CCNR-ZKR/ADN/WP.15/AC.2/41/INF.4

28 November 2022

Or. GERMAN

JOINT MEETING OF EXPERTS ON THE REGULATIONS ANNEXED TO THE AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS (ADN) (SAFETY COMMITTEE)

(Forty-first meeting, Geneva, 23 – 27 January 2023)

Item 4 (d) of the provisional agenda

**Implementation of the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN): Training of experts**

Summary document for the catalogue of questions "Gas"

Transmitted by the Central Commission for the Navigation of the Rhine

| Number | Source | Response | Remarks | Dealt with on |
| --- | --- | --- | --- | --- |
| **Knowledge of physics and chemistry** |  |  |  |  |
|  |  |  |  |  |
| **Objective 1.1** |  |  |  |  |
|  |  |  |  |  |
| 231 01.1-01 | Boyle-Mariotte law: *pV*=constant | C |  | 28.09.2016 |
| 231 01.1-02 | Boyle-Mariotte law: *pV*=constant | C |  | 10.12.2020 |
| 231 01.1-03 | Boyle-Mariotte law: *pV*=constant | B | Modification only in German | 10.12.2020 |
| 231 01.1-04 | Boyle-Mariotte law: *pV*=constant | A |  | 28.09.2016 |
| 231 01.1-05 | Boyle-Mariotte law: *pV*=constant | B |  | 28.09.2016 |
| 231 01.1-06 | Gay-Lussac law: p/T=constant | C |  | 28.09.2016 |
| 231 01.1-07 | Gay-Lussac law: p/T=constant | D |  | 22.09.2022 |
| 231 01.1-08 | Gay-Lussac law: p/T=constant | B |  | 22.09.2022 |
| 231 01.1-09 | Gay-Lussac law: p/T=constant | C |  | 22.09.2022 |
| 231 01.1-10 | Gay-Lussac law: p/T=constant | B |  | 28.09.2016 |
|  |  |  |  |  |
| **Objective 1.2** |  |  |  |  |
|  |  |  |  |  |
| 231 01.2-01 | Fundamental law of gases: *pV/T*=constant | A |  | 22.09.2022 |
| 231 01.2-02 | Fundamental law of gases: *pV/T*=constant | B | Modification only in German | 22.09.2022 |
| 231 01.2-03 | Fundamental law of gases: *pV/T*=constant | D | Modification only in German | 10.12.2020 |
| 231 01.2-04 | Fundamental law of gases: *pV/T*=constant | C |  | 22.09.2022 |
| 231 01.2-05 | Fundamental law of gases: *pV/T*=constant | D |  | 28.09.2016 |
| 231 01.2-06 | Fundamental law of gases: *pV/T*=constant | B |  | 28.09.2016 |
| 231 01.2-07 | Fundamental law of gases: *pV/T*=constant | A |  | 28.09.2016 |
| 231 01.2-08 | Fundamental law of gases: *pV/T*=constant | B |  | 28.09.2016 |
| 231 01.2-09 | Fundamental law of gases: *pV/T*=constant | A |  | 28.09.2016 |
| 231 01.2-10 | Fundamental law of gases: *pV/T*=constant | C |  | 28.09.2016 |
|  |  |  |  |  |
| **Objective 2.1** |  |  |  |  |
|  |  |  |  |  |
| 231 02.1-01 | Partial pressure – definitions | B |  | 10.12.2020 |
| 231 02.1-02 | Partial pressure – definitions | C |  | 10.12.2020 |
| 231 02.1-03 | *ptot = ∑pi and Vol.-% = pi x 100/ ptot* | D |  | 20.09.2018 |
| 231 02.1-04 | *ptot = ∑pi and Vol.-% = pi x 100/ ptot* | C |  | 28.09.2016 |
| 231 02.1-05 | *ptot = ∑pi and Vol.-% = pi x 100/ ptot* | B |  | 28.09.2016 |
| 231 02.1-06 |  |  | deleted | 06.06.2011 |
| 231 02-1-07 | *ptot = ∑pi and Vol.-% = pi x 100/ ptot* | B |  | 28.09.2016 |
| 231 02.1-08 | *ptot = ∑pi and Vol.-% = pi x 100/ ptot* | C |  | 28.09.2016 |
| 231 02.1-09 | *ptot = ∑pi and Vol.-% = pi x 100/ ptot* | D |  | 28.09.2016 |
|  |  |  |  |  |
| **Objective 2.2** |  |  |  |  |
|  |  |  |  |  |
| 231 02.2-01 | *ptot = ∑pi and Vol.-% = pi x 100/ ptot and p \* V = constant* | B |  | 22.09.2022 |
| 231 02.2-02 | *ptot = ∑pi and Vol.-% = pi x 100/ ptot and p \* V = constant* | D |  | 22.09.2022 |
| 231 02.2-03 | *ptot = ∑pi and Vol.-% = pi x 100/ ptot and p \* V = constant* | B |  | 22.09.2022 |
| 231 02.2-04 | *ptot = ∑pi and Vol.-% = pi x 100/ ptot and p \* V = constant* | D |  | 22.09.2022 |
| 231 02.2-05 | *ptot = ∑pi and Vol.-% = pi x 100/ ptot and p \* V = constant* | A |  | 22.09.2022 |
| 231 02.2-06 | *ptot = ∑pi and Vol.-% = pi x 100/ ptot and p \* V = constant* | C |  | 22.09.2022 |
| 231 02.2-07 | *ptot = ∑pi and Vol.-% = pi x 100/ ptot and p \* V = constant* | C |  | 22.09.2022 |
| 231 02.2-08 | Characteristics of substances | D |  | 28.09.2016 |
|  |  |  |  |  |
| **Objective 3.1** |  |  |  |  |
|  |  |  |  |  |
| 231 03.1-01 | 1 kmol ideal gas = 24 m3 at 100 kPa and 15 °C, quantity of substance = M \*mass [kg] | B |  | 22.09.2022 |
| 231 03.1-02 | 1 kmol ideal gas = 24 m3 at 100 kPa and 15 °C, quantity of substance = M \*mass [kg] | A |  | 22.09.2022 |
| 231 03.1-03 | 1 kmol ideal gas = 24 m3 at 100 kPa and 15 °C, quantity of substance = M \*mass [kg] | B |  | 22.09.2022 |
| 231 03.1-04 | 1 kmol ideal gas = 24 m3 at 100 kPa and 15 °C, quantity of substance = M \*mass [kg] | A |  | 22.09.2022 |
| 231 03.1-05 | 1 kmol ideal gas = 24 m3 at 100 kPa and 15 °C, quantity of substance = M \*mass [kg] | B |  | 22.09.2022 |
| 231 03.1-06 | 1 kmol ideal gas = 24 m3 at 100 kPa and 15 °C, quantity of substance = M \*mass [kg] | C |  | 22.09.2022 |
| 231 03.1-07 | 1 kmol ideal gas = 24 m3 at 100 kPa and 15 °C, quantity of substance = M \*mass [kg] | B |  | 22.09.2022 |
| 231 03.1-08 | 1 kmol ideal gas = 24 m3 at 100 kPa and 15 °C, quantity of substance = M \*mass [kg] | D |  | 22.09.2022 |
| 231 03.1-09 | 1 kmol ideal gas = 24 m3 at 100 kPa and 15 °C, quantity of substance = M \*mass [kg] | C |  | 22.09.2022 |
| 231 03.1-10 | 1 kmol ideal gas = 24 m3 at 100 kPa and 15 °C, quantity of substance = M \*mass [kg] | C |  | 22.09.2022 |
|  |  |  |  |  |
| **Objective 3.2** |  |  |  |  |
|  |  |  |  |  |
| 231 03.2-01 | *m = 0,12 \* p \* M \* V / T* | B |  | 28.09.2016 |
| 231 03.2-02 | *m = 0,12 \* p \* M \* V / T* | A |  | 22.09.2022 |
| 231 03.2-03 | *m = 0,12 \* p \* M \* V / T* | B |  | 28.09.2016 |
| 231 03.2-04 | *m = 0,12 \* p \* M \* V / T* | C |  | 28.09.2016 |
| 231 03.2-05 | *m = 0,12 \* p \* M \* V / T* | A |  | 28.09.2016 |
| 231 03.2-06 | *m* = 0,12 *\* p \* M \* V / T* or *p = m \* T / ( 0,12 \* M \* V )* | D |  | 28.09.2016 |
| 231 03.2-07 | *m* = 0,12 *\* p \* M \* V / T* or *p = m \* T / ( 0,12 \* M \* V )* | D |  | 28.09.2016 |
| 231 03.2-08 | *m* = 0,12 *\* p \* M \* V / T* or *p = m \* T / ( 0,12 \* M \* V )* | C |  | 28.09.2016 |
| 231 03.2-09 | *m* = 0,12 *\* p \* M \* V / T* or *p = m \* T / ( 0,12 \* M \* V )* | D |  | 22.09.2022 |
| 231 03.2-10 | *m* = 0,12 *\* p \* M \* V / T* or *p = m \* T / ( 0,12 \* M \* V )* | D |  | 20.09.2018 |
|  |  |  |  |  |
| **Objective 4.1** |  |  |  |  |
|  |  |  |  |  |
| 231 04.1-01 | *m = ρt1 \* Vt1 = ρt2 \* Vt2 (with tables)* | C |  | 10.12.2020 |
| 231 04.1-02 | *m = ρt1 \* Vt1 = ρt2 \* Vt2 (with tables)* | B |  | 10.12.2020 |
| 231 04.1-03 | *m = ρt1 \* Vt1 = ρt2 \* Vt2 (with tables)* | C |  | 22.09.2022 |
| 231 04.1-04 | *m = ρt1 \* Vt1 = ρt2 \* Vt2 (with tables)* | B |  | 22.09.2022 |
| 231 04.1-05 | *m = ρt1 \* Vt1 = ρt2 \* Vt2 (with tables)* | B |  | 22.09.2022 |
| 231 04.1-06 | *m = ρt1 \* Vt1 = ρt2 \* Vt2 (with tables)* | C |  | 22.09.2022 |
| 231 04.1-07 | *m = ρt1 \* Vt1 = ρt2 \* Vt2 (with tables)* | C |  | 06.06.2011 |
| 231 04.1-08 | *m = ρt1 \* Vt1 = ρt2 \* Vt2 (with tables)* | B |  | 06.06.2011 |
| 231 04.1-09 | *m = ρt1 \* Vt1 = ρt2 \* Vt2 (with tables)* | C |  | 06.06.2011 |
| 231 04.1-10 | *m = ρt1 \* Vt1 = ρt2 \* Vt2 (with tables)* | B |  | 06.06.2011 |
|  |  |  |  |  |
| **Objective 4.2** |  |  |  |  |
|  |  |  |  |  |
| 231 04.2-01 |  |  | deleted (2011) | 06.06.2011 |
| 231 04.2-02 |  |  | deleted (2011) | 06.06.2011 |
| 231 04.2-03 |  |  | deleted (2011) | 06.06.2011 |
| 231 04.2-04 |  |  | deleted (2011) | 06.06.2011 |
| 231 04.2-05 |  |  | deleted (2011) | 06.06.2011 |
| 231 04.2-06 |  |  | deleted (2011) | 06.06.2011 |
| 231 04.2-07 |  |  | deleted (2011) | 06.06.2011 |
| 231 04.2-08 |  |  | deleted (2011) | 06.06.2011 |
| 231 04.2-09 |  |  | deleted (2011) | 06.06.2011 |
| 231 04.2-10 |  |  | deleted (2011) | 06.06.2011 |
|  |  |  |  |  |
| **Objective 5** |  |  |  |  |
|  |  |  |  |  |
| 231 05.0-01 | Critical pressure and temperature | A |  | 10.12.2020 |
| 231 05.0-02 | Critical pressure and temperature | C |  | 10.12.2020 |
| 231 05.0-03 | Critical pressure and temperature | B |  | 22.09.2022 |
| 231 05.0-04 | Critical pressure and temperature | A |  | 10.12.2020 |
|  |  |  |  |  |
| **Objective 6.1** |  |  |  |  |
|  |  |  |  |  |
| 231 06.1-01 | Polymerization | C |  | 06.06.2011 |
| 231 06.1-02 | Polymerization | A |  | 22.09.2022 |
| 231 06.1-03 | Polymerization | B |  | 06.06.2011 |
| 231 06.1-04 | Polymerization | B |  | 30.09.2014 |
| 231 06.1-05 | Polymerization | D |  | 10.12.2020 |
|  |  |  |  |  |
| **Objective 6.2** |  |  |  |  |
|  |  |  |  |  |
| 231 06.2-01 | 3.2.3.2, Table C | C |  | 22.09.2022 |
| 231 06.2-02 | Polymerization | C |  | 22.09.2022 |
| 231 06.2-03 | Polymerization | D |  | 22.09.2022 |
| 231 06.2-04 | Polymerization | A |  | 06.06.2011 |
| 231 06.2-05 | 3.2.3.2, Table C | A |  | 22.09.2022 |
| 231 06.2-06 | 3.2.3.2, Table C | D |  | 22.09.2022 |
| 231 06.2-07 | Polymerization | B |  | 10.12.2020 |
| 231 06.2-08 |  |  | deleted (2007) | 06.06.2011 |
| 231 06.2-09 | Polymerization | C |  | 10.12.2020 |
|  |  |  |  |  |
| **Objective 7.1** |  |  |  |  |
|  |  |  |  |  |
| 231 07.1-01 | Vapour pressure | A |  | 06.06.2011 |
| 231 07.1-02 | Vapour pressure | B |  | 30.09.2014 |
| 231 07.1-03 | Vapour pressure | C |  | 30.09.2014 |
| 231 07.1-04 | Vapour pressure | D |  | 06.06.2011 |
| 231 07.1-05 | Vapour pressure | A |  | 06.06.2011 |
| 231 07.1-06 | Vapour pressure | B |  | 22.09.2022 |
| 231 07.1-07 | Vapour pressure | C |  | 06.06.2011 |
| 231 07.1-08 | Vapour pressure | D |  | 06.06.2011 |
| 231 07.1-09 | Vapour pressure | A |  | 06.06.2011 |
| 231 07.1-10 | Vapour pressure | B |  | 28.09.2016 |
| 231 07.1-11 | Influence on the cargo of an increase in temperature | B |  | 28.09.2016 |
| 231 07.1-12 | Change in cargo temperature, general knowledge | B |  | 22.09.2022 |
| 231 07.1-13 | Characteristics of substances, 1.2.1 | A |  | 22.09.2022 |
| 231 07.1-14 | Characteristics of substances | B |  | 22.09.2022 |
|  |  |  |  |  |
| **Objective 7.2** |  |  |  |  |
|  |  |  |  |  |
| 231 07.2-01 |  |  | deleted (2007) | 06.06.2011 |
| 231 07.2-02 |  |  | deleted (2007) | 06.06.2011 |
| 231 07.2-03 | Increase in temperature in the cargo tank | C |  | 28.09.2016 |
| 231 07.2-04 | Pressure in the cargo tank | D |  | 28.09.2016 |
| 231 07.2-05 | Behaviour of pressure in the cargo tank | C |  | 20.09.2018 |
| 231 07.2-06 | Behaviour of pressure in the cargo tank | D |  | 10.12.2020 |
| 231 07.2-07 |  |  | deleted (2007) | 06.06.2011 |
| 231 07.2-08 | Vapour saturation pressure | B |  | 20.09.2018 |
| 231 07.2-09 | Liquefying of gas | A |  | 20.09.2018 |
|  |  |  |  |  |
| **Objective 8.1** |  |  |  |  |
|  |  |  |  |  |
| 231 08.1-01 | Saturation vapour pressure, depending on composition | B |  | 06.06.2011 |
| 231 08.1-02 | Saturation vapour pressure, depending on composition | C |  | 06.06.2011 |
| 231 08.1-03 | Saturation vapour pressure, depending on composition | A |  | 06.06.2011 |
| 231 08.1-04 |  |  | deleted (2007) | 06.06.2011 |
| 231 08.1-05 |  |  | deleted (2007) | 06.06.2011 |
| 231 08.1-06 |  |  | deleted (2007) | 06.06.2011 |
|  |  |  |  |  |
| **Objective 8.2** |  |  |  |  |
|  |  |  |  |  |
| 231 08.2-01 | Health risks | C |  | 22.09.2022 |
| 231 08.2-02 | Health risks | B |  | 22.09.2022 |
| 231 08.2-03 | Health risks | B |  | 22.09.2022 |
| 231 08.2-04 | Health risks | C |  | 22.09.2022 |
| 231 08.2-05 | Health risks | A |  | 13.09.2012 |
| 231 08.2-06 | Hazard characteristics | C |  | 13.09.2012 |
| 231 08.2-07 | Hazard characteristics | C |  | 22.09.2022 |
| 231 08.2-08 | Hazard characteristics | C |  | 10.12.2020 |
| 231 08.2-09 | Characteristics of substances | D |  | 30.09.2014 |
| 231 08.2-10 | Characteristics of substances | C |  | 30.09.2014 |
| 231 08.2-11 | Characteristics of substances | A |  | 28.09.2016 |
|  |  |  |  |  |
| **Objective 9** |  |  |  |  |
|  |  |  |  |  |
| 231 09.0-01 | Polymerization | A |  | 22.09.2022 |
| 231 09.0-02 | Molecular mass | D |  | 30.09.2014 |
| 231 09.0-03 | Molecular mass | C |  | 30.09.2014 |
| 231 09.0-04 | Molecular mass | B |  | 30.09.2014 |
| 231 09.0-05 | Molecular mass | A |  | 30.09.2014 |
| 231 09.0-06 |  |  | deleted (2007) | 06.06.2011 |
| 231 09.0-07 |  |  | deleted (2007) | 06.06.2011 |
| 231 09.0-08 | Molecular mass | A |  | 30.09.2014 |
|  |  |  |  |  |
| **Practice** |  |  |  |  |
|  |  |  |  |  |
| **Objective 1.1** |  |  |  |  |
|  |  |  |  |  |
| 232 01.1-01 | Flushing in the event of a change of cargo | C |  | 10.12.2020 |
| 232 01.1-02 | Flushing in the event of a change of cargo | C |  | 10.12.2020 |
| 232 01.1-03 | Table C, column (20), remark 2 | A |  | 22.09.2022 |
| 232 01.1-04 | Flushing in the event of a change of cargo | A |  | 10.12.2020 |
| 232 01.1-05 | Flushing in the event of a change of cargo | D |  | 10.12.2020 |
| 232 01.0-06 | 9.3.1.21.12 | C |  | 28.09.2016 |
|  |  |  |  |  |
| **Objective 1.2** |  |  |  |  |
|  |  |  |  |  |
| 232 01.2-01 | Table C, column (20), remark 2 | D |  | 10.12.2020 |
| 232 01.2-02 | Table C, column (20), remark 2 | C |  | 10.12.2020 |
| 232 01.2-03 | Table C, column (20), remark 2 | B |  | 10.12.2020 |
| 232 01.2-04 | Table C, column (20), remark 2 | B |  | 10.12.2020 |
| 232 01.2-05 | Table C, column (20), remark 2 | C |  | 10.12.2020 |
|  |  |  |  |  |
| **Objective 1.3** |  |  |  |  |
|  |  |  |  |  |
| 232 01.3-01 | Methods for flushing (degassing) | D |  | 10.12.2020 |
| 232 01.3-02 | Methods for flushing (degassing) | D |  | 10.12.2020 |
| 232 01.3-03 | Methods for flushing (degassing) | C |  | 10.12.2020 |
| 232 01.3-04 | Methods for flushing (degassing) | A |  | 10.12.2020 |
| 232 01.3-05 | Flushing (degassing) at the same time as repairs | B |  | 06.06.2011 |
| 232 01.3-06 | Flushing (degassing) in connection with repair work | C |  | 06.06.2011 |
| 232 01.3-07 | 7.2.3.1.6 | B |  | 10.12.2020 |
| 232 01.3-08 | Longitudinal flushing | C |  | 10.12.2020 |
| 232 01.3-09 |  |  | deleted (2007) | 06.06.2011 |
|  |  |  |  |  |
| **Objective 2** |  |  |  |  |
|  |  |  |  |  |
| 232 02.0-01 |  |  | deleted (2010) | 06.06.2011 |
| 232 02.0-02 |  |  | deleted (2010) | 06.06.2011 |
| 232 02.0-03 | Flushing/rinsing of test tubes | D |  | 06.06.2011 |
| 232 02.0-04 | Flushing/rinsing of test tubes | A |  | 06.06.2011 |
| 232 02.0-05 | Sampling during longitudinal flushing | C |  | 06.06.2011 |
| 232 02.0-06 |  |  | deleted (2007) | 06.06.2011 |
| 232 02.0-07 | 7.2.4.1.1 Storage of samples in test tubes | A |  | 30.09.2014 |
| 232 02.0-08 | Flushing of the cargo tanks | C |  | 06.06.2011 |
| 232 02.0-09 |  |  | deleted (2007) | 06.06.2011 |
| 232 02.0-10 | Taking of samples | B |  | 06.06.2011 |
|  |  |  |  |  |
| **Objective 3** |  |  |  |  |
|  |  |  |  |  |
| 232 03.0-01 | Definition of explosive limit | A |  | 06.06.2011 |
| 232 03.0-02 | Definition of explosive limit | C |  | 10.12.2020 |
| 232 03.0-03 | Definition of explosive limit | D |  | 22.09.2022 |
| 232 03.0-04 | Definition of explosive limit | D |  | 22.09.2022 |
| 232 03.0-05 | Definition of explosive limit | A |  | 22.09.2022 |
| 232 03.0-06 | Critical dilution rate | B |  | 20.09.2018 |
| 232 03.0-07 | Critical dilution rate | C |  | 30.09.2014 |
| 232 03.0-08 | Risk of explosion | B |  | 06.06.2011 |
| 232 03.0-09 | Explosive limit and static electricity | D | Modification only in German | 22.09.2022 |
|  |  |  |  |  |
| **Objective 4** |  |  |  |  |
|  |  |  |  |  |
| 232 04.0-01 | Imminent hazards | A |  | 22.09.2022 |
| 232 04.0-02 | Delayed effect | B |  | 22.09.2022 |
| 232 04.0-03 | Anaesthetizing effect | D |  | 06.06.2011 |
| 232 04.0-04 | Definition of the maximum workplace concentration | C |  | 06.06.2011 |
| 232 04.0-05 | Definition of the maximum workplace concentration | C |  | 06.06.2011 |
| 232 04.0-06 | Exceeding the maximum workplace concentration | B |  | 06.06.2011 |
| 232 04.0-07 | Maximum workplace concentration – odour threshold | A |  | 06.06.2011 |
| 232 04.0-08 |  |  | deleted (2007) | 06.06.2011 |
| 232 04.0-09 | Asphyxiation | C |  | 06.06.2011 |
|  |  |  |  |  |
| **Objective 5.1** |  |  |  |  |
|  |  |  |  |  |
| 232 05.1-01 | Measuring gas concentration | D |  | 06.06.2011 |
| 232 05.1-02 | Measuring gas concentration | A |  | 06.06.2011 |
| 232 05.1-03 | Measuring gas concentration | B |  | 06.06.2011 |
| 232 05.1-04 | Measuring gas concentration | C |  | 06.06.2011 |
| 232 05.1-05 | Measuring gas concentration | D |  | 13.09.2012 |
| 232 05.1-06 | Measuring gas concentration | A |  | 06.06.2011 |
| 232 05.1-07 | Measuring gas concentration | B |  | 10.12.2020 |
| 232 05.1-08 | Measuring gas concentration | C |  | 10.12.2020 |
| 232 05.1-09 | Measuring gas concentration | A |  | 20.09.2018 |
| 232 05.1-10 | Measuring gas concentration | D |  | 22.09.2022 |
|  |  |  |  |  |
| **Objective 5.2** |  |  |  |  |
|  |  |  |  |  |
| 232 05.2-01 | Measuring gas concentration | A |  | 10.12.2020 |
| 232 05.2-02 | Measuring gas concentration | D |  | 06.06.2011 |
| 232 05.2-03 | Measuring gas concentration | A |  | 10.12.2020 |
| 232 05.2-04 | Measuring gas concentration | D |  | 10.12.2020 |
| 232 05.2-05 | Measuring gas concentration | A |  | 10.12.2020 |
| 232 05.2-06 | Measuring gas concentration | D |  | 22.09.2022 |
| 232 05.2-07 | Measuring gas concentration | A |  | 22.09.2022 |
| 232 05.2-08 | Measuring gas concentration | A |  | 22.09.2022 |
| 232 05.2-09 | Measuring gas concentration | B |  | 10.12.2020 |
| 232 05.2-10 |  |  | deleted (2007) | 06.06.2011 |
|  |  |  |  |  |
| **Objective 6** |  |  |  |  |
|  |  |  |  |  |
| 232 06.0-01 | Measuring gas concentration | B |  | 06.06.2011 |
| 232 06.0-02 | Measuring gas concentration, 7.2.3.1.6 | A |  | 22.09.2022 |
| 232 06.0-03 |  |  | deleted (2007) | 06.06.2011 |
| 232 06.0-04 | Measuring gas concentration | C |  | 30.09.2014 |
| 232 06.0-05 | Measuring gas concentration | A |  | 20.09.2018 |
| 232 06.0-06 | 7.2.3.1.6 | D |  | 22.09.2022 |
| 232 06.0-07 | Measuring gas concentration | D |  | 22.09.2022 |
| 232 06.0-08 | 7.2.3.1.6 | C |  | 10.12.2020 |
| 232 06.0-09 | Measuring gas concentration | C |  | 10.12.2020 |
| 232 06.0-10 |  |  | deleted (2016) | 28.09.2016 |
|  |  |  |  |  |
| **Objective 7** |  |  |  |  |
|  |  |  |  |  |
| 232 07.0-01 | Measuring gas concentration | B |  | 30.09.2014 |
| 232 07.0-02 | Measuring gas concentration | B |  | 10.12.2020 |
| 232 07.0-03 | 8.3.5 | C |  | 22.09.2022 |
| 232 07.0-04 | 8.3.5 | A |  | 22.09.2022 |
| 232 07.0-05 | 8.3.5 | D |  | 22.09.2022 |
| 232 07.0-06 | 8.3.5 | A |  | 22.09.2022 |
| 232 07.0-07 | 7.2.3.1.6 | A |  | 20.09.2018 |
| 232 07.0-08 | 8.3.5 | A |  | 22.09.2022 |
| 232 07.0-09 | 8.3.5 | C |  | 22.09.2022 |
| 232 07.0-10 | 8.3.5 | D |  | 22.09.2022 |
|  |  |  |  |  |
| **Objective 8** |  |  |  |  |
|  |  |  |  |  |
| 232 08.0-01 | 1.2.1 | C |  | 20.09.2018 |
| 232 08.0-02 | Degree of filling | D |  | 10.12.2020 |
| 232 08.0-03 | Degree of filling | C |  | 20.09.2018 |
| 232 08.0-04 | Degree of filling | A |  | 10.12.2020 |
| 232 08.0-05 | Degree of filling | B |  | 10.12.2020 |
| 232 08.0-06 | Degree of filling | A |  | 10.12.2020 |
| 232 08.0-07 | Overfilling | C |  | 06.06.2011 |
| 232 08.0-08 | 9.3.1.21.1 | D |  | 28.09.2016 |
| 232 08.0-09 | 9.3.1.21.1 | A |  | 06.06.2011 |
| 232 08.0-10 | Degree of filling | B |  | 10.12.2020 |
| 232 08.0-11 | 7.2.4.16.16 | B |  | 20.09.2018 |
| 232 08.0-12 | 7.2.4.16.17 | A |  | 28.09.2016 |
| 232 08.0-13 | 7.2.4.16.17 | C |  | 22.09.2022 |
|  |  |  |  |  |
| **Objective 9** |  |  |  |  |
|  |  |  |  |  |
| 232 09.0-01 | Safety against bursts in the piping | A |  | 13.09.2012 |
| 232 09.0-02 | Safety against bursts in the piping | C |  | 06.06.2011 |
| 232 09.0-03 | Safety against bursts in the piping | D |  | 06.06.2011 |
| 232 09.0-04 | Safety against bursts in the piping | B |  | 06.06.2011 |
| 232 09.0-05 | Safety against bursts in the piping | A |  | 10.12.2020 |
| 232 09.0-06 | 9.3.1.21.9 | A |  | 20.09.2018 |
| 232 09.0-07 | 7.2.2.21 | B |  | 20.09.2018 |
| 232 09.0-08 | 7.2.2.21 | C |  | 20.09.2018 |
| 232 09.0-09 | Rapid closing system | C |  | 10.12.2020 |
| 232 09.0-10 | Rapid closing system | A |  | 13.09.2012 |
| 232 09.0-11 | 9.3.1.21.11 | D |  | 28.09.2016 |
| 232 09.0-12 | Treatment of the cargo, 9.3.1.24.1 (a) | B |  | 10.12.2020 |
|  |  |  |  |  |
| **Objective 10** |  |  |  |  |
|  |  |  |  |  |
| 232 10.0-01 | Basic general knowledge, Unloading of the cargo | C |  | 22.09.2022 |
| 232 10.0-02 | Basic general knowledge, Unloading of the cargo | D |  | 22.09.2022 |
| 232 10.0-03 | Basic general knowledge, Unloading of the cargo | A |  | 22.09.2022 |
| 232 10.0-04 | Basic general knowledge, Deck pumps | B |  | 22.09.2022 |
| 232 10.0-05 | Basic general knowledge, Compressors | C |  | 22.09.2022 |
| 232 10.0-06 | Basic general knowledge, Compressors | D |  | 22.09.2022 |
| 232 10.0-07 | Basic general knowledge, Deck pumps | A |  | 22.09.2022 |
| 232 10.0-08 | Basic general knowledge, Compressors | C |  | 22.09.2022 |
| 232 10.0-09 | Basic general knowledge, Compressors | B |  | 22.09.2022 |
|  |  |  |  |  |
| **Emergency measures** |  |  |  |  |
|  |  |  |  |  |
| **Objective 1.1** |  |  |  |  |
|  |  |  |  |  |
| 233 01.1-01 | Liquefied gas on skin | B |  | 22.09.2022 |
| 233 01.1-02 | Liquefied gas on skin | A |  | 22.09.2022 |
| 233 01.1-03 | Liquefied gas on skin | C |  | 10.12.2020 |
| 233 01.1-04 | Liquefied gas on skin | D |  | 22.09.2022 |
|  |  |  |  |  |
| **Objective 1.2** |  |  |  |  |
|  |  |  |  |  |
| 233 01.2-01 | Breathing in gas | C |  | 22.09.2022 |
| 233 01.2-02 | Breathing in gas | D |  | 22.09.2022 |
| 233 01.2-03 | Breathing in gas | A |  | 22.09.2022 |
| 233 01.2-04 | Breathing in gas | B |  | 22.09.2022 |
| 233 01.2-05 | Breathing in gas | B |  | 10.12.2020 |
|  |  |  |  |  |
| **Objective 1.3** |  |  |  |  |
|  |  |  |  |  |
| 233 01.3-01 | Emergency assistance, general | A |  | 22.09.2022 |
| 233 01.3-02 | Emergency assistance, general | C |  | 22.09.2022 |
| 233 01.3-03 | Emergency assistance, general | C |  | 10.12.2020 |
| 233 01.3-04 | Emergency assistance, general | D |  | 22.09.2022 |
|  |  |  |  |  |
| **Objective 2.1** |  |  |  |  |
|  |  |  |  |  |
| 233 02.1-01 | Leak in a connection | A |  | 22.09.2022 |
| 233 02.1-02 | Leak in a connection | B |  | 22.09.2022 |
| 233 02.1-03 | Leak in a connection | C |  | 22.09.2022 |
|  |  |  |  |  |
| **Objective 2.2** |  |  |  |  |
|  |  |  |  |  |
| 233 02.2-01 | Fire in the engine room | C |  | 10.12.2020 |
| 233 02.2-02 | Fire in the engine room | A |  | 10.12.2020 |
| 233 02.2-03 | Fire in the engine room | C |  | 10.12.2020 |
|  |  |  |  |  |
| **Objective 2.3** |  |  |  |  |
|  |  |  |  |  |
| 233 02.3-01 | Hazards that might arise in the vicinity of the vessel | B |  | 10.12.2020 |
| 233 02.3-02 | Hazards that might arise in the vicinity of the vessel | A |  | 22.09.2022 |
| 233 02.3-03 | Hazards that might arise in the vicinity of the vessel | B |  | 22.09.2022 |
| 233 02.3-04 | Safety requirements, 7.2.4.16.17 | A |  | 30.09.2014 |
|  |  |  |  |  |
| **Objective 2.4** |  |  |  |  |
|  |  |  |  |  |
| 233 02.4-01 | Over-filling | A |  | 22.09.2022 |
| 233 02.4-02 | Over-filling | A |  | 22.09.2022 |
| 233 02.4-03 | Over-filling | D |  | 22.09.2022 |
|  |  |  |  |  |
| **Objective 2.5** |  |  |  |  |
|  |  |  |  |  |
| 233 02.5-01 | Polymerization | C |  | 22.09.2022 |
| 233 02.5-02 | Polymerization | B |  | 22.09.2022 |
| 233 02.5-03 | Polymerization | D |  | 22.09.2022 |

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