These sheets contain amendments within the following Sections of January 2020 issue of the Structural Rules for Container Ships.

These amendments are effective from July 1st, 2020.

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1. GENERAL CONDITIONS

1.1 The Client shall be a Party and either the owner or builder of the Unit or the Client which shall not be held liable for it.

1.2 The Society shall be the Party which issues or assigns Certificates(s) for the Unit. The Client shall notify the Society of any relevant safety issue and shall take all necessary safety-related action.

1.3 The Client and the Society shall act consistently with the Bureau Veritas’ Code of Ethics.

1.4 The Society bears no liability for consequential loss. For the purpose of this clause consequential loss shall include, without limitation:

1.4.1.1 the cost of replacement of the Unit or any part thereof;

1.4.1.2 loss of income or commercial value;

1.4.1.3 direct loss;

1.4.1.4 any other loss or damage to property or to life or safety;

1.4.1.5 indirect or consequential loss;

1.4.1.6 loss and/or deferral of production, loss of product, loss of use, loss of bargain, loss of revenue, loss of profit or anticipated profit, loss of business and business interruption, in each case whether direct or indirect.

1.5 The Parties shall make every effort to settle any dispute amicably and in good faith by way of negotiation within thirty (30) days from the date of receipt by either one of the Parties of a written notice of such a dispute.

1.6 Invalidity of one or more provisions does not affect the remaining provisions.

2. SCOPE AND PERFORMANCE

2.1 The obligations of the Society resulting from the Rules are conditional and neither the Society nor any of its officers, employees, servants, agents or subcontractors shall be as an employee, servant or agent of any other party hereto the performance of the Services.

2.2 The obligations of the Society shall be that the Services are exclusively conducted by way of random inspections and do not in any circumstances, involve monitoring or exhaustive verification.

2.3 The Society acts as a services provider. This cannot be construed as an obligation bearing on the Society to obtain, verify or maintain any technical data, plans, drawings, calculations or reports. The Society is not the owner of the Unit and cannot be held liable for the information made available to it.

2.4 The Client shall give to the Society all access and information necessary for the efficient performance of the Services.

2.5 The Client bears all the cost of the Services and the cost of having the Unit surveyed and reported on by the Society.

2.6 The Client is responsible for the design and construction of the Unit and shall comply with all applicable laws and regulations.

2.7 The Client shall give to the Society all access and information necessary for the efficient operation of the Services.

2.8 The Client shall act consistently with the Bureau Veritas’ Code of Ethics.

3.1 The Client shall give to the Society all access and information necessary for the efficient performance of the Services. The Client shall also be responsible for the conditions of presentation of the Unit as decided by the Society.

3.2 The Client shall be responsible for the safety, integrity and seaworthiness of the Unit.

3.3 The Client shall notify the Society in writing within three (3) months of the completion of Services' performance or (if later) the date when the events which are relied on were first discovered by the Client. Any claim not so presented as defined above shall be deemed waived and absolutely time barred.

4. INDEEDNE Clause

4.1.1 The Society reserves the right to terminate the Services and (the relevant contract) for convenience after giving the other Party thirty (30) days’ written notice, and without prejudice to clause 6 above.

4.2.1.1 The Client shall immediately give written notice to the Society of any change in the technical requirements of the Unit.

4.2.1.2 The Client shall give to the Society all access and information necessary for the efficient performance of the Services.

4.3.1.1 In case of doubt as to the interpretation of the Conditions, the English text shall prevail.

4.3.1.2 The contract resulting from these Conditions cannot be assigned or transferred by any means by a Party to any third party without the prior written consent of the other Party. However, such prior consent shall not be required when the Society provides the confidential information to a third party for the performance of the Services (including for damages arising out of or in connection with opinions delivered according to clause 4.4 above) except for those claims caused solely and completely by the gross negligence of the Society, its officers, employees, servants, agents or subcontractors.

4.4.1.1.2 Except in case of wilful misconduct of the Society, death or bodily injury caused by the Society's negligence and any other liability that could not be, by law, limited, the Society's maximum liability towards the Client is limited to one hundred and fifty per-cents (150%) of the price paid to the Society for the Services if damages arise out of or in connection with opinions delivered according to clause 4.4 above for the Services performance or if (i) later) the date when the events which are relied on were first discovered by the Client.

5. ACCESS AND SAFETY

5.1.1 The Client shall give to the Society access to the Unit and all other premises on which the Unit is located and shall give to the Society all access and information necessary for the efficient performance of the Services.

5.1.2 The Client shall give to the Society access and information necessary for the efficient performance of the Services.

5.2.1 The Client shall notify the Society of any relevant safety issue and shall take all necessary safety-related action.

5.3.1.1 Indirect or consequential loss;

5.3.1.2 any other loss or damage to property or to life or safety;

5.3.1.3 loss of income or commercial value;

5.3.1.4 direct loss;

5.3.1.5 loss and/or deferral of production, loss of product, loss of use, loss of bargain, loss of revenue, loss of profit or anticipated profit, loss of business and business interruption, in each case whether direct or indirect.

5.4.1.1 In case of doubt as to the interpretation of the Conditions, the English text shall prevail.
Amendments to NR 625

Ch 4, Sec 4

Replace Table 1 and Table 2 by:

| Table 1: Vertical wave bending moment $M_{wv-LC}$ for dynamic load cases |
|-------------------|-------------------|
| $C_{wv} \geq 0$ | $M_{wv-LC} = f_p C_{wv} M_{wv-h}$ |
| $C_{wv} < 0$  | $M_{wv-LC} = f_p C_{wv} |M_{wv-s}|$ |

**Note 1:**

- $C_{wv}$: Load combination factor for vertical wave bending moment, to be taken as specified in Sec 2
- $M_{wv-h}, M_{wv-s}$: Hogging and sagging vertical wave bending moments taking account of the considered design load scenario, as defined in [3.1.1].

For strength assessment with OHM and OHS load cases, $f_{d-h}$ and $f_{d-s}$ are to be taken equal to 1.0.

| Table 2: Vertical wave shear force $Q_{wv-LC}$ for dynamic load cases |
|-------------------|-------------------|
| $C_{Qv} \geq 0$ | $Q_{wv-LC} = f_p C_{Qv} Q_{wv-pos}$ |
| $C_{Qv} < 0$  | $Q_{wv-LC} = f_p C_{Qv} |Q_{wv-neg}|$ |

**Note 1:**

- $C_{Qv}$: Load combination factor for vertical wave shear force, to be taken as specified in Sec 2
- $Q_{wv-pos}, Q_{wv-neg}$: Positive and negative vertical wave shear forces taking account of the considered design shear load scenario, as defined in [3.2.1].

For strength assessment with OHM and OHS load cases, $f_{d-h}$ and $f_{d-s}$ are to be taken equal to 1.0.

Ch 4, Sec 6, [1.2]

Replace the existing requirement [1.2.3] by:

1.2.3 Sequential ballast water exchange

The static pressure $P_s$ due to liquid in ballast tanks associated with ballast water exchange operations by sequential method is to be taken as defined for normal operations at sea in [1.2.1].

Insert a new requirement [1.2.4] as follows:

1.2.4 Ballast water exchange by dilution

The static pressure $P_s$ due to liquid in ballast tanks associated with ballasting operations by means of dilution is to be taken as defined for sequential ballast exchange in [1.2.3].

The ship designer has to inform the Society if the ballast water exchange system implies additional pressure to be considered such as $P_{drop}$, in addition to the pressure defined in [1.2.3].

Ch 4, Sec 6, [3.2]

Replace the requirement [3.2.1] by:

3.2.1 When a unit cargo is carried on a deck, a concentrated load is to be applied. The static and dynamic concentrated forces due to this unit cargo are to be considered, when a direct analysis is applied for stiffeners or for primary supporting members, such as in Ch 6, Sec 5, [1.3] or in Ch 6, Sec 6, [2.2], respectively.

The concentrated force $F_{w+}$, in kN, due to this unit cargo for the static design load scenarios is to be taken, in the z direction, as:

$$F_{w+} = -m_u g$$

The concentrated force $F_{w+}$, in kN, due to this unit cargo for the static + dynamic design load scenarios is to be derived from the dynamic load cases, with components to be taken as defined in Tab 2.
Ch 4, Sec 6, Table 2

Replace Table 2 and Table 3 by:

<table>
<thead>
<tr>
<th>Direction</th>
<th>$F_{u,d}$, in kN, on exposed deck</th>
<th>$F_{u,d}$, in kN, on non-exposed deck</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>$-m_i \cdot a_x$</td>
<td>$-m_i \cdot a_{x,env}$</td>
</tr>
<tr>
<td>y</td>
<td>$-m_i \cdot a_y$</td>
<td>$-m_i \cdot a_{y,env}$</td>
</tr>
<tr>
<td>z</td>
<td>$-m_i \cdot (a_2 + g)$</td>
<td>$-m_i \cdot (a_{z,env} + g)$</td>
</tr>
</tbody>
</table>

**Note 1:**
- $m_i$: Mass of the unit cargo carried, in t
- $a_x$, $a_y$, $a_2$: Accelerations, in m/s², at the centre of gravity of the unit cargo carried for the considered load case, to be obtained according to Sec 3, [3.2]
- $a_{x,env}$, $a_{y,env}$, $a_{z,env}$: Envelope of accelerations, in m/s², at the centre of gravity of the unit cargo carried, to be obtained according to Sec 3, [3.3].

Table 3: Container at tier “i”

| | Static force | $F_{ki} = -M_i \cdot g$ in z direction |
| | Dynamic forces | $F_{W_x,i} = -M_i \cdot a_{x,env}$ in x direction |
| | | $F_{W_y,i} = -M_i \cdot a_{y,env}$ in y direction |
| | | $F_{W_z,i} = -M_i \cdot a_{z,env}$ in z direction |

**Note 1:**
- $M_i$: Mass, in t, of the container at tier “i”
- $a_{x,env}$, $a_{y,env}$, $a_{z,env}$: Envelope of accelerations, in m/s², determined at the container centre of gravity, to be obtained according to Sec 3, [3.3].

Ch 6, Sec 4, [1.1]

Replace the requirement [1.1.1] by:

1.1.1 Plating

The net thickness $t$, in mm, is not to be taken less than the greatest value for all the applicable design load sets, as defined in Sec 2, [2.1.3], given by:

$$t = 0,0158 \cdot \alpha \cdot \beta \cdot \frac{\gamma}{\chi} \cdot \frac{C_a \cdot R_{eH}}{C_t}$$

where:
- $C_a$: Permissible bending stress coefficient for plate, taken equal to:
- $C_t$: Permissible shear stress coefficient for the design load set being considered, as defined in Tab 2.

Ch 6, Sec 5, Symbols

Add the definition of “$K_{corr}$ as” follows:

- $K_{corr}$: Coefficient to take into account the corrosion:
  - for tank testing to be taken equal to 1,2
  - otherwise to be taken equal to 1,0

Ch 6, Sec 5, [1.1]

Replace the requirements [1.1.1] and [1.1.2] by:

1.1.1 Web plating

The minimum net web thickness $t_w$, in mm, is not to be taken less than the greatest value calculated for all applicable design load sets as defined in Sec 2, [2], given by:

$$t_w = \frac{f_{shr} \cdot \gamma \cdot \chi \cdot \frac{C_a}{C_t} \cdot R_{eH}}{\alpha \cdot \beta \cdot \frac{\gamma}{\chi} \cdot \frac{C_a \cdot R_{eH}}{C_t}}$$

with $\chi$, $C_t$ not to be taken greater than 1,0

where:
- $f_{shr}$: Shear force distribution factor taken as:
  - for continuous stiffeners with fixed ends, $f_{shr}$ is to be taken equal to:
    - $f_{shr} = 0,5$ for horizontal stiffeners and upper end of vertical stiffeners
    - $f_{shr} = 0,7$ for lower end of vertical stiffeners
  - for stiffeners with reduced end fixity, variable load or being part of grillage, the requirement in [1.3] applies.

- $C_a$: Permissible shear stress coefficient for the design load set being considered, as defined in Tab 2.
1.1.2 Section modulus

The minimum net section modulus, Z in cm³, is not to be taken less than the greatest value calculated for all applicable design load sets as defined in Sec 2, [2.1.3], given by:

\[ Z = \frac{|P|}{f_{bdg}} \frac{f_{bdg}^2}{\chi \cdot C_s \cdot R_{stt}} \]

with \( \chi \cdot C_s \) not to be taken greater than \( K_{corr} \)

where:

- \( f_{bdg} \) : Bending moment factor taken as:
  - for continuous stiffeners with fixed ends, \( f_{bdg} = 12 \) for horizontal stiffeners and upper end of vertical stiffeners
  - \( f_{bdg} = 10 \) for lower end of vertical stiffeners
- for stiffeners with reduced end fixity, variable load or being part of grillage, the requirement in [1.3] applies

\( C_s \) : Permissible bending stress coefficient as defined in Tab 1 for the design load set being considered

\( \sigma_L \) : Hull girder normal stress, in N/mm², as defined in Sec 2, [1.1], calculated at the load calculation point as defined in Ch 3, Sec 6, [2.2]

\( \beta_s, \alpha_s, C_{s-max} \) : Coefficients as defined in Tab 2.

Ch 6, Sec 5

Replace Table 1 by:

Table 1 : Definition of \( C_s \)

<table>
<thead>
<tr>
<th>Sign of hull girder bending stress ( \sigma_i )</th>
<th>Lateral pressure acting on</th>
<th>Coefficient ( C_s )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tension (positive)</td>
<td>Stiffener side</td>
<td>( C_s = K_{corr} \beta_s - \alpha_s \frac{\sigma_i}{R_{stt}} ) but not to be taken greater than ( K_{corr}C_{s-max} )</td>
</tr>
<tr>
<td>Compression (negative)</td>
<td>Plate side</td>
<td>( C_s = K_{corr}C_{s-max} )</td>
</tr>
<tr>
<td>Tension (positive)</td>
<td>Plate side</td>
<td></td>
</tr>
<tr>
<td>Compression (negative)</td>
<td>Stiffener side</td>
<td></td>
</tr>
</tbody>
</table>

Ch 6, Sec 5, [1.3]

Replace the requirement [1.3.2] by:

1.3.2 Stress criteria

The stress is to comply with the following criterion:

\( \sigma_{eq} \leq \chi \cdot K_{corr}C_{comb} \cdot R_{stt} \)

where:

- \( \sigma_{eq} \) : Equivalent Von Mises stress, in N/mm²:

\( C_{comb} \) : Permissible combined stress coefficient for the design load set being considered, as defined in Tab 2.

Ch 7, Sec 3, Table 3

Replace the row “Connection of primary members” by:

<table>
<thead>
<tr>
<th>Type of details</th>
<th>Screening factors ( \lambda_{sc} )</th>
<th>Permissible screening factors ( \lambda_{perm} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection of primary members</td>
<td>2,00 ( \lambda_y )</td>
<td>AC-2 (2) 1,50  AC-1 (2) 1,20</td>
</tr>
</tbody>
</table>
Ch 8, Sec 1, [3]

Replace the Sub Article [3.1] by:

3.1 Application

3.1.1 General
The requirements in this Article are to be taken into account for application of NI615, Sec 5.

3.1.2 Partial safety factor
The partial safety factor \( S \), defined in NI615, Sec 5, is to be replaced by:

\[
\frac{S}{K_{corr}}
\]

where:

- \( K_{corr} \): Coefficient to take into account the corrosion:
  - for tank testing to be taken equal to 1,1
  - otherwise to be taken equal to 1,0.

Ch 14, Sec 1, [2.2.3]

Add the following item in the bulleted list in item a):

- 40’ containers on top may be full or empty.

Ch 14, Sec 1, [4.3]

Replace the requirements [4.3.2], [4.3.3] and [4.3.4] by:

4.3.2 Still water forces
For the container at tier “i”, still water forces are to be taken, in kN, equal to:

\[
F_{S,i} = -M_i \cdot g
\]

where:

- \( M_i \): Mass, in t, of the container considered at the tier “i” (see also Ch 4, Sec 6, [4.2.2])
- \( g \): Gravity acceleration, in m/s\(^2\), taken equal to:
  \( g = 9,81 \text{ m/s}^2 \).

4.3.3 Inertial forces in upright condition
For the container at tier “i”, inertial forces in upright condition are to be taken, in kN, equal to:

\[
F_{W,X,i} = -\beta M_i a_x \text{ in x direction}
\]

\[
F_{W,Z,i} = -M_i a_z \text{ in z direction}
\]

where:

- \( M_i \): Mass, in t, of the container considered at the tier “i” (see also Ch 4, Sec 6, [4.2.2])
- \( \beta \): Coefficient equal to:
  - \( \beta = 1,2 \) for containers of the forward block, when the centre of gravity of this block is located forward of 0,75 L from the aft end and is not protected by breakwater structures deemed effective by the Society
  - \( \beta = 1,0 \) in the other cases.
- \( a_x, a_z \): Accelerations, in m/s\(^2\), for the upright ship condition, determined according to [4.3.5].

4.3.4 Inertial forces in inclined condition
For the containers at tier “i”, the inertial forces in inclined condition are to be taken, in kN, equal to:

\[
F_{W,Y,i} = -M_i a_y \text{ in y direction}
\]

\[
F_{W,Z,i} = -M_i a_z \text{ in z direction}
\]

where:

- \( M_i \): Mass, in t, of the container considered at the tier “i” (see also Ch 4, Sec 6, [4.2.2])
- \( a_y, a_z \): Accelerations, in m/s\(^2\), for the inclined ship condition, determined according to [4.3.5].

Ch 14, Sec 1, [4.3.5]

Replace the definition of “LC1” by:

LC1 : Upright condition, maximizing positive or negative longitudinal acceleration, as defined in Tab 5.
Ch 14, Sec 1, [5.1]

Replace the requirement [5.1.4] by:

5.1.4 The wind loads are applied totally or partially in the same direction as the transverse or longitudinal inertial forces. The wind loads are not considered when acting in the opposite direction of the inertial forces.

Ch 14, Sec 1

Replace the Table 13 by:

<table>
<thead>
<tr>
<th>Number of 20’ containers</th>
<th>F1</th>
<th>F2</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 or less</td>
<td>590</td>
<td>536</td>
</tr>
<tr>
<td>7</td>
<td>548</td>
<td>500</td>
</tr>
<tr>
<td>8</td>
<td>506</td>
<td>464</td>
</tr>
<tr>
<td>9</td>
<td>464</td>
<td>428</td>
</tr>
<tr>
<td>10</td>
<td>422</td>
<td>392</td>
</tr>
<tr>
<td>11</td>
<td>380</td>
<td>356</td>
</tr>
<tr>
<td>12</td>
<td>–</td>
<td>320</td>
</tr>
</tbody>
</table>

Ch 14, Sec 1, [6.1]

Replace the requirement [6.1.2] by:

6.1.2 Mixed stowage within cell guides

When it is intended to carry 20 feet containers within 40 feet cells, in hold or on deck, the total weight of the 20’ container stack (excluding the 40’ container at the top of the stack) is to be not greater than $W_{\text{MAX}}$ in t, obtained, for the relevant case, from the following formula:

- a) In case of 20’ containers topped at least by one 40’ container on single cones:
  
  $$W_{\text{MAX}} = \frac{F_1}{a_Y} \text{ not to be greater than } 240t$$

- b) In case of 20’ containers connected with single cones:
  
  $$W_{\text{MAX}} = \frac{F_2}{a_Y} \text{ not to be greater than } 210t$$

where:

- $F_1$, $F_2$: Coefficient depending on the number of tiers as defined in Tab 13
- $a_Y$: Transverse acceleration, in m/s², determined according to [4.3.5].

For ships with the service notation container ship, $a_Y$ is to be taken as the maximum absolute value of the transverse acceleration from load cases LC2 and LC3 defined in Tab 6.

For ships assigned with the additional service feature equipped for carriage of containers, $a_Y$ is to be taken as defined in Tab 4.

Ch 14, Sec 1, [6.2]

Replace requirement [6.2.1] by:

6.2.1 For ISO 20, 30, 40 and 45 feet containers, the lashing arrangement is to be such that maximum loads on each container frame (end and intermediate), in kN, are less than the values indicated in:

- Fig 11 for transverse and longitudinal racking
- Fig 12 and Fig X for transverse and vertical compression
- Fig 13 for transverse and vertical tension.
Ch 14, Sec 1, [6.2]

Add the following new requirement [6.2.4]:

**6.2.4 Oversized containers topped on 40’ containers**

For oversized containers topped on 40’ containers, the maximum vertical compression load on each container frame, in kN, is to be less than the values indicated in:

- Fig Y for 45’ ISO containers
- Fig Z for 48’, 49’ and 53’ containers, where $F_{\text{COMP PERM}}$ is defined in [6.2.3] a).

Ch 14, Sec 1

Replace the titles of existing Figure 11 to Figure 13 by:

- **Figure 11**: Permissible transverse and longitudinal racking loads on end frames of 20’, 30’, 40’ and 45’ ISO containers
- **Figure 12**: Permissible transverse and vertical compressions on end frames of 20’, 30’ and 40’ ISO containers
- **Figure 13**: Permissible transverse and vertical tensions on end frames of 20’, 30’, 40’ and 45’ ISO containers

Insert the new Figures X, Y and Z:

- **Figure X**: Permissible transverse and vertical compressions on end and intermediate frames of 45’ ISO containers

![Diagram of 45' ISO container](image1)

- **Figure Y**: Permissible vertical compression on frames of 45’ ISO containers topped on 40’ containers

![Diagram of 45' ISO container on 40'](image2)

- **Figure Z**: Permissible vertical compression on frames of 48’, 49’ and 53’ containers topped on 40’ containers

![Diagram of 48', 49', 53' containers on 40'](image3)
Ch 14, Sec 1

Replace Table 5, Table 7 and Table 8 by:

**Table 5: Load case LC1 in upright condition**

<table>
<thead>
<tr>
<th>Transversal stack location</th>
<th>LC1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portside</td>
<td>OVA1-S</td>
</tr>
<tr>
<td>Starboard side</td>
<td>OVA1-P</td>
</tr>
</tbody>
</table>

**Note 1:** Stack with centre of gravity located at centreline is considered to be on portside.

**Table 7: Load case LC4 in inclined condition with stack located on portside**

<table>
<thead>
<tr>
<th>Longitudinal stack location</th>
<th>LC4</th>
</tr>
</thead>
<tbody>
<tr>
<td>x/L ≤ 0,25</td>
<td>SPLC (1)</td>
</tr>
<tr>
<td>0,25 &lt; x/L ≤ 0,65</td>
<td>BP2-P</td>
</tr>
<tr>
<td>x/L &gt; 0,65</td>
<td>OVA2-S</td>
</tr>
</tbody>
</table>

**Note 1:** Stack with centre of gravity located at centreline is considered to be on portside.

**Table 8: Load case LC4 in inclined condition with stack located on starboard side**

<table>
<thead>
<tr>
<th>Longitudinal stack location</th>
<th>LC4</th>
</tr>
</thead>
<tbody>
<tr>
<td>x/L ≤ 0,25</td>
<td>SPLC (1)</td>
</tr>
<tr>
<td>0,25 &lt; x/L ≤ 0,65</td>
<td>BP2-S</td>
</tr>
<tr>
<td>x/L &gt; 0,65</td>
<td>OVA2-P</td>
</tr>
</tbody>
</table>

**Note 1:** Stack with centre of gravity located at centreline is considered to be on portside.

(1) SPLC is the specific load case for vertical acceleration as defined in Ch 4, Sec 3, [3.3.3] and with the transverse acceleration $a_y$ taken equal to 0.

Ch 14, Sec 1, [7.2]

Replace the requirements [7.2.1] and [7.2.2] by:

7.2.1 Necessary software inputs

The following data are necessary for the calculation to be carried out:

- ship intended speed
- GM and draught values resulting from the loading condition (no default value to be considered)
- description of the container loading (type, weight, position, allowable stack weight at 1.8g as indicated on the CSC plate and racking test load as indicated on the CSC plate)
- description of the associated securing and lashing devices (type, quantity, total length of rod and turnbuckles).

Their value might either be input by the user or be direct outputs from an associated loading instrument. In any case, the information is to be clearly accessible to the user.

7.2.2 Requested software outputs

For any loading condition defined, the software is to derive the following results in way of each stack of containers:

- total stack weight
- location ($x$, $y$ and $z$) of the considered centre of gravity
- considered accelerations at the centre of gravity
- displacement in way of the four lower corners of each container
- vertical reaction in way of the four lower corners of each container
- racking forces in way of both container sides (door and wall)
- reactions in the associated lashing bars (door and wall)
- design roll and pitch angles associated with ship loading condition and intended passage. The design angles are the values used for the lashing assessment and are not to be greater than those given by the rules.

Ch 14, Sec 1, [7.3]

Replace the requirement [7.3.2] by:

7.3.2 Documents to be submitted

Different test cases are to be submitted for review (including all types of containers as detailed in [6.2] for which the lashing software and cargo securing manual are being approved.

They shall include, as a minimum, two different loading conditions with different GM values. The conditions are to be designed so that one of them yields a small value of GM and the other one yields a high value of GM.
Each loading condition is to show container bays on deck and in hold, located aft, amidships and forward. Among the different stacks, the following is to be provided:

- stacks including containers exposed to wind and stacks including containers protected from wind
- stacks made of 20 feet containers and stacks made of 40 feet containers
- stacks where allowable criteria as given in [7.2.4] are exceeded.

In the case of a ship granted with the additional class notation LASHING-WW, results of one of the loading conditions at least are to be given for both unrestricted and worldwide environmental conditions.