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## **Economic Commission for Europe**

## **Inland Transport Committee**

#### **Working Party on the Transport of Dangerous Goods**

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)

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# Proposal for the implementation of the modified explosion protection concept on inland water way vessels

Transmitted by the Central Commission for the Navigation of the Rhine (CCNR)  $^{1,\,2}$ 

#### Corrigendum

## 1. 1.2, page 6

In line Classification of explosion hazardous areas, in column Paragraphs, delete <u>occasionally</u> after <u>likely to occur in normal operation</u> and add editorial in column Reason/Explanation.

#### 2. 1.2, page 6

In line device for the safe depressurization of the cargo tanks, in column Paragraphs, at the beginning of the second sentence after When the, delete <u>list of substances on the</u> and insert

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<sup>&</sup>lt;sup>2</sup> In accordance with the programme of work of the Inland Transport Committee for 2016–2017 (ECE/TRANS/2016/28/Add.1 (9.3.)).

<u>substance list</u> before <u>according to 1.16.1.2.5</u> and at the end of the sentence, after <u>most critical substance in the replace list of substances</u> by <u>vessel substance list</u> and add <u>ADN wording</u> in column <u>Reason/Explanation</u>.

#### 3. 1.2, page 7

In line *Equipment*, in column *Paragraphs*, replace the last sentence by *Equipment having a UN number carried as a cargo are not included* 

and add Aligning language versions in column Reason/Explanation.

## 4. 1.2, page 9

In line Explosion protection, in column Paragraphs, at the end of the first sentence, insert <u>damages by</u> before <u>explosions</u> and add Aligning language versions in column Reason/Explanation.

### 5. 1.2, page 10

In line Explosion protection, in column Paragraphs, below As well as technical means such as for example, in the first indent insert <u>installations and</u> before <u>equipment</u> and replace <u>zone</u> <u>by potentially explosive atmospheres</u> and add Aligning language versions in column Reason/Explanation.

## 6. 1.2, page 10

In line *Explosion protection*, in column *Paragraphs*, below <u>As well as technical means such as for example</u>, in the third indent, delete <u>flammable</u> and <u>automatically or manually</u>.

#### 7. **1.2, page 11**

In line *Gas detector*, in column *Paragraphs*, in the last sentence of the first paragraph, <u>replace n-Hexane</u> by <u>the most critical substance in the vessel substance list</u> and add Aligning language versions in column *Reason/Explanation*.

#### 8. 1.2, page 12

In line *High-velocity vent valve*, in column *Paragraphs*, at the beginning of the second sentence after *When the*, delete *list of substances on the* and insert *substance list* before *according to 1.16.1.2.5* and add *ADN wording* in column *Reason/Explanation*.

#### 9. 1.2, page 12

In line *Opening pressure*, in column *Paragraphs*, in the first sentence mark <u>list of substances</u> in strike- through and insert after <u>vessel substance list</u> and add *ADN wording* in column *Reason/Explanation*.

#### 10. 1.2, page 13

In line Oxygen meter, in column Paragraphs, in the first sentence replace <u>mobile</u> by <u>portable</u> and add ADN wording in column Reason/Explanation.

#### 11. 1.2, page 14

In line Sampling opening, in column Paragraphs, at the beginning of the second sentence after <u>When the</u>, mark <u>list of substances on the</u> in strike-through and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add ADN wording in column Reason/Explanation.

#### 12. 1.2, page 15

In line Sampling opening, in column Paragraphs, in the second sentence after <u>capable of withstanding steady burning</u>, insert <u>for the most critical substance in the substance list</u> and add Aligning language versions in column Reason/Explanation.

## 13. 1.2, page 16

In line *Vacuum valve*, in column *Paragraphs*, at the beginning of the second sentence after *When*, delete *the list of substances on* and insert *substance list* before *according to* 1.16.1.2.5 and add *ADN wording* in column *Reason/Explanation*.

#### 14. 1.2, page 16

In line *Vacuum valve*, in column *Paragraphs*, in the second sentence after <u>of the most critical substance in the</u>, replace <u>list of substances</u> by <u>vessel substance list</u> add *ADN wording* in column *Reason/Explanation*.

#### 15. 1.2, page 16

In line *Zoning*, in column *Paragraphs*, in the first sentence after <u>for tank vessels whose</u>, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add *ADN wording 2x* in column *Reason/Explanation*.

#### 16. 1.2, page 16

In line *Zoning*, in column *Paragraphs*, under *Zone 0 comprises:*, in the first indent, replace *tank-containers or portable tanks* by *receptacles for residual products and for slops* 

#### 17. 1.2, page 17

In line *Zoning*, in column *Paragraphs*, under <u>Zone 2 comprises:</u>, in the first indent, insert <u>within the cargo area</u> after <u>An area on deck</u> and add Aligning language versions in column *Reason/Explanation*.

### 18. 1.4, page 18

In Paragraph 1.4.3.3 (r), in column *Modification*, mark <u>flame fronts</u> in strike-through and insert after passage of flames and add ADN wording in column Reason/Explanation.

#### 19. 1.4, page 18

In Paragraph 1.4.3.3 (s), in column Modification, read:

He shall ascertain that the loading flows conform to the loading-instructions on loading and unloading flows referred to in 9.3.2.25.9 or 9.3.3.25.9 and that the pressure at the crossing-point of the gas discharge pipe venting piping/vapour return piping or the compensation pipe is not greater than the opening pressure of the pressure relief device/ high velocity vent valve.

and add ADN wording in column Reason/Explanation.

## 20. 1.4, page 18

In Paragraph 1.4.3.7.1 (i), in column *Modification*, mark <u>gas discharge pipe</u> in strike-through and insert after <u>venting piping</u> and replace <u>flame fronts</u> by <u>passage of flames</u> and add <u>ADN wording</u> in column <u>Reason/Explanation</u>.

#### 21. 1.4, page 19

In Paragraph 1.4.3.7.1 (j), in column *Modification*, replace <u>gas discharge pipe</u> by <u>venting</u> <u>piping</u> and add *ADN wording* in column *Reason/Explanation*.

## 22. 1.6.7.2.2.2 Table of general transitional provisions: Tank vessels , page 19

In Paragraph 8.1.2.3 (r), (s), (t), (v), in column *Time limit and comments*, replace <u>gasfreeing</u> by <u>degassing</u> and add Agreed upon in January meeting of the safety committee in column Reason/Explanation.

## 23. 1.6.7.2.2.2 Table of general transitional provisions: Tank vessels , page 32

In Paragraph 9.3.1.53.1 9.3.2.53.1 9.3.3.53.1, in column *Time limit and comments*, in letter (a), the beginning of the sentence reads *In cargo tanks*.

## 24. 1.6.7.2.2.2 Table of general transitional provisions: Tank vessels, page 33

In Paragraph 9.3.1.53.1 9.3.2.53.1 9.3.3.53.1, in column *Time limit and comments*, in the last parapgraph of letter (c), replace <u>list of substances</u> by <u>vessel substance list</u> and add *ADN wording* in column *Reason/Explanation*.

## 25. 1.6.7.2.2.2 Table of general transitional provisions: Tank vessels, page 33

In Paragraph 9.3.1.53.1 9.3.2.53.1 9.3.3.53.1, in column *Time limit and comments*, in the first parapgraph after letter (c), replace <u>gas-freeing</u> by <u>degassing</u> and add Agreed upon in January meeting of the safety committee in column Reason/Explanation.

#### 26. 3. Table C, page 35

In Paragraph 3.2.3.1Explanations concerning Table C: Column (16), in column Time limit and comments, in the first paragraph after letter (c), replace <u>relief device</u> by <u>valve</u> and insert <u>safe</u> before <u>depressurization of cargo tanks</u> and add <u>editorial</u> in column Reason/Explanation.

#### 27. 3. Table C, page 36

In Paragraph 3.2.3.1Explanations concerning Table C: Column (20) "Additional requirements/ Remarks" 6., in column Time limit and comments, in the second sentence, replace <u>pipe</u> by <u>piping</u> and add ADN wording in column Reason/Explanation.

## 28. 3. Table C, page 36

In Paragraph 3.2.3.1Explanations concerning Table C: Column (20) "Additional requirements/ Remarks" 7., in column Time limit and comments, in the first sentence, replace <u>pipe</u> by <u>piping</u> and add ADN wording in column Reason/Explanation.

#### 29. 7.1, page 38

In Paragraph 7.1.3.41.1, in column *Modification*, insert <u>windows</u>, <u>doors</u>, <u>skylights and hatches are closed or</u> after <u>or wheelhouses in case</u> and add <u>Aligning language versions</u> in column <u>Reason/Explanation</u>.

## 30. 7.2, page 41

In Paragraph 7.2.2.6, in column *Modification*, at the beginning of the sentence delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add *ADN wording* in column *Reason/Explanation*.

#### 31. 7.2, page 41

In Paragraph 7.2.2.6, in column *Modification*, at the end of the sentence, add an  $\underline{s}$  to  $\underline{substance}$  and delete  $\underline{in\ the\ list\ of\ substances}$  and insert  $\underline{allowed\ for\ carriage\ in\ the\ vessel}$  after  $\underline{substances}$ .

#### 32. 7.2, page 41 and 42

In Paragraph 7.2.2.19.3, in column *Modification*, in the first paragraph delete <u>this vessel</u> <u>equals an onshore assigned zone and</u> and add Agreed upon in January meeting of the safety committee in column Reason/Explanation.

### 33. 7.2, page 43

In Paragraph 7.2.3.51.4 new, in column Modification, in the last paragraph delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add ADN wording in column Reason/Explanation.

### 34. 7.2, page 43

In Paragraph 7.2.3.51.4 new, in column Modification, in the last parapgraph, replace <u>gasfreeing</u> by <u>degassing</u> and add Agreed upon in January meeting of the safety committee in column Reason/Explanation.

## 35. 7.2, page 43

In Paragraph 7.2.3.51.5 new, in column *Modification*, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add *ADN wording* in column *Reason/Explanation*.

#### 36. 7.2, page 43

In Paragraph 7.2.3.51.7 new, in column Modification, replace <u>gas-freeing</u> by <u>degassing</u> and add Agreed upon in January meeting of the safety committee in column Reason/Explanation.

## 37. 7.2, page 44

In Paragraph 7.2.4.16.3, in column *Modification*, mark <u>gas-freeing</u> in strike-through and insert after <u>degassing</u> and add Agreed upon in January meeting of the safety committee in column Reason/Explanation.

#### 38. 7.2, page 44

In Paragraph 7.2.4.16.6, in column *Modification*, replace <u>gas discharge pipe</u> by <u>venting</u> <u>piping</u> and add *ADN wording* in column *Reason/Explanation*.

#### 39. 7.2, page 44

In Paragraph 7.2.4.16.7, in column *Modification*, mark *gas-freeing* in strike-through and insert after <u>degassing</u> and add Agreed upon in January meeting of the safety committee in column Reason/Explanation.

#### 40. 7.2, page 44

In Paragraph 7.2.4.17.1, in column *Modification*, mark *gas-freeing* in strike-through and insert after <u>degassing</u> and add Agreed upon in January meeting of the safety committee in column Reason/Explanation.

### 41. 7.2, page 45

In Paragraph 7.2.4.22.2, in column *Modification*, mark *outlets* in strike-through and insert after *openings* and add *ADN wording* in column *Reason/Explanation*.

### 42. 7.2, page 45

In Paragraph 7.2.4.22.3, in column *Modification*, mark *outlets* in strike-through and insert after <u>openings</u> and add *ADN wording* in column *Reason/Explanation*.

#### 43. 7.2, page 45

In Paragraph 7.2.4.22.5, in column *Modification*, in the last sentence, replace <u>educated</u> by <u>instructed</u> and add <u>editorial</u> in column <u>Reason/Explanation</u>.

### 44. 7.2, page 46

In Paragraph 7.2.4.25.5, add Not identique to the german version of ADN2015 at the beginning of column Reason/Explanation.

### 45. 7.2, page 46

In Paragraph 7.2.4.25.5, in column *Modification*, in the second paragraph, in the first sentence, delete <u>requiring</u> after <u>column (17) of Table C of Chapter 3.2</u> and replace <u>venting</u> by <u>vapour return</u> and add <u>editorial</u> in column <u>Reason/Explanation</u>.

#### 46. 7.2, page 46

In Paragraph 7.2.4.25.5, in column *Modification*, in the third paragraph, the sentence shall be underlined and add *sentence needs to be underlined* in column *Reason/Explanation*.

### 47. 7.2, page 46

In Paragraph 7.2.4.25.7 new, in column *Modification*, replace <u>gas discharge pipe</u> by <u>venting</u> <u>piping</u> and add *ADN wording* in column *Reason/Explanation*.

#### 48. 7.2, page 47

In Paragraph 7.2.4.41, in column *Modification*, mark *gas-freeing* in strike-through and insert after <u>degassing</u> and add Agreed upon in January meeting of the safety committee in column Reason/Explanation.

#### 49. 8.1, page 48

In Paragraph 8.1.2.2, in column *Modification*, under letter (e), replace <u>of "limited explosion risk" type</u> by <u>suitable to be used in zone 1</u> and add <u>editorial</u> in column Reason/Explanation.

#### 50. 8.1, page 48

In Paragraph 8.1.2.2, in column *Modification*, under letter (f), replace <u>and</u> by <u>,</u> after <u>to be</u> <u>used during loading</u> and insert <u>, degassing during berthing</u> after <u>unloading</u> and add <u>Aligning language versions</u> in column <u>Reason/Explanation</u>.

#### 51. 8.1, page 49

In Paragraph 8.1.2.3, in column *Modification*, in the first sentence, mark *carried* in strike-through and insert after <u>available</u> and add <u>editorial</u> in column <u>Reason/Explanation</u>.

## 52. 8.1, page 50

In Paragraph 8.1.2.3, in column *Modification*, under leter (q), add <u>and the documentation of the</u> after (7.2.4.16.16, 7.2.4.16.17.) Mark *The* before heat and shall be documented and kept on board in strike-through. Add editorial in column Reason/Explanation.

## 53. 8.1, page 50

In Paragraph 8.1.2.3, in column *Modification*, under leter (s), replace <u>gas-freeing</u> by <u>degassing</u> and add Agreed upon in January meeting of the safety committee in column Reason/Explanation.

#### 54. 8.1, page 50

In Paragraph 8.1.2.3, in column *Modification*, under leter (t), insert <u>approved by a recognized classification society</u> after <u>a drawing</u> and add Aligning language versions in column Reason/Explanation.

#### 55. 8.1, page 52

In Paragraph 8.1.7.3 new, in column Modification, in the first sentence, delete <u>electrical</u> <u>and non-electrical</u>.

#### 56. 8.1, page 52

In Paragraph 8.1.7.3 new, in column Modification, in the second sentence, replace  $\underline{use}$  by  $\underline{further\ usability}$  and replace  $\underline{has\ to\ be}$  by  $\underline{shall}$  and add  $\underline{editorial\ 2x}$  in column Reason/Explanation.

#### 57. 8.3, page 53

In Paragraph 8.3.2, in column *Modification*, in the last sentence, replace <u>With</u> by <u>Within</u> and add *editorial* in column *Reason/Explanation*.

In Paragraph 8.3.5, in column *Modification*, at the beginning of the first sentence, mark *maintenance* in strike-through and add *New zone concept* in column *Reason/Explanation*.

#### 59. 8.3, page 54

In Paragraph 8.3.5, in column *Modification*, in the sentence before the last paragraph, delete <u>the vessel is furnished with</u> and insert <u>is issued</u> at the end of the sentence. Add <u>editorial</u> in column <u>Reason/Explanation</u>.

#### 60. 8.6, page 56

In Paragraph 8.6.3 ADN Checklist 12.3, in column Modification, the paragraph reads:

When anti Is, in case explosion protection is required in Chapter according to 3.2, in Table C, column (17) in 3.2.3.2 does ensured by the shore installation ensure—that the vapour return piping is such that the vessel is protected against detonations and passage of flames flame fronts—from the shore. (Explosion group / subgroup according to 3.2.3.2 Table C, column (16))

Add ADN wording in column Reason/Explanation.

### 61. 9.1, page 57

In Paragraph 9.1.0.12.3, in column *Modification*, under letter (d) insert a new paragraph after the first paragraph:

These operations shall be performed immediately and automatically and activate the emergency lighting if necessary.

and add Aligning language versions in column Reason/Explanation.

#### 62. 9.1, page 60

In Paragraph 9.1.0.53.2 new, in column *Modification*, insert <u>plug</u> after <u>to prevent</u>. Insert <u>and disconnections</u> after <u>connections</u>. Delete <u>being made</u> before <u>except when</u>.

Add editorial in column Reason/Explanation.

#### 63. 9.1, page 60

In Paragraph 9.1.0.53.6 new, in column Modification, insert <u>during</u> after <u>the protected area</u> and add <u>editorial</u> in column <u>Reason/Explanation</u>.

#### 64. 9.3, page 62

In Paragraph 9.3.1.10.3, in column *Modification*, in the first sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add ADN wording in column Reason/Explanation.

In Paragraph 9.3.2.10.3 9.3.3.10.3, in column *Modification*, in the first sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add *ADN wording* in column *Reason/Explanation*.

### 66. 9.3, page 65

In Paragraph 9.3.2.11.2, in column *Modification*, under letter (f), at the beginning of the first sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add *ADN wording* in column *Reason/Explanation*.

## 67. 9.3, page 65

In Paragraph 9.3.2.11.2, in column *Modification*, under letter (f), at the end of the first sentence, after <u>has reached 20% of the LEL of the cargo or 20% of the LEL of</u> replace <u>the cargo</u> by <u>n-Hexane</u> and add <u>Aligning language versions</u> in column <u>Reason/Explanation</u>.

#### 68. 9.3, page 65

In Paragraph 9.3.1.12.3 9.3.2.12.3, in column *Modification*, under letter (b), at the beginning of the first sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add *ADN wording* in column *Reason/Explanation*.

## 69. 9.3, page 65

In Paragraph 9.3.3.12.3, in column *Modification*, under letter (b), at the beginning of the first sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add *ADN wording* in column *Reason/Explanation*.

#### 70. 9.3, page 69

In Paragraph 9.3.1.17.6, in column *Modification*, in the seventh indent, in the first sentence, delete <u>by means of direct-measuring sensors</u> and add *Aligning language versions* in column *Reason/Explanation*.

#### 71. 9.3, page 69

In Paragraph 9.3.1.17.6, in column *Modification*, in the seventh indent, at the end of the first sentence, replace <u>Vol%</u> by <u>% volume</u> add <u>ADN wording</u> in column *Reason/Explanation*.

#### 72. 9.3, page 69

In Paragraph 9.3.1.17.6, in column *Modification*, in the paragraph after the eight indent, at the beginning of the first sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add ADN wording in column Reason/Explanation.

In Paragraph 9.3.1.17.6, in column *Modification*, in the paragraph after the eight indent, at the end of the first sentence, insert <u>whatever gives the more critical value</u> after <u>of the cargo or 20% of the LEL of n-Hexane</u> and add <u>Aligning language versions</u> in column Reason/Explanation.

## 74. 9.3, page 70

In Paragraph 9.3.2.17.6 9.3.3.17.6, in column *Modification*, in the seventh indent, at the end of the first sentence, replace <u>Vol%</u> by <u>% volume</u> add *ADN wording* in column *Reason/Explanation*.

## 75. 9.3, page 71

In Paragraph 9.3.2.17.6 9.3.3.17.6, in column *Modification*, in the paragraph after the eight indent, at the beginning of the first sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add ADN wording in column Reason/Explanation.

## 76. 9.3, page 71

In Paragraph 9.3.2.17.6 9.3.3.17.6, in column *Modification*, in the paragraph after the eight indent, at the end of the first sentence, insert <u>whatever gives the more critical value</u> after <u>of the cargo or 20% of the LEL of n-Hexane</u> and add Aligning language versions in column Reason/Explanation.

## 77. 9.3, page 71

In Paragraph 9.3.2.20.4 9.3.3.20.4, in column *Modification*, at the beginning of the first sentence, mark *list of substances on the* in strike-through and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add *ADN wording 2x* in column *Reason/Explanation*.

#### 78. 9.3, page 71

In Paragraph 9.3.2.20.4 9.3.3.20.4, in column *Modification*, at the end of the second sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>(see column (16) of Table C in 3.2.3.2).</u>

## 79. 9.3, page 72

In Paragraph 9.3.2.21.1, in column *Modification*, under letter (g), at the beginning of the first sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add *ADN wording 2x* in column *Reason/Explanation*.

In Paragraph 9.3.2.21.1, in column *Modification*, under letter (g), at the end of the second sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>(see column (16) of Table C in 3.2.3.2).</u>

### 81. 9.3, page 72

In Paragraph 9.3.3.21.1, in column *Modification*, under letter (g), at the beginning of the first sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add *ADN wording 2x* in column *Reason/Explanation*.

## 82. 9.3, page 72

In Paragraph 9.3.3.21.1, in column *Modification*, under letter (g), at the end of the second sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>(see column (16) of Table C in 3.2.3.2).</u>

#### 83. 9.3, page 73

In Paragraph 9.3.3.21.7, in column *Modification*, under letter (b), insert <u>of the vacuum valve</u> after vacuum pressure and add Aligning language versions in column Reason/Explanation.

## 84. 9.3, page 74

In Paragraph 9.3.2.22.4, in column *Modification*, under letter (a), in the last sentence delete , <u>and no work is being carried out and signs indicate the area</u> and add a new last sentence <u>Signs shall indicate the area as range of danger</u>. and add <u>editorial</u> in column <u>Reason/Explanation</u>.

#### 85. 9.3, page 74

In Paragraph 9.3.2.22.4, in column *Modification*, under letter (b), at the beginning of the first sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u> and add *ADN wording 2x* in column *Reason/Explanation*.

#### 86. 9.3, page 75

In Paragraph 9.3.2.22.4, in column *Modification*, under letter (c), at the beginning of the first sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u>

#### 87. 9.3, page 75

In Paragraph 9.3.2.22.4, in column *Modification*, for the paragraph after letter (c), insert (d) before <u>If shut-off devices</u> and add <u>More clear</u> in column <u>Reason/Explanation</u>.

In Paragraph 9.3.2.22.4, in column *Modification*, letter (d) becomes letter (e). In the first paragraph add which will be after subgroup of the substances. Delete list of substances on the and insert substance list before (see column (16) of Table C in 3.2.3.2). Add ADN wording in column Reason/Explanation.

#### 89. 9.3, page 75

In Paragraph 9.3.2.22.4, in column *Modification*, in the first paragraph after letter (e), in the last sentence delete , <u>and no work is being carried out and signs indicate the area</u> and add a new last sentence <u>Signs shall indicate the area as range of danger</u>. and add <u>editorial</u> in column <u>Reason/Explanation</u>.

#### 90. 9.3, page 75

In Paragraph 9.3.2.22.4, in column *Modification*, in the last paragraph, replace <u>pipe</u> by <u>piping</u>, delete <u>in closed vessels</u> after <u>heatable for carriage</u>, replace <u>have to</u> by <u>shall</u> and add <u>Aligning language versions</u> in column <u>Reason/Explanation</u>.

## 91. 9.3, page 75

In Paragraph 9.3.3.22.4, in column *Modification*, under *open N Type:*, in the second indent, at the beginning of the sentence, delete <u>safety</u> and add <u>Aligning language versions</u> in column *Reason/Explanation*.

## 92. 9.3, page 76

In Paragraph 9.3.3.22.4, in column *Modification*, under *closed N Type:*, in the first indent, mark *safety devices for preventing unacceptable overpressure or vacuum* in strike-through and add *double* in column *Reason/Explanation*.

#### 93. 9.3, page 76

In Paragraph 9.3.3.22.4, in column *Modification*, under *closed N Type:*, in the paragraph before letter (b), delete <u>a device for the safe depressurization of the tanks which clearly indicates whether it is open or shut.</u> and add a new letter (a) to read as <u>a connection for the safe return ashore of gases expelled during loading</u>.

#### 94. 9.3, page 76

In Paragraph 9.3.3.22.4, in column *Modification*, under *closed N Type:*, under letter (b), replace <u>a connection for the safe return ashore of gases expelled during loading</u> by <u>a device for the safe depressurization of the tanks which clearly indicates whether it is open or shut and add Aligning language versions in column Reason/Explanation.</u>

In Paragraph 9.3.3.22.4, in column *Modification*, under *closed N Type*:, under letter (b), delete text under letter (d) and delete letter (d).

#### 96. 9.3, page 76

In Paragraph 9.3.3.22.4, in column *Modification*, under *closed N Type:*, letter (e) becomes letter (d).

## 97. 9.3, page 76

In Paragraph 9.3.3.22.4, in column *Modification*, under *closed N Type:*, under letter (d), at the beginning of the first sentence, replace <u>when the list of substances on the vessel</u> by <u>If the vessel substance list</u>.

#### 98. 9.3, page 76

In Paragraph 9.3.3.22.4, in column *Modification*, under *closed N Type:*, under letter (d), in the second indent, at the end of the sentence, delete <u>capable of withstanding a detonation</u> and add <u>superfluos</u> in column <u>Reason/Explanation</u>.

## 99. 9.3, page 76

In Paragraph 9.3.3.22.4, in column *Modification*, under *closed N Type:*, under letter (d), in the paragraph under the third indent, insert <u>which will be</u> after <u>subgroup of the substances</u>, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>(see column (16) of Table C in 3.2.3.2)</u>. Add *ADN wording* in column *Reason/Explanation*.

#### 100. 9.3, page 77

In Paragraph 9.3.3.22.4, in column Modification, under closed N Type:, under letter (d), in the second paragraph under the third indent, delete in closed vessels and add superfluos in column Reason/Explanation.

#### 101. 9.3, page 77

In Paragraph 9.3.3.22.4, in column Modification, under closed N Type:, under letter (d), in the second paragraph under the third indent, delete in closed vessels and add superfluos in column Reason/Explanation.

#### 102. 9.3, page 77

In Paragraph 9.3.3.22.4, in column Modification, under closed N Type:, under letter (d), insert a new last paragraph to read as If shut-off devices will be mounted between the venting piping and the cargo tank this devices shall be mounted between the cargo tank and the flame arrestor and each cargo tank has to be equipped with its own pressure relieve valves, and add Aligning language versions in column Reason/Explanation.

In Paragraph 9.3.3.22.4, in column Modification, under closed N Type:, letter (f) becomes letter (e).

#### 104. 9.3, page 77

In Paragraph 9.3.3.22.4, in column *Modification*, under letter (e), in the last sentence delete <u>and signs indicate the area as range of danger where work is not allowed to be carried out.</u> and add a new last sentence <u>Signs shall indicate the area as range of danger.</u> and add <u>editorial</u> in column Reason/Explanation.

## 105. 9.3, page 77

In Paragraph 9.3.2.22.5 9.3.3.22.5, in column *Modification*, under letter (a), insert (devices for preventing unacceptable overpressure or vacuum, high velocity vent valve, deflagration safe vacuum valve, deflagration safe device for the safe depressurization of the tanks) after the equipment according to 9.3.x.22.4 and add More Clear in column Reason/Explanation.

#### 106. 9.3, page 80

In Paragraph 9.3.2.26.2, in column *Modification*, in the first and second paragraph after the third indent, at the beginning of the first sentence, delete two times <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u>. Add *ADN wording 3x* in column *Reason/Explanation*.

#### 107. 9.3, page 80

In Paragraph 9.3.2.26.2, in column *Modification*, in the fourth paragraph after the third indent, at the end of the sentence, replace <u>list of substances on the vessel</u> by <u>vessel substance list</u>.

#### 108. 9.3, page 80

In Paragraph 9.3.3.26.2, in column *Modification*, under *in the case of a protected system:*, cut — *an ullage opening:* and — *connections, with stop valves, for pipes and hose assemblies:* and paste below *in the case of a protected system:* and add *Aligning language versions* in column *Reason/Explanation*.

#### 109. 9.3, page 81

In Paragraph 9.3.3.26.2, in column *Modification*, under *in the case of a closed system:*, under letter (a), in the last paragraph, in the first sentence, replace <u>they do</u> by <u>it does</u> and add <u>editorial</u> in column <u>Reason/Explanation</u>.

In Paragraph 9.3.3.26.2, in column *Modification*, under *in the case of a closed system:*, under letter (a), in the last paragraph, at the end the last sentence, insert *for the substances to be transported* and add *Aligning language versions* in column *Reason/Explanation*.

### 111. 9.3, page 81

In Paragraph 9.3.3.26.2, in column *Modification*, under *in the case of a closed system:*, under letter (b), in the first paragraph, delete <u>list of substances on the</u> and insert <u>substance</u> <u>list</u> before <u>according to 1.16.1.2.5</u> and Add ADN wording 2x in column Reason/Explanation.

## 112. 9.3, page 81

In Paragraph 9.3.3.26.2 in column *Modification*, under *in the case of a closed system:*, under letter (b), in the last paragraph, insert <u>/subgroup</u> after <u>explosion group</u> and delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>(see column (16) of Table in 3.2.3.2 C.)</u>. Add *ADN wording 2x* in column *Reason/Explanation*.

## 113. 9.3, page 81

In Paragraph 9.3.3.26.2, in column *Modification*, in the last sentence, delete <u>of a tank for residual products</u> and Add superflous in column Reason/Explanation.

#### 114. 9.3, page 84

In Paragraph 9.3.1.51 new 9.3.2.51 new 9.3.3.51 new, in column Modification, under letter (c), at the beginning of the sentence, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according to 1.16.1.2.5</u>. Add ADN wording in column Reason/Explanation.

#### 115. 9.3, page 86

In Paragraph 9.3.1.53.19.3.2.53.1 9.3.3.53.1, in column *Modification*, in the second paragraph, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>(see column (15) and (16) of Table C in 3.2.3.2,)</u> and add ADN wording 3x in column Reason/Explanation.

#### 116. 9.3, page 86

In Paragraph 9.3.1.53.19.3.2.53.1 9.3.3.53.1, in column *Modification*, in the third and fourth paragraph, delete <u>list of substances on the</u> and insert <u>substance list</u> before <u>according</u> to 1.16.1.2.5.

#### 117. 9.3, page 86

In Paragraph 9.3.1.53.29.3.2.53.2 9.3.3.53.2, in column *Modification*, in the second paragraph, insert <u>shall be led</u> after <u>shell plating</u> and add <u>Sentence incomplete</u> in column <u>Reason/Explanation</u>.

## 118. Annex 2, page 92

In line *Receptacle for slops*, in column *Paragraphs*, at the end of the sentence insert <u>(font size 10 cm)</u>.

## 119. Annex 2, page 92

In Paragraph 7.2.4.1.1. in column *Modification*, in the first indent, insert, located not less than one quarter of the vessels breadth from the outer shell after receptacles for slops shall be properly secured in the cargo area.

## 120. Annex 2, page 93

In Paragraph 7.2.4.15.2, in column *Modification*, delete the last sentence.