Degassing – the use of the old term gas-freeing

Transmitted by the Government of the Netherlands

Introduction

1. The German delegation brought to the attention of the Dutch delegation that the English version of the Regulations annexed to ADN still contains several times the term “gas-freeing”. One of the aims of the informal working group on degassing of cargo tanks was to change all the instances of the wording “gas-free” into “degassed” and “gas-freeing” into “degassing”, since the wording “gas-free” and “gas-freeing” could lead to misinterpretation (ECE/TRANS/WP.15/AC.2/2015/29).

2. Based on the information we have searched the English version of the regulations for both the terms “gas-freeing” and “gas-freed”. We have found 14 instances of the term “gas-freeing” and two instances of the term “gas-freed”.

3. Five of these 14 instances of the term gas-freeing, and one of the instances of the term gas-freed, are in chapter 7.2.3.7, which is to be deleted for the ADN 2021 (ECE/TRANS/WP.15/AC.2/70).

Amendment

4. It is our proposal to change the remaining nine instances of the term “gas-freeing” into “degassing” and the remaining instance of the term “gas-freed” into “degassed”, as indicated below (The cancelled text is struck through, the additional text is bold and underlined):

   1. 1.6.7.2.2.2, row: 8.1.2.3 (r), (s), (t), (v), column: time limit and comments;
8.1.2.3 (r), (s), (t), (v) | Documents which must be carried on board | N.R.M. from 1 January 2019
Renewal of the certificate of approval after 31 December 2020
Until that date, in addition to the documents required in accordance with 1.1.4.6, the following documents are required:
(a) A plan indicating the boundaries of the cargo area and the location of the electrical equipment installed in that area;
(b) A list of the machinery, appliances or other electrical equipment referred to in (a) above, including the following particulars:
   Machinery or appliance, location, type of protection, type of explosion protection, testing body and approval number;
(c) A list of or general plan indicating the electrical equipment located outside the cargo area which may be operated during loading, unloading or gas-freeing degassing.
The documents listed above shall bear the stamp of the competent authority issuing the certificate of approval.

2. 1.6.7.2.2.2, row: 9.3.1.12.4 9.3.3.12.4, column: subject;

9.3.1.12.4 9.3.3.12.4 | Electrical installations and equipment used during loading, unloading, gas-freeing degassing and when in the immediate vicinity of or within an onshore assigned zone | N.R.M. From 1 January 2019
Renewal of the certificate of approval after 31 December 2034
Until that date, on board type G and type N vessels whose keels were laid before 1 January 1977, all electrical equipment except the lighting installations in accommodation, radio telephone installations in the accommodation and the wheelhouse and combustion engine control appliances, shall meet the following requirements:
Generators, engine, etc.: IP 13 protection mode
Switchboards, switches near entrances to accommodation, etc.: IP23 protection mode
Appliances, etc.: IP 55 protection mode

3. 1.6.7.2.2.2, row: 9.3X.52.1, column: time limit and comments;

9.3.1.52.1 9.3.2.52.1 9.3.3.52.1 | Electrical installations and equipment of the limited explosion risk type | N.R.M.
Renewal of certificate of approval after 31 December 2034
Until that date, the following documents are required for electrical equipment used during loading, unloading and gas-freeing degassing of vessels in service whose keels were laid after 1 January 1995: 9.3.1.52.3, 9.3.2.52.3 and 9.3.3.52.3 of the version of ADN in force until 31 December 2018
1. **1.6.7.2.2.2, row: 9.3.1.52.1 9.3.3.52.1, column: time limit and comments;**

<table>
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Until that date, on board vessels whose keels were laid before 1 January 1977, all electrical equipment except the lighting installations in the accommodation, radio telephone installations in the accommodation and the wheelhouse and combustion engine control appliances in use during loading, unloading and gas-freeing degassing shall meet the following requirements:

- Generators, engines, switchboards, lighting, etc.: IP 13 protection mode
- Appliances, etc.: IP 55 protection mode

2. **1.6.7.2.2.2, row: 9.3.1.53.1, column: time limit and comments;**

<table>
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<tr>
<th>9.3.1.53.1</th>
<th>9.3.2.53.1</th>
<th>9.3.3.53.1</th>
<th>Type and location of electrical installations and equipment intended to be used in explosion hazardous areas Zone 0, Zone 1</th>
<th>N.R.M.</th>
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Until that date, the following requirements are applicable:

(a) In cargo tanks and piping for loading and unloading, only measuring, regulation and alarm devices of the EEEx (ia) type of protection may be installed.

(b) Electrical equipment on deck in the cargo area and the measuring, regulation and alarm apparatus, motors driving essential equipment such as ballast pumps in the cofferdams, double-hull spaces, double bottoms, hold spaces and service spaces below deck in the cargo area shall be checked and approved by the competent authority with respect to the safety of operation in an explosive atmosphere, for example, intrinsically safe apparatus, flameproof enclosure apparatus, apparatus protected by pressurization, powder filling apparatus, apparatus protected by encapsulation and increased safety apparatus.

(c) In the cofferdams, double-hull spaces, double bottoms, hold spaces and service spaces below deck in the cargo area, the lighting appliances must have the “flame-proof enclosure” or “apparatus protected by pressurization” type of protection.

(d) The control and protective equipment of the equipment referred to in (a), (b) and (c) above shall be located outside the cargo area if they are not intrinsically safe.

For the selection of electrical equipment, the explosion groups and temperature classes assigned to the substances carried in the list of substances shall be...
taken into consideration (see columns (15) and (16) of Table C of Chapter 3.2).

Until that date, the following requirements apply on board vessels in service whose keels were laid after 31 December 1977:

Until that date, the following conditions shall be met during loading, unloading and gas-freeing degassing on board vessels having non-gastight wheelhouse openings (e.g. doors, windows, etc.) in the cargo area:

(a) All electrical equipment to be used in the wheelhouse shall be of a limited explosion-risk type, i.e., it shall be so designed that there is no sparking and the temperature of its outer surface does not rise above 200 °C during normal operation, or it shall be of a type protected against water jets and designed in such a way that its surface temperature may not exceed 200 °C during normal operation.

(b) Electrical equipment which does not meet the requirements of (a) above shall be marked in red and it shall be possible to switch it off by means of a central switch.

3. 7.2.3.51.4;
   "During a stay in the immediate vicinity of or within an onshore assigned zone, electrical and non-electrical installations and equipment not complying with the requirements of 9.3.x.51 (a), 9.3.x.51 (b), 9.3.x.51 (c) or 9.3.x.52.1 (marked in red according to 9.3.x.51 and 9.3.x.52.3) shall be switched off, cooled down to below the temperature mentioned in 9.3.x.51 (a) or 9.3.x.51 (b), or the measures mentioned in 7.2.3.51.6 shall be taken.

When the list of substances on the vessel according to 1.16.1.2.5 contains substances for which explosion protection is required in column (17) of Table C of Chapter 3.2, this provision applies also during loading and unloading and gas-freeing degassing during berthing.”

4. 7.2.3.51.7;
   "Installations and equipment according to 7.2.3.51.4 that have been switched off during loading and unloading, gas-freeing degassing during berthing or a stay in the vicinity of or within an onshore assigned zone may only be switched on again:
   “…”

5. 8.1.2.3 (s);
   "A list of or a general plan indicating the fixed installations and equipment which are not authorized for use during loading and unloading, gas-freeing degassing or during a stay near to or within an onshore assigned zone (marked in red according to 9.3.1.52.3, 9.3.2.52.3 or 9.3.3.52.3);”

6. 8.1.2.3 (v);
   "A list of or general plan indicating the fixed installations and equipment installed outside the explosion hazardous areas that may be used during loading, unloading, gas-freeing degassing, berthing or during a stay in the immediate vicinity of or within an onshore assigned zone, if not referred to in (r) and (u).”

a) 8.3.5;
   No work requiring the use of an open flame or electric current or liable to cause
sparks may be carried out on board. This provision does not apply:

- to berthing operations;
- in the service spaces outside the protected area or the cargo area, provided the doors and openings of those areas are closed for the duration of the work and the vessel is not being loaded, unloaded or gas-free; or
- when the vessel is not in the vicinity of or within an onshore assigned zone and, in the case of a tank vessel, has a certificate attesting to the totally gas-free condition of the vessel in accordance with 7.2.3.7.6 or an authorization from the competent authority or in the case of a dry cargo vessel, has a certificate attesting to the totally gas-free condition of the protected area or an authorization from the competent authority.

…"

**Action to be taken**

5. The Dutch delegation invites the ADN Safety Committee to consider the proposed amendments in paragraph 4, and to take action as it deems appropriate.