
Economic Commission for Europe**Inland Transport Committee****Working Party on the Transport of Dangerous Goods**

English

3 January 2017

Joint Meeting of Experts on the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) (ADN Safety Committee)**Thirtieth session**

Geneva, 23–27 January 2017

Item 6 of the provisional agenda

Reports of informal working groups

"Modified Explosion protection concept on inland waterway vessels"**Additional remarks****Submitted by the Central Commission for the Navigation of the Rhine (CCNR)**

At its twenty-ninth session the ADN Safety Committee agreed to the modified explosion safety concept as proposed in the documents ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, informal documents INF.13, INF.28 and INF.29 of the twenty-ninth session to be implemented into the ADN in 2019.

During the discussion based on INF.16 from Austria some items stayed to be clarified:

1. Adapting the transitional provisions for 9.3.3.52.5 as well as 9.3.x.52.3 lit. (a) and (b),
2. 8.1.7.3 headline is missing
3. 9.1.0.12.3, 9.3.x.12.4, 9.1.0.51 und 9.3.x.51: better wording
4. 9.3.3.8.4, 9.3.3.10.5 und 9.3.3.52.11: Exemptions for cargo tank type N open
The safety committee agreed. In the Annex alternative wording (7.2.4.7.1, 9.3.3.12.7, 9.3.3.51, 9.3.3.51, 9.3.3.52.11) and additional chapters (7.2.3.51.8, 9.3.3.10.6) are proposed due to the fact that the basic safety requirements have to be fulfilled in case the type N open vessel will stay in or near to a shore-side assigned zone.

Furthermore the Informal Working Group proposes to allow similar exemptions also for dry cargo vessels (7.1.4.7.3, 7.1.3.51.5, 9.1.0.12.6, 9.1.0.51, 9.1.0.52.8), in case they will not stay within or near to a shore side assigned zone.

The Informal Working Group 'Explosion protection in tank vessels' has discussed these open items per email. The result is listed in the Annex.

The Informal Working Group asks the Safety Committee to discuss the proposals.

Annex

1. Adopting the transitional provisions

Informal document INF.16: The three existing transitional provisions for 9.3.x.52.3 lit. (a) and (b) have to be adapted because 9.3.x.52.3 is no longer containing lit. and the content is amended.

The first mentioned transitional provision is included in ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13 as transitional provision 9.3.1.52.1, 9.3.2.52.1, 9.3.3.52.1.

The second transitional provision is included in ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13 as transitional provision 9.3.3.52.3 a), 9.3.3.52.3 b). It has however to be renumbered.

Replace transitional provision 9.3.3.52.3 a) 9.3.3.52.3 b) of ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13 by 9.3.3.52.1

<p>9.3.3.52.3 a) 9.3.3.52.3 b) 9.3.3.52.1</p>	<p>Electrical installations used during loading, unloading or gas freeing a stay-near to or within a shore-side assigned zone</p>	<p>N.R.M. <u>from 1 January 2019</u> for Type N open vessels. Renewal of the certificate of approval after 31 December 2034</p>
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The third transitional provision is covered by transitional provision 9.3.3.12.4 in ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13. Therefore it has to be deleted.

Insert transitional provision 9.3.1.52.3 b) 9.3.2.52.3 b) 9.3.3.52.3 b) in conjunction with 3 (a) to ECE/TRANS/WP.15/ AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13

<p>9.3.1.52.3 (b) 9.3.2.52.3 (b) 9.3.3.52.3 (b) in conjunction with 3 (a)</p>	<p>Electrical installations used during loading, unloading or gas freeing</p>	<p>N.R.M. Renewal of the certificate of approval after 31 December 2034 Until then, on board vessels in service, paragraph (3) (a) shall not apply to: — Lighting installations in accommodation, with the exception of switches near entrances to accommodation; — Radio telephone installations in accommodation and wheelhouses.</p>
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Inf 16: The existing transitional provision for 9.3.3.52.5 has to be adapted because the content is changed.

The content of 9.3.3.52.5 (ADN 2017) was moved to 9.3.3.52.12 in the modified explosion safety concept.

**Insert transitional provision 9.3.3.52.12 to ECE/TRANS/WP.15/AC.2/2016/30,
ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13**

9.3.3.52.5	Shutting down switch for continuously driven generator	N.R.M. for Type N open vessels
<u>9.3.3.52.12</u>		Renewal of the certificate of approval after 31 December 2034

**Insert 9.3.3.52.12 to ECE/TRANS/WP.15/AC.2/2016/30,
ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13**

9.3.3.52.12 An electric generator which is permanently driven by an engine and which does not meet the requirements of 9.3.1.52.1 above, shall be fitted with a switch capable of shutting down the excitation of the generator. A notice board with the operating instructions shall be displayed near the switch

2. Missing headline

Inf 16: 8.1.7.3 The new text does not have a headline. 8.1.7.1 and 8.1.7.2 have headlines.

**Replace 8.1.7.3 in ECE/TRANS/WP.15/AC.2/2016/30,
ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13, by:**

8.1.7.3

Repair of explosion protected installations and equipment as well as of the autonomous protective systems

Repair of explosion protected installations and equipment as well as of the autonomous protective systems is allowed only by a competent person. After repair its further usability in explosion hazardous areas shall certified. This certificate has to be available on board.

3. Better Wording: 9.1.0.12.3, 9.3.x.12.4, 9.3.1.51 and 9.3.2.51

**Replace 9.1.0.12.3 in ECE/TRANS/WP.15/AC.2/2016/30,
ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13 by:**

9.1.0.12.3

- (a) Ventilation shall be provided for the accommodation, wheelhouse and for service spaces.
- (b) The ventilation system of these rooms has to fulfill the following requirements:
- (i) The air intakes of the ventilation system shall be located as far away as possible, however, not less than 6.00 m from the protected area and not less than 2.00 m above the deck;
- (ii) It is able to ensure an overpressure in these rooms of at least 0.1 kPa (0.001 bar);
- (iii) It is equipped with an alerting in case of a breakdown;
- (iv) The ventilation system including the alerting is at least of the ‘limited explosion risk’ type;
- (v) It is linked to a gas detection system fulfilling the following requirements i) to iv):
1. It is at least suitable to be used in zone 1, explosion group IIC, temperature class T6;
2. It is equipped with sensors:
- at the suction inlets of the ventilation system;

– directly at the top edge of the sill of the entrance doors.

3. The t90-time is lower than or equal to 4 s;

4. The measurements are continuous.

(vi) In the service spaces it is linked to an emergency lighting which is at least of the ‘limited explosion risk’ type;

The emergency lighting is not necessary, in case the lightening of the service spaces is at least of the ‘limited explosion risk’ type;

(vii) The suction of the ventilation system as well as the installations and equipment not fulfilling the requirements of 9.1.0.51 and 9.1.0.52.1 are shut off when a concentration of 20% of the LEL of n-Hexane is reached;

This shut-off shall be indicated in the accommodation and wheelhouse by visual and audible signals;

(viii) In case of a breakdown of the ventilation system or the gas detection system of the accommodation the installations and equipment of the accommodation not fulfilling the requirements of 9.1.0.51 and 9.1.0.52.1 are shut off;

This breakdown shall be indicated in the accommodation, wheelhouse and on deck by visual and audible signals;

(ix) In case of a breakdown of the ventilation system or the gas detection system of the wheelhouse or the service spaces the installations and equipment of these rooms not fulfilling the requirements of 9.1.0.51 and 9.1.0.52.1 are shut off;

This breakdown shall be indicated in the wheelhouse and on deck by visual and audible signals. The alarm has to be lead to the accommodation automatically if not cleared;

(x) Each shut-off is performed immediately and automatically and activates the emergency lighting if necessary. The automatic switching-off device is set so that no automatic switch off may occur while the vessel is under way;

(c) In case the ventilation system of the respective room does not fulfill the above mentioned requirements 2(a) to 2(j) the installations and equipment in the respective room generating during use higher temperatures as mentioned in 9.1.0.51 or not fulfilling the requirements mentioned in 9.1.0.52.1 must have a shut-down option.

Replace 9.3.x.12.4 in ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13 by:

9.3.x.12.4

(a) Ventilation shall be provided for the accommodation, wheelhouse and for service spaces.

(b) The ventilation system of these rooms has to fulfill the following requirements:

(i) The air intakes of the ventilation system shall be located as far away as possible, however, not less than 6.00 m from the protected area and not less than 2.00 m above the deck;

(ii) It is able to ensure an overpressure of at least 0.1 kPa (0.001 bar);

(iii) It is equipped with an alerting in case of a breakdown;

(iv) The ventilation system including the alerting is at least of the ‘limited explosion risk’ type;

- (v) It is linked to a gas detection system at least suitable to be used in zone 1, explosion group IIC, temperature class T6 with fulfilling the following requirements i) to iv):
1. It is at least suitable to be used in zone 1, explosion group IIC, temperature class T6;
 2. It is equipped with sensors:
 - at the suction inlets of the ventilation system;
 - directly at the top edge of the sill of the entrance doors.
 3. The t90-time is lower than or equal to 4 s;
 4. The measurements are continuous;
- (vi) In the service spaces it is linked to an emergency lighting at least of the 'limited explosion risk' type. The emergency lighting is not necessary, in case the lightening of the service spaces is at least of the 'limited explosion risk' type;
- (vii) The suction of the ventilation system as well as the installations and equipment not fulfilling the requirements of 9.3.x.51 (1), 9.3.x.51 (2) and 9.2.x.52.1 are shut off when a concentration of 20% of the LEL of n-Hexane is reached. This shut-off shall be indicated in the accommodation and wheelhouse by visual and audible signals;
- (viii) In case of a breakdown of the ventilation system or the gas detection system of the accommodation the installations and equipment not fulfilling the requirements of 9.3.x.51 (1), 9.3.x.51 (2) and 9.2.x.52.1 are shut off;
This shut-off shall be indicated in the accommodation, wheelhouse and on deck by visual and audible signals;
- (ix) In case of a breakdown of the ventilation system or the gas detection system of the wheelhouse or the service spaces the installations and equipment of these rooms not fulfilling the requirements of 9.3.x.51 (1), 9.3.x.51 (2) and 9.2.x.52.1 are shut off;
This shut-off shall be indicated in the wheelhouse and on deck by visual and audible signals. The alarm has to be lead to the accommodation automatically if not cleared;
- (x) Each shut-off is performed immediately and automatically and activates the emergency lighting if necessary. The automatic switching-off device is set so that no automatic switch off may occur while the vessel is under way;
- (c) In case the ventilation system of the respective room does not fulfill the above mentioned requirements 2(a) to 2 (j) the installations and equipment in the respective room generating during use higher temperatures as mentioned in 9.3.x.51 (1), 9.3.x.51 (2) or not fulfilling the requirements in 9.2.x.52.1 must have a shut-down option.

Replace 9.3.1.51 and 9.3.2.51 in ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/ Corr.1, INF.13 by:

9.3.1.51, 9.3.2.51 *Surface temperatures of installations and equipment*

- (a) Surface temperatures of electrical and non-electrical installations and equipment shall not exceed 200°C;
- (b) Surface temperatures of the outer parts of engines and their inlets and exhaust ducts shall not exceed 200°C;

- (c) When the list of substances on the vessel according to 1.16.1.2.5 will contain substances for which in column (15) of Table C of 3.2.3.2, T4, T5 or T6 is indicated the allowed respective surface temperatures within the zones displayed on board the vessel shall not exceed 135°C (T4), 100°C (T5) and 85°C (T6)
- (d) (1) and (2) do not apply if the following requirements are fulfilled (see also 7.2.3.51.4):
- (i) Accommodation, wheelhouse and service spaces where surface temperatures higher than mentioned in (1) and (2) occur are equipped with a ventilation system according to 9.3.x.12.4;
- or
- (ii) Equipment and installations, which generate surface temperatures higher than mentioned in (1) and (2) shall have the possibility to be switched off. Such installations and equipment shall be marked in red.

4. Exemption for Type N open vessels

Inf 16: 9.3.3.8.4 The current text of 9.3.3.8.4 with exemptions for open type N is still necessary and has to be kept.

It was agreed by keeping in 9.3.3.8.4 the respective text of ADN 2017 and renumbering the following chapters. The following proposal is a better solution according to the discussions within the InfWG, due to the fact, that vessels Type N open have to fulfill the basic safety concept in case it will stay near to or within a shore-side assigned zone.

**Keep numbering as in ECE/TRANS/WP.15/AC.2/2016/30,
ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13 concerning 9.3.3.8 and replace
9.3.3.12.7 by:**

9.3.3.12.7 Type N open vessels have to fulfill the requirements mentioned in 9.3.3.12.4 (2) or 9.3.3.12.4 (3) only in case the vessel is allowed to stay near to or within a shore-side assigned zone.

~~The flame arresters prescribed in 9.3.2.20.4, 9.3.2.22.4, 9.3.2.22.5 and 9.3.2.26.4 shall be of a type approved for this purpose by the competent authority~~

Inf 16.: 9.3.3.10.5 The current text of 9.3.3.10.4 with exemptions for open type N is still necessary has to be kept as new 9.3.3.10.5. The text has to be amended with a reference to the new 9.3.3.10.4.

It was agreed to keep in 9.3.3.10.4 the respective text of ADN 2017 and to renumber the following chapters. The following proposal is a better solution according to the discussions within the InfWG, due to the fact, that vessels Type N open have to fulfill the basic safety concept in case it will stay near to or within a shore-side assigned zone.

**Keep numbering as in ECE/TRANS/WP.15/AC.2/2016/30,
ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13 concerning 9.3.3.10 and insert
9.3.3.10.6 to ECE/TRANS/WP.15/AC.2/2016/30:**

9.3.3.10.6 Type N open vessels have to fulfill the requirements mentioned in 9.3.3.10.1 only in case the vessel will stay near to or within a shore-side assigned zone.

Inf 16: 9.3.3.52.11: It should be checked whether open type N vessels should also be exempted from certain explosion protection requirements, especially in 9.3.3.52.1.

It was agreed. According to the discussions within the IWG, the IWG proposes the following due to the fact, that vessels Type N open have to fulfill the basic safety concept in case it will stay near to or within a shore-side assigned zone.

**Replace 9.3.3.51 in ECE/TRANS/WP.15/AC.2/2016/30,
ECE/TRANS/WP.15/AC.2/2016/30/ Corr.1, INF.13 by:**

9.3.3.51 Surface temperatures of installations and equipment

- (a) Surface temperatures of electrical and non-electrical installations and equipment shall not exceed 200°C;
- (b) Surface temperatures of the outer parts of engines and their inlets and exhaust ducts shall not exceed 200°C;
- (c) When the list of substances on the vessel according to 1.16.1.2.5 will contain substances for which in column (15) of Table C of 3.2.3.2, T4, T5 or T6 is indicated the allowed respective surface temperatures within the zones displayed on board the vessel shall not exceed 135°C (T4), 100°C (T5) and 85°C (T6) ;
- (d) (1) and (2) do not apply if the following requirements are fulfilled (see also 7.2.3.51.4):
 - (i) Accommodation, wheelhouse and service spaces where surface temperatures higher than mentioned in (1) and (2) occur are equipped with a ventilation system according to 9.3.x.12.4;
 - or
 - (ii) Equipment and installations, which generate surface temperatures higher than mentioned in (1) and (2) shall have the possibility to be switched off. Such installations and equipment shall be marked in red.
- (e) Type N open vessels have to fulfill the requirements mentioned in (1), (2) and (4) only in case the vessel will stay near to or within a shore-side assigned zone.

**Replace 9.3.3.52.11 in ECE/TRANS/WP.15/AC.2/2016/30,
ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13 by:**

9.3.3.52.11 Type N open vessels have to fulfill the requirements mentioned in 9.3.3.52.1 and 9.3.3.52.2 only in case the vessel will stay near to or within a shore-side assigned zone.

The provisions of 9.3.3.52.1 to 9.3.3.52.10 shall not apply to oil separator or supply vessels

Furthermore

**Insert 7.2.3.51.8 to ECE/TRANS/WP.15/AC.2/2016/30,
ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13**

7.2.3.51.8 If the vessel is not able to fulfill the requirements mentioned in 7.2.3.51.4 and 7.2.3.51.6 the vessel is not allowed to stay near to or within a shore-side assigned zone.

**Insert 7.2.4.7.1 to ECE/TRANS/WP.15/AC.2/2016/30,
ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13**

7.2.4.7.1 Tank vessels shall be loaded, unloaded or gas-freed only at the places designated or approved for this purpose by the competent authority. If there is a shore-side zone assigned at places of loading and unloading the vessel is allowed to stay near to or within a shore-side assigned zone only in case it fulfills the requirements mentioned in 9.3.x.12.4 (2) or 9.3.x.12.4 (3), 9.3.x.51, 9.3.x.52.1 and 9.3.x.52.3.

Replace 8.6.1.3 and 8.6.1.4 to ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/ Corr.1, INF.13, INF 28 (Slightly modified compared to INF.28 which was adopted during the twenty-ninth meeting)

8.6.1.3 and 8.6.1.4

8. Additional equipment:

- Sampling device
 - connection for a sampling device..... yes/no^{1 2}
 - sampling opening yes/no^{1 2}
- Water-spray system yes/no^{1 2}
 - Internal pressure alarm 40 kPa yes/ no^{1 2}
- Cargo heating system:
 - possibility of cargo heating from shore yes/ no^{1 2}
 - cargo heating installation on board yes/ no^{1 2}
- Cargo refrigeration system yes/ no^{1 2}
- Inerting facilities yes/ no^{1 2}
- Cargo pump-room below deck yes/no¹
- Ventilation system ~~ensuring an overpressure according to 9.3.x.12.4 (2)~~ yes/no¹
in.....
- Conforms to the rules of construction mentioned in 9.3.x.12(2) or 9.3.x.12(3), 9.3.x.51 and 9.3.x.52 yes/no¹
- ~~• Venting piping according to~~
- piping and installation heated yes/ no^{1 2}
- Conforms to the rules of construction resulting from the remark(s) of column (20) of Table C of ~~Chapter 3.2.3.2~~^{1 2}

9. Electrical and non-electrical installations and equipment intended to be used in potentially explosive atmospheres:

- Temperature class:
- Explosion group:

10. Autonomous protective systems:

- Explosion group / subgroup with explosion group II B:.....

(Note from the UNECE secretariat: if Autonomous protective systems is supposed to be item 10, then the rest needs to be renumbered)

5. Proposal of the InfWG to allow similar exemptions for dry cargo vessels, in case they will not stay within or near to a shore side assigned zone. (Adapted editorially and by content to the exemptions for vessels type N open)

Insert 7.1.4.7.3 to ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13

7.1.4.7.3 If there is a shore-side zone assigned at places of loading and unloading the vessel is allowed to stay near to or within this shore-side assigned zone only in case it fulfills the requirements mentioned in 9.1.0.12.3 (2) or 9.1.0.12.3 (3), 9.1.0.51, 9.1.0.52.1 and 9.1.0.52.2.

Insert 7.1.3.51.5 to ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13

7.1.3.51.5 During a stay near to or within a shore-side assigned zone electrical and non-electrical installations and equipment not fulfilling the requirements mentioned in 9.1.0.52.1 or having a surface temperature higher than 200°C (marked in red according to

9.1.0.51 and 9.1.0.52.2) shall be switched off, cooled down below 200°C or the measures mentioned in 7.1.4.13.2 shall be taken.

Insert 7.1.3.51.6 to ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13

7.1.3.51.6 7.1.3.51.5 does not apply in the accommodation, wheelhouse and service spaces in case

- (a) the ventilation system is adjusted to guarantee an overpressure of at least 0.1 kPa; and
- (b) the gas detection system is switched on and is measuring continuously.

Insert 7.1.3.51.7 to ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13

7.1.3.51.7 Installations and equipment according to 7.1.3.51.5 which have been switched off during a stay near to or within a shore-side assigned zone, may only be switched on after the vessel stays no longer near to or within a shore-side assigned zone or in wheelhouse, accommodations and service spaces 10% of the LEL of n-Hexane is underrun.

The results of the measurements shall be recorded in writing.

Insert 7.1.3.51.8 to ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13

7.1.3.51.8 If the vessel is not able to fulfill the requirements mentioned in 7.1.3.51.5 and 7.1.3.51.6 the vessel is not allowed to stay near to or within a shore-side assigned zone.

Cross out 7.1.4.13, 7.1.4.13.1, 7.1.4.13.2 in ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13

Replace 8.6.1.1 und 8.6.1.2 in ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13, INF 28 (Slightly modified compared to INF 28 which was adopted during the twenty-ninth meeting) by:

8.6.1.1 and 8.6.1.2

Competent authority:

Space reserved for the emblem and name of the State

ADN certificate of approval No.:

1. Name of vessel.....
2. Official number
3. Type of vessel
4. Additional requirements: vessel referred to in 7.1.2.19.1¹
vessel referred to in 7.2.2.19.3¹
The vessel complies with the additional rules of construction referred to in 9.1.0.80 to 9.1.0.95/9.2.0.80 to 9.2.0.95 for double hull vessels¹⁾
Vessel complies with the rules of construction 9.1.0.12.3(2) or 9.1.0.12.3(3), 9.1.0.51, 9.1.0.52¹⁾
Ventilation system according to 9.1.0.12.3 (2)¹⁾
in.....
Vessel complies with the rules of construction 9.1.0.53¹⁾
Electrical and non-electrical installations and equipment to be used within the protected area:
Temperature class :.....
Explosion group:.....

Insert 9.1.0.12.6 to ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13

9.1.0.12.6 The requirements mentioned in 9.3.0.12.3 (2) or 9.3.0.12.3 (3) have to be fulfilled only in case the vessel is allowed to stay near to or within a shore-side assigned zone.

Replace 9.1.0.51 in ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13 by:

9.1.0.51 *Surface temperatures of installations and equipment*

- (a) The surface temperatures of electrical and non-electrical installations and equipment as well as the outer parts of engines and their inlets and exhaust ducts shall not exceed 200°C;
- (b) This provision does not apply if the following requirements are fulfilled:
 - accommodation, wheelhouse and service spaces where surface temperatures higher than 200 °C occur are equipped with a ventilation system according to 9.1.0.12.3;
 - or
 - installations and equipment which generate surface temperatures higher than 200 °C have the possibility to be switched off. Such installations and equipment shall be marked in red;
- (c) Within the protected area 9.1.0.53.1 applies;
- (d) The requirements mentioned in 9.1.0.51 (1) and (2) have to be fulfilled only in case the vessel will stay near to or within a shore-side assigned zone.

Insert 9.1.0.52.8 to ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13

9.1.0.52.8 The requirements mentioned in 9.1.0.52.1 and 9.1.0.52.2 have to be fulfilled only in case the dry cargo vessel will stay near to or within a shore-side assigned zone.

Insert transitional provision for 9.1.0.52.1 to ECE/TRANS/WP.15/AC.2/2016/30, ECE/TRANS/WP.15/AC.2/2016/30/Corr.1, INF.13

9.1.0.52.1	Electrical installations used during a stay near to or within a shore-side assigned zone	N.R.M. from 1 January 2019 Renewal of the certificate of approval after 31 December 2034
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