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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)**

Thirty-ninth session

Geneva, 24–28 January 2022

Item 5 (b) of the provisional agenda

Proposed amendments to the Regulations annexed to ADN: other proposals

**Amendments due to enter into force on 1 January 2023,
updating of references to standards**

Transmitted by the Government of Germany ****

Summary

Executive summary: Some of the standards cited in the Regulations annexed to ADN were mentioned with an incorrect publication date when they were first included. These standards thus cannot be found and so cannot be applied.

In several provisions, the current version of ADN refers to EN, ISO and DIN standards, IEC standards and ASTM standards that have been revised and replaced.

When building new vessels or replacing equipment or components of a vessel, it is not possible to find products on the market that comply with those previous standards. If components that meet the new standards are used, the inspection bodies or classification societies cannot certify in their inspection report in accordance with section 1.16.3 of ADN that the components comply with the current requirements of the Regulations annexed to ADN and the components must be objected to during inspections on the grounds that they do not comply with the Regulations.

The revised norms and standards and revised electrotechnical, explosion protection and other test procedures generally result in an improved level of

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safety. The highest possible level of safety should always be maintained when building and fitting out vessels for the transport of dangerous goods, taking into account necessary and appropriate transitional periods.

Action to be taken: Update the references to EN, ISO and DIN standards, IEC standards and ASTM standards, with effect from 1 January 2023. As far as possible, ISO and IEC standards will be used, so as to allow non-European Union contracting parties to apply them.

Introduction of transitional provisions: N.R.M. from 1 January 2023, renewal of the certificate of approval after 31 December 2026.

Related documents: Report of the thirty-fourth session, January 2019, ECE/TRANS/WP.15/AC.2/70, paras. 81 and 82.

Introduction

1. The ADR/RID/ADN Joint Meeting has set up a working group on standards tasked with the continuous monitoring of technical standards specific to dangerous goods and standards that are referred to in the Regulations; it checks the content of the standards and their revisions at the draft stage to ensure compatibility with the dangerous goods regulations. For general standards, e.g. in the field of electrical engineering, there is no systematic follow-up by the international bodies that deal with dangerous goods.

2. The norms and standards referred to in the Regulations annexed to ADN have generally not been developed specifically for the transport of dangerous goods but, rather, concern many different industrial and more general fields. It is therefore up to the ADN Safety Committee to independently verify the validity of the references and their applicability in the Regulations.

3. The informal working group on standards envisaged by the ADN Safety Committee has not materialized for various reasons. The delegation of Germany has therefore taken it upon itself to check the validity of the standards mentioned in the 2021 edition of ADN and has drawn up the following proposed amendments.

I. Requests and justification

A. Proposed amendments to the Regulations annexed to ADN

1. Section 1.2.1 “Definitions” – make the following changes:

(a) In the definitions of “auto-ignition temperature”, “deflagration”, “detonation”, “explosion”, “explosive atmosphere” and “temperature class”:

Replace “EN 13237:2011” with “EN 13237:2012”.

4. Title of the standard: “Potentially explosive atmospheres – Terms and definitions for equipment and protective systems intended for use in potentially explosive atmospheres”.

5. This is to correct an editorial error. There is no 2011 edition of this standard.

6. There is no need for a transitional provision as no new requirements are being introduced.

(b) In the definition of “gas detection system”:

Replace “EN 50271:2010” with “EN 50271:2018”.

7. Title of the standard: “Electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen – Requirements and tests for apparatus using software and/or digital technologies”.

8. The edition of the standard mentioned is out of date. The changes include technically relevant aspects of compliance with safety integrity level (SIL) 1 and adjustments to the structure of EN 50402 (“Electrical apparatus for the detection and measurement of combustible or toxic gases or vapours or of oxygen – Requirements on the functional safety of gas detection systems”).

9. It is no longer possible to obtain gas detection systems for new builds or spare parts for vessels already in service that comply with the previous edition of the standard. We are not aware of any reason why the current edition would not be suitable for ADN.

10. Insert the following transitional provision in ADN 1.6.7.2.2.2, Table of general transitional provisions: Tank vessels:

| | | |
|-------|--|--|
| 1.2.1 | Gas detection system Test according to IEC/EN 60079-29-1:2016 and EN 50271:2018 | N.R.M. from 1 January 2023 for vessels brought into service before 1 January 2019: Renewal of the certificate of approval after 31 December 2024 for vessels brought into service from 1 January 2019: Renewal of the certificate of approval after 31 December 2027 |
|-------|--|--|

11. The amended version of the standard contains safety-related elements. Gas detection systems should therefore be modernized in order to maintain the best possible level of safety.

12. However, the 2010 edition of the standard for gas detection systems was only introduced with effect from 1 January 2019 (ADN 2019). No inspection standard was mentioned in the definition until ADN 2019. A transitional period is still applicable: “Renewal of the certificate of approval after 31 December 2024”.

13. A differentiated transitional period should therefore be introduced.

14. This does not imply any change for vessels already in service as at 1 January 2019. The more recent standard will only need to be applied for those vessels when the certificate of approval is renewed after 31 December 2024. In practical terms, those vessels will not need to apply the 2010 version of the standard.

15. Application of the 2018 edition of the standard should be postponed for vessels brought into service after 1 January 2019. It should only be required upon renewal of the certificate of approval after 31 December 2027. This means that the existing systems can still be used for five years, even on ships that will be brought into service in 2022.

(c) In the definitions of “oxygen measuring system” and “oxygen meter”:

Replace “IEC/EN 50104:2010” with “EN 50104:2019”.

16. Title of the standard: “Electrical equipment for the detection and measurement of oxygen – Performance requirements and test methods”.

17. The edition of the standard mentioned is out of date. The changes include alignment of the requirements with EN 60079-29-1 (“Explosive atmospheres – Part 29-1: Gas detectors – Performance requirements of detectors for flammable gases”), the revision of section 5.4, Performance requirements and test methods, and the revision of section 4, General requirements.

18. It is no longer possible to obtain oxygen measuring systems or oxygen meters for new builds or spare parts for vessels already in service that comply with the previous edition of

the standard. We are not aware of any reason why the current edition would not be suitable for ADN.

19. Insert the following transitional provisions in ADN 1.6.7.2.2.2, Table of general transitional provisions: Tank vessels:

| | | |
|-------|---|--|
| 1.2.1 | Oxygen measuring system Test according to standard EN 50104:2019 | N.R.M. from 1 January 2023 Renewal of the certificate of approval after 31 December 2026 Until that date, the oxygen measuring system must be checked in accordance with IEC/EN 50104:2010 |
| 1.2.1 | Oxygen meter Test according to standard EN 50104:2019 | N.R.M. from 1 January 2023 Renewal of the certificate of approval after 31 December 2026 Until that date, the oxygen meter must be checked in accordance with IEC/EN 50104:2010 |

20. The amended version of the standard contains safety-related elements. Gas detection systems should therefore be modernized in order to maintain the highest possible level of safety. A transitional period of three to eight years from the adoption of the amendment is sufficient to organize the necessary replacements.

(d) In the definition of “protective suit”:

Replace “EN 1149-5:2008” with “EN 1149-5:2018”.

21. Title of the standard: “Protective clothing – Electrostatic properties – Part 5: Material performance and design requirements”.

22. The edition of the standard mentioned is out of date. The changes include the scope, normative references, new terms, the thickness of any non-conductive layer forming the outer surface of the suit, a grounding requirement, the thickness of any non-conductive accessory on the outer surface of the suit, and informative annex ZA.

23. The reference to the standard in the definition includes an indication of the conditions under which protective clothing is appropriate: “... shall correspond to the dangers likely to arise. For protective suits, see for example ...”. It is no longer possible to obtain protective suits that comply with the previous edition of the standard. We are not aware of any reason why the current edition would not be suitable for ADN.

24. Insert the following transitional provisions in ADN 1.6.7.2.2.2, Table of general transitional provisions: Tank vessels:

| | | |
|-------|---|----------------------------|
| 1.2.1 | Protective suit Compliance with EN 1149-5:2018 | N.R.M. from 1 January 2023 |
|-------|---|----------------------------|

25. Existing protective clothing does not need to be replaced, as it has a limited lifespan and will certainly be replaced as soon as it no longer fulfils its function.

(e) In the definition of “types of protection”, under “electrical equipment”

(i) Replace “EEEx (d)” with “EEEx d” and replace “IEC 60079-1:2014” with “IEC 60079-1:2014 Cor1:2018”.

26. Title of the standard: “Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures ‘d’”.

27. The change to the standard is editorial. It does not lead to in any improvement in technical safety.

28. Insert the following transitional provision in ADN 1.6.7.2.2.2, Table of general transitional provisions: Tank vessels:

| | | |
|-------|--|----------------------------|
| 1.2.1 | Types of protection EEx d, IEC standard | N.R.M. from 1 January 2023 |
|-------|--|----------------------------|

- (ii) *Replace “EEx (e)” with “EEx e” and replace “IEC 60079-7:2016” with “IEC 60079-7:2016 A1:2017”.*

29. Title of the standard: “Explosive atmospheres – Part 7: Equipment protection by increased safety ‘e’”.

30. The change to the standard is editorial. It does not lead to any improvement in technical safety.

31. Insert the following transitional provisions in ADN 1.6.7.2.2.2, Table of general transitional provisions: Tank vessels:

| | | |
|-------|--|----------------------------|
| 1.2.1 | Types of protection EEx e, IEC standard | N.R.M. from 1 January 2023 |
|-------|--|----------------------------|

- (iii) *Replace “EEx (ia)” with “EEx ia” and “EEx (ib)” with “EEx ib” and replace “IEC 60079-11:2012” with “IEC 60079-11:2011 Cor.:2012” twice.*

32. Title of the standard: “Explosive atmospheres – Part 11: Equipment protection by intrinsic safety ‘i’”.

33. This is an editorial correction of the entry in ADN. There is no need for a transitional provision.

- (iv) *Replace “EEx (m)” with “EEx m” and replace “IEC 60079-18:2014” with “IEC 60079-18:2014; A1:2017; Cor.:2018”.*

34. Title of the standard: “Explosive atmospheres – Part 18: Equipment protection by encapsulation ‘m’”.

35. The change to the standard is editorial and concerns the description of the test procedure. This does not result in any improvement in technical safety.

36. Insert the following transitional provision in ADN 1.6.7.2.2.2, Table of general transitional provisions: Tank vessels:

| | | |
|-------|--|----------------------------|
| 1.2.1 | Types of protection EEx e, IEC standard | N.R.M. from 1 January 2023 |
|-------|--|----------------------------|

- (v) *Replace “EEx (p)” with “EEx p” and replace “IEC 60079-2:2014” with “IEC 60079-2:2014 Cor.:2015”.*

37. Title of the standard: “Explosive atmospheres – Part 2: Equipment protection by pressurized enclosure ‘p’”.

- (vi) *Replace “EEx (q)” with “EEx q”.*

38. The dates of the edition of the standard are out of date. It is no longer possible to obtain components for new builds or spare parts for vessels already in service that comply with the previous edition of the standard. We are not aware of any reason why the current edition would not be suitable for ADN.

39. The amendments to the letter codes are in line with the current IEC standard.

40. No technical content has been published for the correction of the standard. This does not lead to any improvement in technical safety.

41. Insert the following transitional provision in ADN 1.6.7.2.2.2, Table of general transitional provisions: Tank vessels:

| | | |
|-------|---|----------------------------|
| 1.2.1 | Types of protection EEx p, EEx q, IEC Standard | N.R.M. from 1 January 2023 |
|-------|---|----------------------------|

(f) In the definitions of “equipment category” (three times) and “equipment protection level”:

Replace “IEC 60079-0” with “IEC 60079-0:2017+COR1:2020”.

(g) In the definition of “electrical apparatus protected against water jets”

Replace “IEC publication 60529” with “IEC Publication 60529:1989 + A1:1999 + A2:2013”.

42. Title of the standard: “Explosive atmospheres – Part 0: Equipment – General requirements”.

43. The only addition compared to the previous edition, which was applicable when ADN entered into force, is the IPX9 protection rating (test for resistance of enclosures to high pressure cleaners), which is not relevant in the context of ADN. This does not lead to any improvement in technical safety.

44. A dynamic reference would lead to too much uncertainty for persons applying the Regulations, as there is no indication of which edition of the standard should be applied. Furthermore, the legislator must retain full regulatory competence and not delegate it to private law standard-setting bodies. The legislator alone must decide (after a safety assessment) on the specific content of the standard to be made applicable in ADN for all persons applying the Regulations.

45. Insert the following transitional provision in ADN 1.6.7.2.2.2, Table of general transitional provisions: Tank vessels:

| | | |
|-------|---|----------------------------|
| 1.2.1 | Electrical apparatus protected against water jets IEC 60529:1989 + A1:1999 + A2:2013 | N.R.M. from 1 January 2023 |
|-------|---|----------------------------|

(h) In the definition of “explosion group/subgroup”:

Replace “IEC 60079-0:2012” with “IEC 60079-0:2017+COR1:2020”.

46. Title of the standard: “Explosive atmospheres – Part 0: Equipment – General requirements”.

47. The standard mentioned is out of date. Significant changes have been made to the content.

48. It is no longer possible to obtain components for new builds or spare parts for vessels already in service that comply with the previous edition of the standard. We are not aware of any reason why the current edition would not be suitable for ADN.

49. Insert the following transitional provision in ADN 1.6.7.2.2.2, Table of general transitional provisions: Tank vessels:

| | | |
|-------|---|---|
| 1.2.1 | Explosion group IEC 60079-0:2017+ COR1:2020 | N.R.M. from 1 January 2023 Renewal of the certificate of approval after 31 December 2026 |
|-------|---|---|

50. The amended edition of the standard contains safety-related elements. The components must therefore be replaced in order to maintain the best possible level of safety. A transitional period of three to eight years from the adoption of the amendment is sufficient to organize any necessary replacements.

(i) In the definition of “types of protection”, under “electrical equipment”

For “electrical equipment” replace “IEC 60079-0:2014” with “IEC 60079-0:2017+COR1:2020”.

51. Title of the standard: “Explosive atmospheres – Part 0: Equipment – General requirements”.

52. The standard mentioned is out of date. Significant changes have been made to the content.

53. It is no longer possible to obtain components for new builds or spare parts for vessels already in service that comply with the previous version of the standard. We are not aware of any reason why the current edition would not be suitable for ADN.

54. Insert the following transitional provision in ADN 1.6.7.2.2.2, Table of general transitional provisions: Tank vessels:

| | | |
|-------|---|---|
| 1.2.1 | Types of protection, electrical equipment CEI 60079-0:2017+ COR1:2020 | N.R.M. from 1 January 2023 Renewal of the certificate of approval after 31 December 2026 |
|-------|---|---|

55. The amended version of the standard contains safety-related elements. It must therefore be applied in the case of electrical equipment in order to maintain the best possible level of safety. A transitional period of three to eight years from the adoption of the amendment is sufficient to organize any necessary replacements.

(j) In the definition of “types of protection”, under “non-electrical equipment”:

(i) For EEx (en) replace “EN 13463-2:2005” with [“IEC 60079-1:2014”] [“ISO 80079-36”].

56. The series of standards mentioned previously has been withdrawn. For the evaluation, EN 13463-2 has been replaced with IEC 60079-1 and EN ISO 80079-36.

57. SN EN 13463-2:2005-04: “Non-electrical equipment for use in potentially explosive atmospheres – Part 2: Protection by flow restricting enclosure ‘fr’”.

58. IIE 60079-1:2014: “Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures ‘d’”.

59. ISO 80079-36:2016-02: “Explosive atmospheres – Part 36: Non-electrical equipment for explosive atmospheres – Basic method and requirements”.

60. Germany invites the Safety Committee to develop an appropriate transitional provision.

(ii) For EEx (d) replace “EN 13463-2:2005” with [“IEC 60079-15:2017”] [“ISO 80079-36”].

61. The series of standards mentioned previously has been withdrawn. In respect of the marking, EN 13463-3 has been replaced with EN ISO 80079-36, with the marking Ex h.

62. SN EN 13463-3:2005-07: “Non-electrical equipment for use in potentially explosive atmospheres – Part 3: Protection by flameproof enclosure ‘d’”.

63. IEC 60079-15:2017: “Explosive atmospheres – Part 15: Equipment protection by type of protection ‘n’”.

64. ISO 80079-36:2016-02: “Explosive atmospheres – Part 36: Non-electrical equipment for explosive atmospheres – Basic method and requirements”.

65. It is no longer possible to obtain components for new builds or spare parts for vessels already in service that comply with the previous edition of the standard. We are not aware of any reason why the current edition would not be suitable for ADN.

66. Germany invites the Safety Committee to develop an appropriate transitional provision.

(iii) *Replace “EEEx (c)” with “EEEx c”.*

(iv) *Replace “EEEx (b)” with “EEEx b” and replace “EN 13463-6:2005” with “ISO 80079-37:2016”.*

67. EN 13463-5:2011: “Non-electrical equipment intended for use in potentially explosive atmospheres – Part 6: Protection by control of ignition source ‘b’”.

68. ISO 80079-37:2016: “Explosive atmospheres – Part 37: Non-electrical equipment intended for use in explosive atmospheres – Non-electrical type of protection constructional safety ‘c’, control of ignition sources ‘b’, liquid immersion ‘k’”.

69. Germany invites the Safety Committee to develop an appropriate transitional provision.

(v) *Replace “EEEx (k)” with “EEEx k” and replace “EN 13463-8:2003” with “ISO 80079-37:2016”.*

70. EN 13463-8:2003: “Non-electrical equipment for use in potentially explosive atmospheres – Part 8: Protection by immersion in liquid ‘k’”.

71. ISO 80079-37:2016: “Explosive atmospheres – Part 37: Non-electrical equipment intended for use in explosive atmospheres – Non-electrical type of protection constructional safety ‘c’, control of ignition sources ‘b’, liquid immersion ‘k’”.

72. The series of standards mentioned previously has been withdrawn and replaced with the 80079 series, with substantial modifications to the content.

73. It is no longer possible to obtain components for new builds or spare parts for vessels already in service that comply with the previous edition of the standard. We are not aware of any reason why the current edition would not be suitable for ADN.

74. The amendments to the letter codes are in line with the current IEC standard.

75. Germany invites the Safety Committee to develop an appropriate transitional provision.

2. ADN 3.2.4.2 Application form for special authorizations under section 1.5.2

(a) 2.12 “Flow time”

Replace “ISO 2431-1996” with “ISO 2431:2019”.

76. Title of the standard: “Paints and varnishes – Determination of flow time by means of flow cups”.

77. This change is necessary because two new editions of the standard have been published in the meantime.

78. The content has been modified, including the general reference to ISO 4618 on terminology, a reference to measurements at temperatures and humidity levels other than those specified in the standard, and information on conducting measurements in a laboratory fume cupboard.

79. It is unlikely that laboratories are still conducting tests using the previous standard. We are not aware of any reason why the current edition would not be suitable for ADN.

80. There is no need for a transitional provision, as this is a change to the test method involving acceptable constraints, and the requirements for the construction and operation of vessels are unchanged.

(b) 3.2 “Flash-point”

(i) *Replace “DIN 51755-1:1974” with “DIN 51755:1974-03”.*

81. Title of the standard: “Testing of mineral oils and other combustible liquids; determination of flash-point by the closed tester according to Abel-Pensky”.

82. This is an editorial correction to the title of the standard.

83. ADN refers almost exclusively to standards that are available internationally (ISO, EN), which are commonly used and can be applied by all contracting parties.

84. In this case, the reference is to a DIN standard, specific to Germany, which is declared applicable. Unfortunately, the German delegation is not aware of any international standard that covers this area of application. The informal working group on substances could be invited to check the possibility of replacing it with an international standard.

85. There is no need for a transitional provision, as this is a change to the test method involving acceptable constraints, and the requirements for the construction and operation of vessels are unchanged.

(ii) *We were not able to check whether the French standard “NF M T60-103:1968” is still valid.*

(iii) *Replace “EN ISO 3679:2004” with “ISO 3679:2015”.*

86. Title of the standard: “Determination of flash no-flash and flash point – Rapid equilibrium closed cup method”.

87. The following changes have been made compared to EN ISO 3679:2004: change to the title; revision of the instrument requirements for temperature measurement; introduction of the ISO 3680 procedure into the Yes/No procedure as a separate procedure; and new precision values covering gas ignition and electric ignition.

88. It is unlikely that laboratories are still conducting tests using the previous standard. We are not aware of any reason why the current edition would not be suitable for ADN.

89. There is no need for a transitional provision, as this is a change to the test method involving acceptable constraints, and the requirements for the construction and operation of vessels are unchanged.

(iv) *Replace “EN ISO 2592:2002” with “ISO 2592:2017”.*

90. Title of the standard: “Petroleum and related products – Determination of flash and fire points – Cleveland open cup method”.

91. The following changes have been made compared to ISO 2592:2002–09: addition to annex D of an alternative method for handling skin-forming products; revision in annex B of instrument requirements for temperature measurement; change from 17 °C to 18 °C for flash point comparability by analogy with ASTM D92 based on current precision values; and addition of a method for determining an approximate flash point for a sample with an unknown flash point, by analogy with ASTM D92.

92. It is unlikely that laboratories are still conducting tests using the previous standard. We are not aware of any reason why the current edition would not be suitable for ADN.

93. There is no need for a transitional provision, as this is a change to the test method involving acceptable constraints, and the requirements for the construction and operation of vessels are unchanged.

- (v) *It was not possible to check whether the French standard “Appareil luchaire : norme française NF T60-103:1968” (Luchaire apparatus: French standard NF T60-103:1968) is still valid.*¹

(c) Section 3.3 “Explosion limits” (ignition limits)

Replace “EN 1839:2012” with “EN 1839:2017”.

94. Title of the standard: “Determination of the explosive limits and determination of the limiting oxygen concentration (LOC) for flammable gases and vapours”.

95. The edition of the standard mentioned is out of date. The main change is the addition of provisions from DIN EN 14756:2007-02, i.e. the inclusion of a method for determining the limiting oxygen concentration for flammable gases and vapours.

96. It is unlikely that laboratories are still conducting tests using the previous standard. We are not aware of any reason why the current edition would not be suitable for ADN.

97. There is no need for a transitional provision, as this is a change to the test method involving acceptable constraints, and the requirements for the construction and operation of vessels are unchanged.

3. 8.1.6.2 (Checking and inspection of equipment)

(a) In the first sentence:

- (i) *Replace “EN ISO 10380:2003-10” with “ISO 10380:2012”*

98. Title of the standard: “Pipework – Corrugated metal hoses and hose assemblies”.

99. The edition of the standard mentioned is out of date. The following changes have been made:

- (a) Updating and addition of normative references;
- (b) Redesign of the presentation of the standard, including images and tables;
- (c) Updating of testing and performance requirements to reflect current industry practice;
- (d) Introduction of a conformity assessment system and a certification system;
- (e) Editorial revision of the standard.

100. It is no longer possible to obtain components for new builds or spare parts for vessels already in service that comply with the previous edition of the standard. We are not aware of any reason why the current edition would not be suitable for ADN.

101. Insert the following transitional provision in ADN 1.6.7.2.2.2, Table of general transitional provisions: Tank vessels:

| | | |
|---------|-------------------|---|
| 8.1.6.2 | EN ISO 10380:2012 | N.R.M. from 1 January 2023 Renewal of the certificate of approval after 31 December 2026 |
|---------|-------------------|---|

102. The amended version of the standard contains safety-related elements. The hoses and hose assemblies should therefore be replaced in order to maintain the best possible level of safety. A transitional period of three to eight years from the adoption of the amendment is sufficient to organize the necessary replacements.

¹ Note from the CCNR secretariat: according to the AFNOR website, standard T60-103:1968 is still in force. Its official title is: “*Produits pétroliers ; Point d’éclair en vase clos des lubrifiants et des huiles combustibles*” / “Petroleum products; Closed cup flashpoint of lubricants and fuel oils”.

(ii) *Replace “EN 13765:2010-08” with “ISO 13765:2018”.*

103. Title of the standard: “Thermoplastic multi-layer (non-vulcanized) hoses and hose assemblies for the transfer of hydrocarbons, solvents and chemicals – Specification”.

104. The edition of the standard mentioned is out of date and another previous edition was published in 2015. The 2018 edition includes significant changes to the content:

- (a) The normative references (section 2) have been updated;
- (b) It now states that lower minimum and/or higher maximum temperatures are allowed on agreement with the manufacturer (section 4);
- (c) The requirement for electrical continuity between the end fittings (section 7) has been amended;
- (d) The marking requirements for hoses and hose assemblies (section 10) have been updated;
- (e) Deviation limits have been added for the test load for the maximum pressure test (annex D);
- (f) Requirements have been added regarding the sequence of hydrostatic tests (annex H);
- (g) The requirements for type and routine tests (annex K) and batch tests (annex L) for hoses and hose assemblies have been updated;
- (h) Bibliographic references have been added.

105. It is no longer possible to obtain components for new builds or spare parts for vessels already in service that comply with the previous edition of the standard. We are not aware of any reason why the current edition would not be suitable for ADN.

106. Insert the following transitional provision in ADN 1.6.7.2.2.2, Table of general transitional provisions: Tank vessels:

| | | |
|---------|-------------------|---|
| 8.1.6.2 | EN ISO 13765:2018 | N.R.M. from 1 January 2023 Renewal of the certificate of approval after 31 December 2026 |
|---------|-------------------|---|

107. The amended edition of the standard contains safety-related elements. Hoses and hose assemblies should therefore be replaced in order to maintain the highest possible level of safety. A transitional period of three to eight years from the adoption of the amendment is sufficient to organize the necessary replacements.

(b) In the second sentence:

(i) *Replace “or table K.1 of standard EN 13765: 2010-08” with “or section 8 and annex K of standard EN 13765:2018 (routine tests)”.*

108. The requirements for type and routine tests (annex K) for hoses and hose assemblies have been updated in comparison with EN 13765:2010+A1:2015.

109. The amendment clarifies the test requirement in section 8 of the standard and reflects current safety levels.

110. No transitional provision is necessary, as there is no need to replace hoses and hose assemblies.

(ii) *Delete “or paragraph 7 of standard EN ISO 10380:2003-10”.*

111. It is proposed to delete the reference to this standard as the current editions of the standard no longer require regular checks of the hoses.

112. No transitional provision is necessary, as it only involves removing a verification requirement.

4. 8.2.2.8.2 of ADN (expert certificate)

The reference to “ISO/IEC 7810:2003” should be replaced with “ISO/IEC 7810:2019”.

113. Title of the standard: “Identification cards – Physical characteristics”.

114. The edition of the standard mentioned is out of date. There is a change compared to the previous edition in respect of the format of the identification cards: “the overall size tolerance of the ID-1 size returned card has changed (5.2)” (Source: <https://cdn.standards.iteh.ai/samples/70483/16f04de1cda3494f9e12567b7d1aa541/ISO-IEC-7810-2019.pdf>).

115. It is likely that blank cards that conform to the previous standard will soon no longer be available on the market, which means that disparities will arise if this change to the format is not reflected. However, there is no need to replace identity documents issued previously for safety reasons.

116. In ADN 1.6.8, Transitional provisions concerning training of the crew, insert the following new transitional provision:

“1.6.8.3 **Certificates of specific knowledge of ADN** referred to in 8.2.2.8 issued before [1 January 2023] [1 July 2023] and which conform to the format laid down in ISO/IEC 7810:2003 shall remain valid until the expiry date indicated therein.”

5. 9.1.0.53.4 (a) (Type and location of electrical and non-electrical installations and equipment intended for use in the protected area)

Replace “EN 15869-03:2010” with “EN 15869-1:2019”.

117. Title of the standard: “Inland navigation vessels – Electrical shore connection, three phase current 400 V, 50 Hz, up to 125 A – Part 1: General requirements”.

118. The edition of the standard mentioned is out of date. Significant changes have been made to the content:

- (a) The title has been changed;
- (b) The maximum operating current has been increased from 65 A to 125 A;
- (c) The scope has been expanded and clarified;
- (d) Normative references have been added;
- (e) Section 3 has been expanded and the definitions of terms have been aligned with those used in EN 16840;
- (f) All requirements that apply to the “shore connections” parts of electrical installations have been moved from parts 2 and 3 to part 1 and merged;
- (g) Figure 1 (schematic representation) has been adapted in line with the corresponding figure in EN 16840;
- (h) Section A.5 has been added to annex A;
- (i) The references mentioned in the different parts of the EN 15869 series have been brought together and inserted in part 1;
- (j) Various editorial changes have been made.

119. It is no longer possible to obtain components for new builds or spare parts for vessels already in service that comply with the previous edition of the standard. We are not aware of any reason why the current edition would not be suitable for ADN.

120. Insert the following transitional provision in ADN 1.6.7.2.2.2, Table of general transitional provisions: Tank vessels:

| | | |
|----------------|-----------------|---|
| 9.1.0.53.4 (a) | EN 15869-1:2019 | N.R.M. from 1 January 2023 Renewal of the certificate of approval after 31 December 2026 |
|----------------|-----------------|---|

121. The amended edition of the standard contains safety-related elements. Shore connections should therefore be replaced in order to maintain the highest possible level of safety. A transitional period of three to eight years from the adoption of the amendment is sufficient to organize the necessary replacements.

6. 8.1.2.2 (h) (Documents to be carried on board dry cargo vessels), first and second indents:

Replace “IEC 60079-0” with “IEC 60079-0:2011, modified + Cor.:2012 + Cor.:2013”.

7. 8.1.2.3 (u) (Documents to be carried on board tank vessels), first and second indents:

Replace “IEC 60079-0” with “IEC 60079-0:2011, modified + Cor.:2012 + Cor.:2013”.

122. A dynamic reference would lead to too much uncertainty for persons applying the Regulations, as there is no indication of which edition of the standard should be applied. Furthermore, the legislator must retain full regulatory competence and not delegate it to private law standard-setting bodies. The legislator alone must decide (after a safety assessment) on the specific content of the standard to be made applicable in ADN for all persons applying the regulation.

B. Sources

123. The information on the changes made to the editions of the DIN, EN and ISO standards is taken from the website: www.beuth.de (publisher with exclusive rights to market the standards in Germany).

124. The IEC standards and their current status are described on the webpage: <https://webstore.iec.ch/home>.

II. Safety

125. The inclusion of the most recent editions of the standards ensures that the highest possible levels of safety are maintained.

III. Implementation

126. The transitional periods ensure that previous safety levels are maintained. Vessel owners and operators will be given a reasonable period of time to make the required adjustments, by no later than the date of the next general survey of the vessel at the shipyard. No disproportionate investment costs or restrictions on vessel operations are expected to arise.