | installation on board, and require no adjustments or | |
| | modifications which could adversely affect the NOx | | modifications which could adversely affect the NOx | |
| | emissions. | | emissions. | |
| (9) | "Engine Group" means a series of engines to which | (9) | "Engine Group" means a series of engines to which | |
| | the guidance specified in 4.4.6 of the NOx Technical | | the guidance specified in 4.4.6 of the NOx Technical | |
| | Code applies. These engines form a smaller series, | | Code applies. These engines form a smaller series, | |
| | produced for similar engine application, and may | | produced for similar engine application, and may | |
| | require minor adjustments and modifications during | | require minor adjustments and modifications during | |
| | installation or in service on board. | | installation or in service on board. | |
| (10) | "Parent Engine" means an engine selected as the one | (10) | "Parent Engine" means an engine selected as the one | |
| | which has the highest NOx emission level among all | | which has the highest NOx emission level among all | |
| | of the engines in an Engine Family in accordance with | | of the engines in an Engine Family in accordance with | |
| | the provisions specified in 4.3.9 of the NOx Technical | | the provisions specified in 4.3.9 of the NOx Technical | |
| | Code and that chosen for the Engine Group in | | Code and that chosen for the Engine Group in | |
| | accordance with the provisions specified in 4.4.8 of | | accordance with the provisions specified in 4.4.8 of | |
| | the NOx Technical Code. | | the NOx Technical Code. | |
| (11) | 1 6 | (11) | "Components" of an engine mean those | |
| | interchangeable parts which influence the NOx | | interchangeable parts which influence the NOx | |
| | emissions performance, identified by their | | emissions performance, identified by their | |
| | design/parts number. | | design/parts number. | |
| (12) | "Operating values" of an engine mean engine data, | (12) | "Operating values" of an engine mean engine data, | |
| | like cylinder peak pressure, exhaust gas temperature, | | like cylinder peak pressure, exhaust gas temperature, | |
| | etc., from the engine log which are related to the NOx | | etc., from the engine log which are related to the NOx | |
| | emission performance. These data are load- | | emission performance. These data are load- | |
| <i></i> | dependent. | (1.5) | dependent. | |
| (13) | "Technical File" means a record containing all details | (13) | "Technical File" means a record containing all details | |
| | of parameters, including components and settings of | | of parameters, including components and settings of | |
| | an engine, which may influence the NOx emission of | | an engine, which may influence the NOx emission of | |
| | the engine. | | the engine. | |
| (14) | 6 6 5 | (14) | "Setting" of an engine means adjustment of an | |
| | adjustable feature influencing the NOx emissions | | adjustable feature influencing the NOx emissions | |

| (15) "Substantial modification" of an engine. (15) "Substantial modification" of an engine means as follows. (a) For engines installed on ships at beginning stage of construction on or after 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification to an engine that could potentially cause the NOx emission from the engine to exceed the limits specified in 2.2.2-1. Routine replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics is not be considered a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in the excess of the limits established by the on-board simplified measurement method. These changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion character stice in the installation of a certificat approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). (16) "Major conversion" of an engine means a | | | |
|--|---|---|--|
| follows. (a) For engines installed on ships at beginning stage of construction on or after 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification is an engine that could potentially cause the NOx emission from the engine to exceed the limits specified in the Technical File that do not alter NOx emission characteristics is not be considered a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex V1</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex V1</i> is not considered to be a substantial modification of (16) and 2.2.2-1(2). | performance of an engine. | performance of an engine. | |
| (a) For engines installed on ships at beginning stage of construction on or after 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification to an engine that could potentially cause the NOx emission from the engine to exceed the limits specified in 2.2.2-1. Routine replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics is not be considered a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification for the engine. Nox emission characteristics in texcess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine) 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | (15) "Substantial modification" of an engine means as | (15) "Substantial modification" of an engine means as | |
| of construction on or after 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification to an engine that could potentially cause the NOx emission from the engine to exceed the limits specified in 2.2.2-1. Routine replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics is not be considered a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification?. (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | follows. | follows. | |
| May 2005 for ships not engaged in international voyages), substantial modification means any modification to an engine that could potentially cause the NOx emission from the engine to exceed the limits specified in 2.2.2-1. Routine replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics is not be considered a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOX emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | (a) For engines installed on ships at beginning stage | (a) For engines installed on ships at beginning stage | |
| voyages), substantial modification means any modification to an engine that could potentially cause the NOx emission from the engine to exceed the limits specified in 2.2.2-1. Routine replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics is not be considered a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> is not considered to be a substantial modification of (16) and 2.2.2-1(2). voyages), substantial modification means any modification for the purpose of the application of (16) and 2.2.2-1(2). | of construction on or after 1 January 2000 (19 | of construction on or after 1 January 2000 (19 | |
| modification to an engine that could potentially cause the NOx emission from the engine to exceed the limits specified in 2.2.2-1. Routine replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics is not be considered a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification of (16) and 2.2.2-1(2). modification to an engine that could potentially cause the NOx emission from the engine to exceed the limits specified in 2.2.2-1. Routine replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics in ternational voyages), substantial modification means any modified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification of the application of (16) and 2.2.2-1(2). | May 2005 for ships not engaged in international | May 2005 for ships not engaged in international | |
| cause the NOx emission from the engine to exceed the limits specified in 2.2.2-1. Routine replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics is not be considered a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | voyages), substantial modification means any | voyages), substantial modification means any | |
| exceed the limits specified in 2.2.2-1. Routine replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics is not be considered a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changers in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification of a 0.2.2-1(2). exceed the limits specified in 2.2.2-1. Routine replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics is not be considered a "substantial modification?". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) a | modification to an engine that could potentially | modification to an engine that could potentially | |
| replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics is not be considered a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification of (16) and 2.2.2-1(2). replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics is not be considered a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification means any set is existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification of the enprice. | cause the NOx emission from the engine to | cause the NOx emission from the engine to | |
| specified in the Technical File that do not alter NOx emission characteristics is not be considered a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in tysystems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | exceed the limits specified in 2.2.2-1. Routine | exceed the limits specified in 2.2.2-1. Routine | |
| NOx emission characteristics is not be considered a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification of the engine). However, the imstallation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | replacement of components of an engine by parts | replacement of components of an engine by parts | |
| a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification of the engine). However, the installation of a 2.2.2-1(2). a "substantial modification". (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification of the engines of the application of (16) and 2.2.2-1(2). | specified in the Technical File that do not alter | specified in the Technical File that do not alter | |
| (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). (b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | NOx emission characteristics is not be considered | NOx emission characteristics is not be considered | |
| of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | a "substantial modification". | a "substantial modification". | |
| 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).2005 for ships not engaged in international | (b) For engines installed on ships at beginning stage | (b) For engines installed on ships at beginning stage | |
| voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). voyages), substantial modification means any modification for the purpose of the application of (16) and 2.2.2-1(2). | of construction before 1 January 2000 (19 May | of construction before 1 January 2000 (19 May | |
| voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). voyages), substantial modification means any modification for the purpose of the application of (16) and 2.2.2-1(2). | 2005 for ships not engaged in international | 2005 for ships not engaged in international | |
| its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). total content of the conte | voyages), substantial modification means any | voyages), substantial modification means any | |
| excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the tinstallation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | modification made to an engine which increases | modification made to an engine which increases | |
| simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | its existing NOx emission characteristics in | its existing NOx emission characteristics in | |
| include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | excess of the limits established by the on-board | excess of the limits established by the on-board | |
| operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | simplified measurement method. These changes | simplified measurement method. These changes | |
| changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | include, but are not limited to, changes in its | include, but are not limited to, changes in its | |
| systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). systems, combustion chamber configuration, or timing calibration chamber configuration, or timing calibration chamber configuration, or timing calibration chamber configuration, or timing calibration of a certified approved method pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | operations or in its technical parameters (e.g., | operations or in its technical parameters (e.g., | |
| timing calibration of the engine). However, the installation of a certified approved method pursuant to Regulation 13.7.1.1 of Annex VI or certification pursuant to Regulation 13.7.1.2 of Annex VI is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).timing calibration of the engine). However, the installation of a certified approved method pursuant to Regulation 13.7.1.2 of Annex VI is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).timing calibration of the engine). However, the installation of a certified approved method pursuant to Regulation 13.7.1.2 of Annex VI is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | changing camshafts, fuel injection systems, air | changing camshafts, fuel injection systems, air | |
| installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). installation of a certified approved method pursuant to <i>Regulation</i> 13.7.1.1 of <i>Annex VI</i> or certification pursuant to <i>Regulation</i> 13.7.1.2 of <i>Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | systems, combustion chamber configuration, or | systems, combustion chamber configuration, or | |
| pursuant to Regulation 13.7.1.1 of Annex VI or certification pursuant to Regulation 13.7.1.2 of Annex VI is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).pursuant to Regulation 13.7.1.1 of Annex VI or certification pursuant to Regulation 13.7.1.2 of Annex VI is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).pursuant to Regulation 13.7.1.1 of Annex VI or certification pursuant to Regulation 13.7.1.2 of Annex VI is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | timing calibration of the engine). However, the | timing calibration of the engine). However, the | |
| certification pursuant to Regulation 13.7.1.2 of Annex VI is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).certification pursuant to Regulation 13.7.1.2 of Annex VI is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | installation of a certified approved method | installation of a certified approved method | |
| Annex VI is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).Annex VI is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2). | pursuant to Regulation 13.7.1.1 of Annex VI or | pursuant to Regulation 13.7.1.1 of Annex VI or | |
| modification for the purpose of the application of (16) and 2.2.2-1(2).modification for the purpose of the application of (16) and 2.2.2-1(2). | certification pursuant to Regulation 13.7.1.2 of | certification pursuant to Regulation 13.7.1.2 of | |
| (16) and $2.2.2-1(2)$. (16) and $2.2.2-1(2)$. | Annex VI is not considered to be a substantial | Annex VI is not considered to be a substantial | |
| | modification for the purpose of the application of | modification for the purpose of the application of | |
| (16) "Major conversion" of an engine means a (16) "Major conversion" of an engine means a | | | |
| | (16) "Major conversion" of an engine means a | (16) "Major conversion" of an engine means a | |

| modification of an engine on or after 1 January 2000 | |
|--|--|
| (19 May 2005 for ships not engaged in international | |
| voyages) which corresponds to any of the following | |
| (a) to (c). | |

- (a) The engine is replaced or supplemented with a non-identical engine manufactured.
- (b) Any substantial modification of an engine is made to the engine.
- (c) The maximum continuous output (referred to in 2.1.23, Part A of the Rules for the Survey and Construction of Steel ships, hereinafter the same) of the engine is increased to more than 10%.
- (17) "Emission Control Areas" means an area where the adoption of special mandatory measures for emissions from ships is required to prevent, reduce and control air pollution from NOx or SOx and particulate matter or all three types of emissions and their attendant adverse impacts on human health and the environment. Emission Control Areas are to include those listed in, or designated under the following (18).
- (18) "NOx Emission Control Areas" means the following areas:
 - (a) The North American Area
 - i) The sea area located off the Pacific coasts of the United States and Canada, enclosed by geodesic lines connecting the coordinates specified in Appendix VII.1 to *Annex* VI.
 - ii) The sea areas located off the Atlantic coasts of the United States, Canada, and France (Saint-Pierre-et-Miquelon) and the Gulf of Mexico coast of the United States enclosed by geodesic lines connecting the coordinates specified in Appendix VII.2 to *Annex* VI.

modification of an engine on or after 1 January 2000 (19 May 2005 for ships not engaged in international voyages) which corresponds to any of the following (a) to (c).

- (a) The engine is replaced or supplemented with a non-identical engine manufactured.
- (b) Any substantial modification of an engine is made to the engine.
- (c) The maximum continuous output (referred to in 2.1.23, Part A of the Rules for the Survey and Construction of Steel ships, hereinafter the same) of the engine is increased to more than 10%.
- (17) "Emission Control Areas" means an area where the adoption of special mandatory measures for emissions from ships is required to prevent, reduce and control air pollution from NOx or SOx and particulate matter or all three types of emissions and their attendant adverse impacts on human health and the environment. Emission Control Areas are to include those listed in, or designated under the following (18).
- (18) "NOx Emission Control Areas" means the following areas:
 - (a) The North American Area
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 - ii) The sea areas located off the Atlantic coasts of the United States, Canada, and France (Saint-Pierre-et-Miquelon) and the Gulf of Mexico coast of the United States enclosed by geodesic lines connecting the coordinates specified in Appendix VII.2 to Annex VI.

- iii) The sea area located off the coasts of the Hawaiian Islands of Hawaii, Maui, Oahu, Molokai, Niihau, Kauai, Lanai, and Kahoolawe, enclosed by geodesic lines connecting the coordinates specified in Appendix VII.3 to *Annex* VI.
- (b) The United States Caribbean Sea Area

The sea area located off the Atlantic and Caribbean coasts of the Commonwealth of Puerto Rico and the United States Virgin Islands, enclosed by geodesic lines connecting the coordinates specified in Appendix VII.3 to *Annex* VI.

(c) The Baltic Sea Area

The Baltic Sea proper with the Gulf of Bothnia, the Gulf of Finland and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57°44.8'N.

(d) The North Sea Area

The North Sea proper including seas therein with the boundary between:

- i) the North Sea southwards of latitude 62°N and eastwards of longitude 4°W;
- ii) the Skagerrak, the southern limit of which is determined east of the Skaw by latitude 57° 44.8'N; and
- iii) the English Channel and its approaches eastwards of longitude 5 ° W and northwards of latitude 48°30'N.
- (e) A sea area, including port areas, designated by the *IMO* in accordance with criteria and procedures set forth in Appendix III to *Annex* VI other than those specified in (a) to (d) above.

- iii) The sea area located off the coasts of the Hawaiian Islands of Hawaii, Maui, Oahu, Molokai, Niihau, Kauai, Lanai, and Kahoolawe, enclosed by geodesic lines connecting the coordinates specified in Appendix VII.3 to *Annex* VI.
- (b) The United States Caribbean Sea Area

The sea area located off the Atlantic and Caribbean coasts of the Commonwealth of Puerto Rico and the United States Virgin Islands, enclosed by geodesic lines connecting the coordinates specified in Appendix VII.3 to *Annex* VI.

(c) The Baltic Sea Area

The Baltic Sea proper with the Gulf of Bothnia, the Gulf of Finland and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57°44.8'N.

(d) The North Sea Area

The North Sea proper including seas therein with the boundary between:

- i) the North Sea southwards of latitude 62°N and eastwards of longitude 4°W;
- ii) the Skagerrak, the southern limit of which is determined east of the Skaw by latitude 57° 44.8'N; and
- iii) the English Channel and its approaches eastwards of longitude 5 ° W and northwards of latitude 48°30'N.
- (e) A sea area, including port areas, designated by the *IMO* in accordance with criteria and procedures set forth in Appendix III to *Annex* VI other than those specified in (a) to (d) above.

| (19) "A ship at beginning stage of construction" is a ship | (19) "A ship at beginning stage of construction" is a ship | |
|--|--|--|
| whose keel is laid or a ship at a similar stage of | whose keel is laid or a ship at a similar stage of | |
| construction. For this purpose, the term "a similar | construction. For this purpose, the term "a similar | |
| stage of construction" means the stage at which: | stage of construction" means the stage at which: | |
| (a) construction identifiable with a specific ship | (a) construction identifiable with a specific ship | |
| begins; and | begins; and | |
| (b) assembly of that ship has commenced comprising | (b) assembly of that ship has commenced comprising | |
| at least 50 tonnes or 1% of the estimated mass of | at least 50 tonnes or 1% of the estimated mass of | |
| all structural material, whichever is less. | all structural material, whichever is less. | |
| (20) "Annex VI" means the annex VI of Protocol of 1997 | (20) "Annex VI" means the annex VI of Protocol of 1997 | |
| to amend the International Convention for the | to amend the International Convention for the | |
| Prevention of Pollution from Ships, 1973, as modified | Prevention of Pollution from Ships, 1973, as modified | |
| by the Protocol of 1978 relating thereto. | by the Protocol of 1978 relating thereto. | |

Guidance for the survey and construction of steel ships Part D D15 D15.2.8-1

| Correction | Present | Note |
|---|--|--------------------|
| 1 Interpretation of "Suitable arrangements to ensure | 1 Interpretation of "Suitable arrangements to ensure | |
| working access to steering gear machinery and controls" | working access to steering gear machinery and controls" | |
| required in 15.2.8-2, Part D of the Rules is as follows: | required in 15.2.8-2, Part D of the Rules is as follows: | |
| (1) Access ways to steering gears and controls | (1) Access ways to steering gears and controls | |
| (a) Walkways for approaching steering gears and | (a) Walkways for approaching steering gears and | |
| controls from entrances of steering gear rooms | controls from entrances of steering gear rooms | |
| are to be arranged. | are to be arranged. | |
| (b) Standard widths of such walkways are to be 600 | (b) Standard widths of such walkways are to be 600 | |
| mm and they are to be provided with non-slip | mm and they are to be provided with non-slip | |
| surfaces. | surfaces. | |
| (c) Adequate handrails are to be placed at least in on | (c) Adequate handrails are to be placed at least in on | |
| one side of such walkways. Handrails, in | one side of such walkways. Handrails, in | |
| principle, are to be of a fixed type and made of | | |
| steel. In cases where installation of such fixed | steel. In cases where installation of such fixed | |
| types seems to be impracticable, stanchions and | types seems to be impracticable, stanchions and | |
| ropes (wires) of disconnection types may be used. | ropes (wires) of disconnection types may be used. | |
| (2) Handrails and work areas around steering gears | (2) Handrails and work areas around steering gears | |
| (a) Steel handrails and work areas for ensuring | (a) Steel handrails and work areas for ensuring | |
| working conditions are to be arranged around or in the vicinity of steering gears. | working conditions are to be arranged around or in the vicinity of steering gears. | |
| (b) Work areas with 600 mm standard width and non- | (b) Work areas with 600 mm standard width and non- | |
| slip surfaces are to be arranged around or in the | slip surfaces are to be arranged around or in the | |
| vicinity of steering gears. | vicinity of steering gears. | |
| (3) The wording "non-slip surface floor" means gratings | (3) The wording "non-slip surface floor" means gratings | |
| (grids), buckboardsduckboards, floors with surface | (grids), buckboards, floors with surface covering | Wording correction |
| covering material for the non-slip and non-slip | material for the non-slip and non-slip coating floors. | e |
| coating floors. Non-slip surface covering materials | Non-slip surface covering materials are to be durable | |
| are to be durable enough to be able to be used for long | enough to be able to be used for long periods of time. | |
| periods of time. | | |

Guidance for the survey and construction of steel ships Part R R10 R10.5.2-3

| Correction | Present | Note |
|---|--|------------------------|
| 3 The wording "the fuel and lubricating oil pressure | 3 The wording "the fuel and lubricating oil pressure | Wording correction |
| systems, gearing and other fire hazards" specified in 10.5.2- | systems" specified in 10.5.2-2(2), Part R of the Rules means, | the of ming contention |
| 2(2), Part R of the Rules means, for example, valves, | for example, valves, strainers, etc. of the internal combustion | |
| strainers, etc. of the internal combustion engines, fuel oil | engines, fuel oil transfer pumps, oil burning pumps, | |
| transfer pumps, oil burning pumps, lubricating oil coolers, oil | lubricating oil coolers, oil purifiers, reversing gears, reduction | |
| purifiers, reversing gears, reduction gears and hydraulic | gears and hydraulic piping. | |
| piping. | | |

Guidance for the survey and construction of steel ships Part R R20 R20.4.1

| Correction | Present | Note |
|--|--|----------------------|
| 2 The wording "an overall response time" specified in | 2 The wording "an overall response time" specified in | Wording correction |
| 20.4.1, Part R of the Rules means an operating time specified | 20.4.1, Part R of the Rules means an operating time specified | to ording correction |
| in R29.2.3-2. | in R29.2.3-2 . | |
| 32 The detector sections in vehicle and ro-ro spaces may | 3 The detector sections in vehicle and ro-ro spaces may | |
| be provided with an arrangement, (e.g. a timer) for | be provided with an arrangement, (e.g. a timer) for | |
| disconnecting detector sections during loading and unloading | disconnecting detector sections during loading and unloading | |
| of vehicles to avoid "false" alarms. The time of disconnection | of vehicles to avoid "false" alarms. The time of disconnection | |
| is to be adapted to the time of loading/unloading. The central | is to be adapted to the time of loading/unloading. The central | |
| unit is to indicate whether the detector sections are | unit is to indicate whether the detector sections are | |
| disconnected or not. However, manual call points are not to be | disconnected or not. However, manual call points are not to be | |
| capable of being disconnected by the arrangements referred to | capable of being disconnected by the arrangements referred to | |
| above. | above. | |

Guidance for the survey and construction of steel ships Part R Annex R5.3.1-1 Table 1

| Correction | | | | | | Note | | | | |
|------------|--|--------------------------------|--------------------------------|---------------------|----------------------|--------------------|---------------------|---------------------|--|--------------------|
| | | | Table | 1 Method | I IC | | | | | |
| Req | uirements | Non combustible material | Non combustible material | Low flame spread | Equivalent volume | Calorific value | Smoke production | Not readily ignited | | |
| Part | R of the Rules | 5.3.1-2 | 5.3.1-1 | 5.3.2-4 | 5.3.2- <u>3(</u> 1) | 5.3.2-2 | 6 | 4.4.4 | | Reference correcti |
| 1) | Moulding | | | | 0 | | | | | |
| 2) | Panel | 0 | | | | | | | | |
| 3) | Painted surface or Veneer or Fabric or Foils | | | 0 | 0 | 0 | ○ ⁽²⁾ | | | |
| 4) | Painted surface or | | | 0 | 0 | 0 | ○ ⁽²⁾ | | | |
| 5) | Decoration | | | | 0 | | 0 | | | |
| 6) | Painted surface or Veneer or Fabric or Foils | | | | 0 | 0 | ○ ⁽²⁾ | | | |
| 7) | Skirting board | | | | 0 | | | | | |
| 8) | Insulation | | $\bigcirc^{(1)}$ | | | | | | | |
| 9) | Surfaces and paints in concealed or inaccessible spaces | | | 0 | | | | | | |
| 10) | Draught stop | 0 | | | | | | | | |
| | Grounds and supports | 0 | | 0 | | | | | | |
| | Lining | 0 | | | | | | | | |
| 13) | Primary deck covering 1st layer | | | | | | 0 | 0 | | |
| 14) | ě – | | | ○ ⁽³⁾ | | | 0 | | | |
| 15) | | 0 | | | | | | | | |
| 16) | | | | 0 | 0 | 0 | 0 | | | |
| 17) | Window box surface in concealed or inaccessible spaces | | | 0 | | | | | | |
| 10) | Ceiling panel | 0 | | | l | | 1 | | | |

| (1) | Vapour barriers used on pipes for cold services (see R5.3.1-2) may be combustible materials providing that their surface | |
|-----|--|--|
| | has low flame spread characteristics. (5.3.1-1, Part R of the Rules) | |
| (2) | Applicable to paints, varnishes and other finishes (6.2.1, Part R of the Rules) | |
| (3) | Only in corridors and stairway enclosures | |

Guidance for the survey and construction of steel ships Part R Annex R5.3.1-1 Table 2

| | Correction | 1 | | • | | | Present | | Note |
|----|---|--------------------------------|--------------------------------|---------------------|----------------------|--------------------|------------------|---------------------|----------------------|
| | | | Table 2 M | ethod IIC | and IIIC | | | | |
| R | equirements | Non combustible material | Non combustible material | Low flame spread | Equivalent volume | Calorific value | Smoke production | Not readily ignited | |
| Ра | art R of the Rules | 5.3.1-2 | 5.3.1-1 | 5.3.2-4 | 5.3.2- <u>3(</u> 1) | 5.3.2-2 | 6 | 4.4.4 | Reference correction |
| | 1) Moulding | | | | ○ ⁽³⁾ | | | | |
| | 2) Panel | O ⁽⁴⁾ | | | | | | | |
| 3 | Painted surface or3) Veneer or Fabric orFoils | | | 0 | 0 | 0 | ○ ⁽⁵⁾ | | |
| 2 | 4) Painted surface or Veneer or Fabric or Foils | | | 0 | ○(3) | O ⁽²⁾ | ○ ⁽⁵⁾ | | |
| 4 | 5) Decoration | | | | ○ ⁽³⁾ | | 0 | | |
| e | 6) Painted surface or Veneer or Fabric or Foils | | | | ○(3) | ○ ⁽²⁾ | ○ ⁽⁵⁾ | | |
| | 7) Skirting board | | | | ○ ⁽³⁾ | | | | |
| 5 | 8) Insulation | | $O^{(1)}$ | | | | | | |
| ç | Surfaces and paints in concealed or inaccessible spaces | | | 0 | | | | | |
| 10 | 0) Draught stop | O ⁽⁴⁾ | | | | | | | |
| | 1) Grounds and supports | O ⁽⁴⁾ | | 0 | | | | | |
| 12 | 2) Lining | O ⁽⁴⁾ | | | | | | | |
| 13 | 3) Primary deck covering 1st layer | | | | | | 0 | 0 | |
| 14 | 4) Floor finishing | | | $\bigcirc^{(6)}$ | | | 0 | | |
| 1: | 5) Window box | O ⁽⁴⁾ | | | | | | | |
| 10 | 6) Window box surface | | | $\bigcirc^{(3)}$ | ○ ⁽³⁾ | $\bigcirc^{(2)}$ | 0 | | |

Editorial Correction for Technical Rules and Guidance

| 17) in con | Window box surface in concealed or inaccessible spaces | | | 0 | | | | |
|---|--|---|--|---|---|-------------------------------|---|---|
| 18) Ceilin | Ceiling panel | O ⁽⁴⁾ | | | | | | |
| (2) Whe 2, P: (3) To b (5) App | : Vapour barriers used providing that their su Where the material is 2, Part R of the Rule To be applied to thos (5.3.2-3(1), Part R of Only in corridors and R of the Rules) Applicable to paints, Only in corridors and | rface has low : fitted on non-c s) e accommodat the Rules) stairway enclose warnishes and c | flame spread cl ombustible bu ion and servic sures serving a other finishes ((| naracteristics. Ikheads, ceilin e spaces boun ccommodation | (5.3.1-1, Part g on lining in ded by non-c and service s | R of the Rule accommodatio | s) n and service : kheads, ceilir | spaces. (5.3.2 - ng and linings. |

Guidance for Safety Equipment Chapter 3 3.1.1-10

| | Correction | Present | Note |
|--------------|--|--|------|
| 10 | Additional liferafts as required by Regulation 31.1.4, | 10 Additional liferafts as required by Regulation 31.1.4 , | |
| - | er III of the Annex to the Convention are to be | Chapter III of the Annex to the Convention are to be | |
| U U | ed as "remotely located survival craft" with regard to | regarded as "remotely located survival craft" with regard to | |
| - | tion 7.2.1.4, Chapter III of the Annex to the | Regulation 7.2.1.4, Chapter III of the Annex to the | |
| | ntion. The followings are to be provided in the areas | Convention . The followings are to be provided in the areas | |
| where | these remotely located survival crafts are stowed. | where these remotely located survival crafts are stowed. | |
| (1) | At least 2 lifejackets and 2 immersion suits. | (1) At least 2 lifejackets and 2 immersion suits. | |
| (2) | Adequate means of illumination complying with | (2) Adequate means of illumination complying with | |
| | Regulation 16.7, Chapter III of the Annex to the | Regulation 16.7, Chapter III of the Annex to the | |
| | Convention, either fixed or portable, which are to be | Convention , either fixed or portable, which are to be | |
| | capable of illuminating the liferaft stowage position | capable of illuminating the liferaft stowage position | |
| | as well as the area of water into which the liferaft | as well as the area of water into which the liferaft | |
| | should be launched. Portable lights, when used, are to | should be launched. Portable lights, when used, are to | |
| | have brackets to permit their positioning on both sides | have brackets to permit their positioning on both sides | |
| (2) | of the vessel. | of the vessel. | |
| (3) | The portable lights required by (2) may be self- | (3) The portable lights required by (2) may be self- | |
| | contained battery-powered lamps. In such cases, | contained battery-powered lamps. In such cases, | |
| | the battery-powered lamps are to satisfy the following (a) to (b) : | the battery-powered lamps are to satisfy the following | |
| | (a) to (f):(a) The lamps are to be capable of being recharged | (a) to (f):(a) The lamps are to be capable of being recharged | |
| | from the ship's main and emergency sources of | from the ship's main and emergency sources of | |
| | electrical power. | electrical power. | |
| | (b) The lamps are to be stowed under charge in | (b) The lamps are to be stowed under charge in | |
| | storage spaces close to the liferaft and the | storage spaces close to the liferaft and the | |
| | embarkation ladder they are intended to serve | embarkation ladder they are intended to serve | |
| | except when being used. | except when being used. | |
| | (c) The lamps are to give a minimum duration of 3 | (c) The lamps are to give a minimum duration of 3 | |
| | hours of undiminished performance when | hours of undiminished performance when | |
| | disconnected from their power sources. | disconnected from their power sources. | |
| | (d) The lamps are to comply with the requirements in | (d) The lamps are to comply with the requirements in | |
| | LSA Code section 1.2.3. | LSA Code section 1.2.3. | |
| | (e) The degree of protection of the lamps is to be | (e) The degree of protection of the lamps is to be | |

| | IP55. | | IP55. | |
|-----|--|-----|--|----------------------|
| | (f) The batteries for such lamps are to comply with | | (f) The batteries for such lamps are to comply with | |
| | Table B2.2.1.6, Part B of the Rules for the | | 2.1.6, Part B of the Rules for the Survey and | Reference correction |
| | Survey and Construction of Steel Ships as well | | Construction of Steel Ships as well as 1.1.8 and | |
| | as 1.1.8 and 2.11.5, Part H of the Rules for the | | 2.11.5, Part H of the Rules for the Survey and | |
| | Survey and Construction of Steel Ships | | Construction of Steel Ships irrespective of | |
| | irrespective of whether they are marked with | | whether they are marked with their expiration | |
| | their expiration dates by their manufacturers. | | dates by their manufacturers. | |
| (4) | An embarkation ladder or other means of embarkation | (4) | An embarkation ladder or other means of embarkation | |
| | enabling descent to the water in a controlled manner | | enabling descent to the water in a controlled manner | |
| | as per Regulation 11.7, Chapter III of the Annex to | | as per Regulation 11.7, Chapter III of the Annex to | |
| | the Convention. | | the Convention. | |

Guidance for the Survey and Construction of Passenger Ships Part 3 Chapter 3 3.2.1-1

| | Correction | Present | Note |
|---------|--|--|----------------------|
| | Compressive buckling strength at the midship part of | 1 Compressive buckling strength at the midship part of | |
| | aving long multi-deckhouses on strength deck is to be | ships having long multi-deckhouses on strength deck is to be | |
| in acco | rdance with the follows: | in accordance with the follows: | |
| (1) | The requirements of 3.32.1-1, Part 3 of the Rules are | | Reference correction |
| | to be complied with. | to be complied with. | |
| (2) | The application of the compressive buckling strength | (2) The application of the compressive buckling strength | |
| | of the deck which requires the examination specified | of the deck which requires the examination specified | |
| | in 3.1.1 of the Rules and all shell platings, decks, | in 3.1.1 of the Rules and all shell platings, decks, | |
| | superstructure side platings and plate members of | superstructure side platings and plate members of | |
| | longitudinal bulkhead which is located below the | longitudinal bulkhead which is located below the | |
| | deck and contribute to the longitudinal strength, | deck and contribute to the longitudinal strength, | |
| | compressive buckling, torsional buckling of its | compressive buckling, torsional buckling of its | |
| | longitudinal stiffeners and compressive buckling | longitudinal stiffeners and compressive buckling | |
| | strength of web are to be in accordance with the | strength of web are to be in accordance with the | |
| | requirements in Annex 5.3, Part 1, Part C of the | requirements in Annex 5.3, Part 1, Part C of the | |
| | Rules for the Survey and Construction of Steel | Rules for the Survey and Construction of Steel | |
| | Ships. In this case, the determination of moment of | Ships. In this case, the determination of moment of | |
| | inertia for the hull cross section is to be in | inertia for the hull cross section is to be in | |
| | accordance with the requirements in An3.1.1(2), | accordance with the requirements in An3.1.1(2), | |
| | Annex 5.3, Part 1, Part C of the Rules, except for | Annex 5.3, Part 1, Part C of the Rules, except for | |
| | proviso. And, the minimum value of the compressive | proviso. And, the minimum value of the compressive | |
| | stress of members specified in 5.3.2, Part 1, Part C | stress of members specified in 5.3.2, Part 1, Part C | |
| | of the Rules for the Survey and Construction of | of the Rules for the Survey and Construction of | |
| | Steel Ships needs not to be taken $30/K$ (N/mm ²), | Steel Ships needs not to be taken $30/K$ (N/mm ²), | |
| | hereinafter K is the material factor and is in | hereinafter K is the material factor and is in | |
| | accordance with the requirements in 5.2.1-1(1), | accordance with the requirements in 5.2.1-1(1), | |
| | Part 3 of the Rules. Where, however, longitudinal | Part 3 of the Rules. Where, however, longitudinal | |
| | plate member that compressive buckling strength is | plate member that compressive buckling strength is | |
| | not enough and which is considered to give no | not enough and which is considered to give no | |
| | contribution to the longitudinal strength is located | contribution to the longitudinal strength is located | |
| | above the strength deck, the sagging moment which | above the strength deck, the sagging moment which | |
| | arises under navigation is to be in accordance with the | arises under navigation is to be in accordance with the | |

| | following requirements in (a) and (b). (a) The sub-paragraph (2) is to be applied only considering frame members, provided the longitudinal plate member that compressive buckling strength is not enough and which is considered to give no contribution to the longitudinal strength is removed from inclusion member of hull cross section modulus and moment of inertia. | following requirements in (a) and (b). (a) The sub-paragraph (2) is to be applied considering frame members, provide longitudinal plate member that compute buckling strength is not enough and we considered to give no contribution to longitudinal strength is removed from incomember of hull cross section moduly moment of inertia. | d the ressive hich is to the clusion |
|-----|---|--|--|
| | (b) Frame members may be in accordance with the requirements in 3.1.1-1(2)(b) of the Rules. | (b) Frame members may be in accordance w requirements in 3.1.1-1(2)(b) of the Rules | |
| (3) | Where an approval by the Society is obtained, | (3) Where an approval by the Society is ob | |
| | buckling strength may be examined by other method | buckling strength may be examined by other r | |
| | which is specially considered, notwithstanding the | which is specially considered, notwithstandi | ng the |
| L | provisions of (1) and (2). | provisions of (1) and (2). | |

Guidance for the Survey and Construction of Inland Waterway Ships Part 2 Chapter 1 1.1.2-1

| Correction | Present | Note |
|--|--|----------------------|
| 1 Modifications and changes that are subject to | | |
| Occasional Surveys referred to in 1.1.2-2(3), Part 2 of the | | |
| Rules are as specified in (1) through (5) below: | Rules are as specified in (1) through (5) below: | |
| (1) Change in the purpose of combined deep water | | |
| tank/oil tank/cargo hold | tank/oil tank/cargo hold | |
| When such dual-purpose holds are intended to be used | | |
| for cargoes exclusively, the Owner is to submit an | • | |
| application for the change of purpose to the Society | | |
| A part of the oil/ballast suction line is to be removed | 1 | |
| and blank flanges are to be fitted at the end of the line. Hydrostatic tests for the holds need not be | 6 | |
| carried out after the change. | carried out after the change. | |
| (2) Change in the loading conditions | (2) Change in the loading conditions | |
| When ships are loaded in an extremely different way | | |
| from the conditions specified in the approved plans. | 1 * | |
| the longitudinal strength, shearing force and local | | |
| strength are to be verified and approved by the | | |
| Society. | Society. | |
| (3) Amendment of the loading manuals, the stability | | |
| information and other similar documents | information and other similar documents | |
| When a modification is intended that alters the | When a modification is intended that alters the | |
| principal data of the ship, B2.5.1-7 to -9, Part B of | | Reference correction |
| the Guidance for Survey and Construction of Steel | | |
| Ships2.3.1, Part B of the Rules are to be followed to | 1 | |
| determine the need for re-inclining tests, and the need | | |
| for amending stability information. | information. | |
| (4) Other changes and modifications | | |
| As changes and modifications may require approval | | |
| by the Society, the Owner is to notify the Society in | • • • • • • | |
| such a case. In general, modifications to the main hull structure require approval by the Society. | | |
| Reference is made to the provisions of 2.4.1, Part 2 | e i | |
| | nun suuciure require approvar by the society. | |

Reference is made to the provisions of 2.4.1, Part 2 of the Rules. Ships Using Low-flashpoint Fuels (5) of the Rules. (a) For ships that fall under the following i) or ii), a Ships Using Low-flashpoint Fuels (5) survey is to be carried out to verify compliance (a) For ships that fall under the following i) or ii), a with the requirements of 1.1.8, Part 1 of the survey is to be carried out to verify compliance Rules before using low-flashpoint fuels or with the requirements of 1.1.8, Part 1 of the undertaking to use different low-flashpoint fuels Rules before using low-flashpoint fuels or than specified: undertaking to use different low-flashpoint fuels i) Ships which convert to using low-flashpoint than specified: fuels on or after 1 January 2017; or i) Ships which convert to using low-flashpoint ii) Ships which, on or after 1 January 2017, fuels on or after 1 January 2017; or undertake to use low-flashpoint fuels ii) Ships which, on or after 1 January 2017, different from those which they were undertake to use low-flashpoint fuels originally approved to use before 1 January different from those which they were originally approved to use before 1 January 2017. 2017. (b) For ships that fall under the following i) or ii), a survey is to be carried out to verify compliance (b) For ships that fall under the following i) or ii), a with the requirements of GF11.3.1-1, GF11.3.1survey is to be carried out to verify compliance 2, GF12.5.2-2 and GF15.10.1, Part GF of the with the requirements of GF11.3.1-1, GF11.3.1-Guidance for the Survey and Construction of 2, GF12.5.2-2 and GF15.10.1, Part GF of the Steel Ships before using low-flashpoint fuels or Guidance for the Survey and Construction of undertaking to use different low-flashpoint fuels Steel Ships before using low-flashpoint fuels or than specified: undertaking to use different low-flashpoint fuels i) Ships which convert to using low-flashpoint than specified: fuels on or after 1 July 2019; or Ships which convert to using low-flashpoint i) ii) Ships which, on or after 1 July 2019, fuels on or after 1 July 2019; or undertake to use low-flashpoint fuels Ships which, on or after 1 July 2019, ii) different from those which they were undertake to use low-flashpoint fuels originally approved to use before 1 July different from those which they were originally approved to use before 1 July 2019. 2019. (c) For ships that fall under the following i) or ii), a survey is to be carried out to verify compliance (c) For ships that fall under the following i) or ii), a survey is to be carried out to verify compliance with the requirements of 11.8.1, Part GF of the **Rules for the Survey and Construction of Steel** with the requirements of 11.8.1, Part GF of the

| Ships and GF11.3.1-2, Part GF of the | Rules for the Survey and Construction of Steel |
|---|---|
| Guidance for the Survey and Construction of | Ships and GF11.3.1-2, Part GF of the |
| Steel Ships before using low-flashpoint fuels or | Guidance for the Survey and Construction of |
| undertaking to use different low-flashpoint fuels | Steel Ships before using low-flashpoint fuels or |
| than specified: | undertaking to use different low-flashpoint fuels |
| i) Ships which convert to using low-flashpoint | than specified: |
| fuels on or after 1 January 2024; or | i) Ships which convert to using low-flashpoint |
| ii) Ships which, on or after 1 January 2024, | fuels on or after 1 January 2024; or |
| undertake to use low-flashpoint fuels | ii) Ships which, on or after 1 January 2024, |
| different from those which they were | undertake to use low-flashpoint fuels |
| originally approved to use before 1 January | different from those which they were |
| 2024. | originally approved to use before 1 January |
| | 2024. |

End of Document.