10 April 2018

Explanatory notice of the amendments introduced by ES-TRIN 2017/1

In July 2017, CESNI adopted the European standard laying down technical requirements for inland navigation vessels (ES-TRIN), edition 2017/1.

In conjunction with the European Commission, the CESNI Secretariat worked out an explanatory notice to document the needs, alternatives and consequences associated with the amendments introduced by ES-TRIN 2017/1 (see annex). This notice is for documentary purposes only.

This notice is organised as follows:

Annex to CESNI/PT (18) 3 = CESNI (18) 2

1. Elevating wheelhouse

The work on this topic led to the following provisions of ES-TRIN being amended or added: Article 7.12; Article 32.02(2), to Article 7.12; Article 32.05(5), to Article 7.12; Article 33.02(2), to Article 7.12; ESI-I-2.

1.1 Needs to be addressed by the amendments

On 18 February 2009, the skipper of the river/sea vessel “Amberes” (built-in 2007) was seriously injured following an unexpected and uncontrolled fall from the wheelhouse. The mechanical locking device malfunctioned, a cylinder came off and the master cylinder tore through the floor of the wheelhouse. A similar incident also occurred in Austria. It would therefore appear that not all installers are adhering to the same quality standards when installing these wheelhouses. There are therefore serious risks both to wheelhouse occupants, but also to individuals and personnel in the immediate vicinity.
These experiences created an awareness of the urgent need for additional regulations on elevating wheelhouses. It would appear that existing legislation, even when adequately applied, does not adequately ensure people’s safety. In this context, the installers are not taking responsibility and are blaming one another in the event of an accident.

Moreover, the CESNI/PT Working Group noted that this type of wheelhouse is increasingly prevalent on inland navigation vessels (because of the increasing role of container transport); consequently regulation is becoming more important and should be revised.

Various activities had already been conducted within the Joint Working Group (JWG) with a view to revising Article 7.12 and related annexes. Following the setting up of the CESNI, this work was taken over by the CESNI/PT Working Group with a view to inclusion in the first amendment of ES-TRIN 2015.

In conclusion, the amendments in ES-TRIN 2017 aim to improve the safety of crews aboard vessels with an elevating wheelhouse and increase the technical reliability of the equipment, but they do not aim to prevent collision with bridges.

1.2 Possible alternative to the amendments

The CESNI/PT Working Group examined the possibility of activating the emergency lowering system (Article 7.12(8)) from the deck. Following a discussion with the industry and in the absence of cogent arguments to justify the effective increase in safety, the CESNI/PT Working Group did not wish at this juncture to maintain the requirement for a deck-activated emergency system.

The CESNI/PT Working Group noted the existence on the market of bridge detection and collision prevention devices. It decided not to make any additions to the technical requirements at this stage. It deems it appropriate in future to examine feedback from, and the increased security provided by, these devices.

1.3 Consequences of these amendments

Article 7.12 of ES-TRIN 2015 has been **completely rewritten** and subdivided into paragraphs 1 to 12.

Article 7.12(1) to (3) specify the safety objectives with regard to the protection of individuals, vessel stability, and safety during the raising or lowering of the wheelhouse.

Article 7.12(4) adds requirements pertaining to the control of the lifting mechanism inside the wheelhouse, as well as the information to be provided at the steering position.

Articles 7.12(5), (6) and (7) contain requirements governing the lifting mechanism with respect to stopping in any position, locking and preventing uncontrolled lowering, as well as the wheelhouse's terminal positions. Moreover, (7) provides for optical and acoustic signals to warn of the lowering of the wheelhouse.

Article 7.12(8) requires an emergency lowering system independent from the normal lifting mechanism and capable also of being used in the event of a complete on-board power failure. At a minimum, this emergency system must be capable of activation from inside the wheelhouse.

Article 7.12(9) is reserved for possible regulatory developments.

Article 7.12(10) adds requirements concerning the inspection of elevating wheelhouse hydraulic hoses.

Article 7.12(11) and (12) define the requirements applicable to the inspection of elevating wheelhouses and their appliances, in particular the inspection intervals and the individuals performing the inspections. The inspections referred to above are also subject to an update of the instruction ESI-I-2.

The transitional provisions associated with Article 7.12 are amended in Articles 32.02(2) 32.05(5) and 33.02(2). The aim of these transitional provisions is the progressive adaptation of the existing fleet with a view to further improving safe and orderly inland navigation.

A detailed impact report, including cost estimates, was examined by the CESNI/PT Working Group.

2. Emission of gaseous and particulate pollutants from internal combustion engines (adaptation of ES-TRIN to the European Union's NRMM Regulation)

The work on this topic led to the following provisions of ES-TRIN being amended or added: Chapter 9; Article 26.01(1); Article 30.04; Article 32.02(2) to Chapter 9; Article 32.05(5) to Chapter 9; Article 33.02(2) to Chapter 9.

The content of Chapter 9 has been **completely rewritten and reorganised.**

2.1 Needs to be addressed by the amendments

The objective of this amendment is to ensure legal compatibility between ES-TRIN and Regulation (EU) 2016/1628 on the requirements concerning emission limits for gaseous and particulate pollutants and type approval for internal combustion engines for non-road mobile machinery (hereafter referred to as the NRMM Regulation).

In accordance with the NRMM Regulation, the primary aim of these amendments is to:

- provide clarification in respect of authorised categories of internal combustion engine for inland navigation craft and on the banning of replacement engines,
- define the documents required to be held aboard the vessel (a copy of the type approval certificate, the manufacturer's instructions and the engine parameter protocol),
- retain the installation, intermediate and special tests provided for in ES-TRIN 2015,
- define the specific requirements for the exhaust gas after treatment systems required to ensure the vessel's safe operation.

In conjunction with the transitional provisions (Chapters 32 and 33), this amendment does not affect existing legislation for existing engines installed on vessels.

The amendment of Article 26.01 also ensures legal compatibility with another EU text: Directive 2013/53/EU on recreational craft and personal watercraft.

2.2 Possible alternative to the amendments

The CESNI has looked into the possibility of an addition to the transitional provisions for exhaust gas after treatment systems. The CESNI Committee dispensed with this addition for ES-TRIN 2017 but called on the CESNI/PT Working Group to examine this proposal for the future version of ES-TRIN with the representatives of the engine manufacturers and relevant European Commission services (see CESNI (17) 4 rev. 1).

One alternative considered was to delete Article 9.00 introduced during these amendments. This article contains the definitions of the terms used in Chapter 9 which could be inserted directly into Article 1.01. However, this change entails legal consequences and needs to be checked. Because of the tight timetable, transferring the definitions from Article 9.00 to Article 1.01 was waived.

2.3 Consequences of these amendments

The content of Chapter 9 has been **completely rewritten and reorganised** (Articles 9.00 to 9.08). The legal consequences of each of these articles are spelled out below.

Article 9.00 introduces a reorganisation and simplification of the definitions of the terms used in Chapter 9: “internal combustion engine”; “type approval”; “engine family”; “reference power”; “engine manufacturer” and “engine parameter protocol”. The definitions are guaranteed compatible with those in the NRMM Regulation.

Article 9.01 defines the general provisions as to the scope of Chapter 9, to authorised categories of engine and to the banning of replacement engines Indeed, this ban is consistent with the interpretation of the NRMM Regulation handed down by the European Commission and the engine manufacturers’ representatives. This article also stipulates which documents shall be kept on board: “A copy of the type approval certificate, the engine manufacturer's instructions and the engine parameter protocol shall be kept on board.” Finally, Article 9.01 retains the possibility of the Inspection body employing a technical service to perform the tasks referred to in Chapter 9. This provision is analogous to Article 9.01(10) of ES-TRIN 2015. However, only technical services notified according to the NRMM Regulation are recognised for the purpose of this standard.

Article 9.02 retains the provisions previously laid down by Article 9.01(9) of ES-TRIN 2015.

Article 9.03 requires the installation of the internal combustion engine on the vessel to comply with the restrictions defined in the scope of the engine’s type approval.

Article 9.04 updates the provisions on the engine manufacturer’s instructions (Article 9.03(3) of ES-TRIN 2015). The content of these engine manufacturer’s instructions is key to performing the testing of the internal combustion engine (Articles 9.05 to 9.08).

Articles 9.05 to 9.08 adopt the provisions on installation tests, intermediate tests and special tests in a way that does not affect existing legislation. The provisions have undergone a major overhaul. For example, Articles 9.05 to 9.08 of ES-TRIN 2017 adopt the content of the definitions provided by Article 9.00(8.6), (8.7) and (8.8) of ES-TRIN 2015.

Moreover, clarifications have been forthcoming concerning the Inspection body's obligations when it deems the internal combustion engine no longer to comply with the requirements (Article 9.05(3) of ES-TRIN 2017).

A major change to the technical requirements is the creation of Article 9.09. Indeed, this article defines the minimum safety requirements that apply to exhaust gas after treatment systems to ensure the vessel's safe operation. Indeed, these safety requirements have voluntary not been included in the NRMM Regulation. However, Article 9.09 does not require the installation of exhaust gas after treatment systems or bypassing devices.

The transitional provisions (Chapters 32 and 33), do not affect existing legislation for existing engines installed on vessels. An existing engine installed on board a vessel shall comply with the type and installation provisions in force at the date of installation.

Only Article 9.02 applies to engines already installed on board that do not have type approval. Nevertheless, for the other engines, namely those that do have type approval (for example CCNR I, CCNR II or EU IIIa), the provisions on intermediate or special tests (Articles 9.07 and 9.08) continue to apply (do not affect existing legislation). These type-approved engines are also subject to the new, specific requirements on exhaust gas after treatment systems (Article 9.09). The application of Article 9.09 to existing engines has a very limited impact because it is currently very rare for these engines to be equipped with after treatment systems. Nevertheless, these engines could in future be equipped with such systems and the provisions of Article 9.09 are relevant in this respect.

Article 26.01(1) is amended to ensure that Chapter 9 is appropriately applied to recreational craft, except for those already covered by directive 2013/53/EU (see Article 26.01(2)).

Article 30.04 is abrogated because the NRMM Regulation introduces specific requirements for methane emissions. Considering the content of Chapter 9, a reference to the NRMM Regulation was deemed superfluous.

3. Electrical equipment and installations

The work on this topic led to the following provisions of ES-TRIN being amended or added: Article 1.01(3.4), (3.21) to (3.24), (6.6) to (6.8), (11.1) to (11.5); Chapter 10; Article 32.02(2) to Chapter 10; Article 32.03(2) to Chapter 10; Article 32.03(2) to Chapter 10; Article 32.05(5) to Chapter 10; Article 33.02(2) to Chapter 10; Article 33.03(2) to Chapter 10.

Chapter 10 has been **completely revised** in the light of technical progress. Numerous changes in Chapter 10 are editorial and may only concern one language.

3.1 Needs the amendments are required to meet

This amendment aims to revise the technical requirements applicable to electrical equipment and installations in the light of technical progress and thereby ensure the maintenance of a high level of safety in inland navigation. In particular, this revision concerns protection against explosions, maximum permitted voltages, connection to the shore power supply, generators, engines, transformers, batteries, accumulators and cables as well as power electronics.

3.2 Possible alternative to the amendments

One alternative would have been to retain the provisions in ES-TRIN 2015. However, obsolete requirements would have been applied to newly-built craft and a high level of safety would not have been ensured for certain equipment (e.g. batteries and accumulators).

3.3 Consequences of these amendments

In Article 1.01, (3.4) adds a definition of “electrical service room”. This definition is used for the requirements in Article 10.11(5).

In Article 1.01, (3.21) to (3.24) add definitions of explosive atmospheres and protection against explosions. These definitions are helpful in particular when applying Article 10.04.

In Article 1.01, a new (6.6) “self-extinction” is inserted. (6.6) and (6.7) of ES-TRIN 2015 become (6.7) and (6.8).

In Article 1.01, (11.1) to (11.5) add definitions of “power source”, “electrical power source”, “accumulator”, “battery” and “power electronics”.

In Article 10.01 (2) the list of documents required to be carried on board is extended to include “switchboard plans as well as electric propulsion engine documentation;”, “plans of electronic steering control, regulating, alarm and safety systems”; and “control circuit plans”. Moreover, a new (5) is added to the general requirements to prevent vibration-related damage or malfunctions.

Except for editorial corrections, the content of Article 10.02 on power supply systems is unchanged as compared with ES-TRIN 2015.

In Article 10.03, the requirements concerning protection against physical contact, intrusion of solid objects and the ingress of water have been updated to take account of the European standard EN 60529 : 2014.

In Article 10.04 the requirements concerning protection against explosions have been revised in their entirety. The technical requirements envisage the classification and evaluation of hazardous areas; then define the equipment that is permitted in the various hazardous areas. As far as possible, reference is made to the EN or IEC standards used in other industrial sectors.

Except for editorial corrections, the content of Article 10.05 on earthing is unchanged as compared with ES-TRIN 2015.

In Article 10.06, the table in (1) has been updated to permit maximum voltages of 690 V for three-phase alternating current. Moreover, the amendment increases the Inspection body’s powers to authorise higher voltages in specific circumstances.

Except for editorial corrections, the content of Article 10.07 on distribution systems is unchanged as compared with ES-TRIN 2015.

In Article 10.08, the requirements have been updated to take account of European standards EN 15869-1, EN 15869-3 and EN 16840 which relate specifically to the connection between an inland navigation vessel and the shore power supply. Except for editorial corrections, the requirements in (2) to (8) are unchanged as compared with ES-TRIN 2015 (former (1) to (7)) and continue to be applicable to connections with other external power supplies. Finally, the requirements in Article 10.08(9) are consistent with the state-of-the-art and are identical with those in Article 10.09(1) of ES-TRIN 2015.

Article 10.09 requires a separate connection for the provision of power to other vessels. The other requirements are adopted with no impact on existing legislation while taking account of the changes effected in Articles 10.08 and 10.15.

In Article 10.10, the requirements applicable to generators, engines and transformers have been updated to take account of the state-of-the-art. In particular, (5) contains a requirement for a manufacturer's plate containing rating data for engines, generators and transformers. Because of the amendments in Article 10.03, the provisions of Article 10.10(1) of ES-TRIN 2015 have been deleted.

In Article 10.11, the requirements applicable to batteries, accumulators and charging devices have been updated to take account of technical progress. This concerns in particular fire safety with requirements governing the ventilation and segregation of equipment. For lithium-ion accumulators, there is a reference to standards EN 62619 and 62620 used in our industrial sectors.

With the exception of editorial corrections, the content of Articles 10.12 on switchgear and controlgear, 10.13 on emergency circuit-breaker devices and 10.14 on installation fittings are unchanged as compared with ES-TRIN 2015.

In Article 10.15, cable requirements have been updated to take account of technical progress and the EN and CEI standards used in other industrial sectors. Furthermore, experience gained with passenger vessels (the content of instruction ESI-II-13 of ES-TRIN 2015) has been incorporated as technical requirements.

Except for editorial corrections, the content of Article 10.16 on lighting installations and of Article 10.17 on navigation lights is unchanged as compared with ES-TRIN 2015.

A new Article 10.18 has been created to define the minimum rules for safe operation of the power electronics. The requirements correspond to the state-of-the-art in the industry.

Except for editorial corrections and the updating of EN and IEC standards, the content of Article 10.19 on alarm and safety systems for mechanical installations and of Article 10.20 on electronic installations is unchanged as compared with ES-TRIN 2015.

For the transitional provisions (Articles 32.02, (2), 32.03, (2), 32.05, (5), 33.02, (2), 33.03, (2)), a distinction has been drawn between the provisions which already existed in Chapter 10 (i.e. included in ES-TRIN 2015) and provisions that are new.

In the former case, the transitional provisions (including the expiry dates) are unchanged.

In the latter case, the provisions only apply to Newly-built craft and to the Replacement or Conversion of the parts or areas concerned (N.R.C. without an end date). For these provisions, CESNI Committee invited the CESNI/PT Working Group to find a compromise on detailed transitional provisions (with an expiry date) for the future version of ES-TRIN.

4. Fire-fighting systems using water as the extinguishing agent

The work on this topic led to the following provisions of ES-TRIN being amended or added: Article 13.05(1), (9), (a), and (14).

4.1 Needs to be addressed by the amendments

Article 13.05 of ES-TRIN governs the use of permanently installed fire-fighting systems for protecting engine rooms, boiler rooms and pump rooms. In ES-TRIN 2015 it was not permitted to use water (as water mist) as an extinguishing agent aboard inland navigation vessels.

However, this extinguishing technique is booming and has already been used for some time, very satisfactorily so, aboard inland navigation vessels for which a CCNR recommendation had been issued (Article 2.19 of the Rhine vessel inspection regulations (RVIR)). The derogations authorised by the CCNR have enabled sufficient experience to be gathered in the use of these fire-fighting installations. In the light of this experience, the amendments to ES-TRIN aim to allow the use of water mist as a normal solution for protecting engine rooms, boiler rooms and pump rooms.

4.2 Possible alternative to the amendments

One alternative was not to amend ES-TRIN and to continue to make vessels' firefighting systems, which use water as the extinguishing agent, subject to a recommendation (individual derogation). It is considered that vessels will soon increasingly want to be able to use such extinguishing systems and that, consequently, the number of requested recommendations will increase in future. The CESNI/PT Working Group considered that there was sufficient experience to enable technical requirements to be drawn up in ES-TRIN.

4.3 Consequences of these amendments

In Article 13.05(1), water is added to the list of extinguishing agents.

In addition to compliance with the general requirements (Article 13.05(1) to (9)), the new Article 13.05(14) defines the requirements that are specific to fire-fighting systems using water as an extinguishing agent. In particular, the specific requirements cover the following areas:

- the formation of a water mist with a droplet size between 5 and 300 microns;
- the system's type-approval;
- the dimensioning and configuration of the system, including the pipes and spray nozzles and its ability to spray water continuously;
- operational requirements (example the ability to spray water continuously within the room for a period not less than 30 min);
- the monitors triggering an alarm signal in the wheelhouse;
- the necessary documents for the shipboard installation and inspection.

In addition, these amendments are also the opportunity for adding to the general requirements in Article 13.05 (9), which are applicable to the various permanently installed firefighting systems for protecting engine rooms, boiler rooms and pump rooms. This addition states that: "Maintenance, in particular of the condition of the spray nozzles, shall be carried out regularly in accordance with the instructions of the system manufacturer". This addition has been introduced because the nozzles' maintenance is critical for the proper functioning of the firefighting installation.

5. Traditional craft

The work on this topic led to the following provisions of ES-TRIN being added: Article 1.01(1.29) and (1.30); Chapter 24; Annex 3, Section V; ESI-I-2.

5.1 Needs the amendments are required to meet

Various activities had been conducted within the Joint Working Group (JWG) to create specific provisions for traditional craft. The CESNI/PT Working Group continued these activities, while endeavouring to differentiate between procedural rules (which come under the regulatory frameworks) and technical requirements (subject matter of ES-TRIN).

These amendments of ES-TRIN aim to allow recognition of traditional craft and the application of technical requirements appropriate to these craft with a view to issuing the inland navigation vessel certificate, as well as a “traditional craft” annex to the certificate. Moreover, these amendments aim to introduce the definition of a “traditional craft expert” capable of becoming involved in the procedure for recognising a vessel is being a traditional craft while also being a member of the Inspection body.

In addition to the requirements foreseen in this Chapter 24, possibilities of derogations are also offered in accordance with Article 2.20 of the Rhine vessel inspection regulations (RVIR), as well as Article 25 of the Directive (EU) 2016/1629.However, following the pattern established throughout the rest of ES-TRIN, for formal reasons the explicit reference to a “recommendation” was removed from the text previously developed by the JWG, because the different legal frameworks of CCNR and EU use different legal instruments for granting derogations. These derogation procedures allow the case of some really special vessels to be taken into account and the recognition of the use of other materials and installation of equipment, provided that an equivalent level of safety is ensured. Such procedures remain applicable for the whole of the draft Chapter 24, in particular Article 24.02 (6).

5.2 Possible alternative to the amendments

By analogy with Chapter 20 of ES-TRIN (passengers sailing vessels), an alternative would have been to apply Chapter 24 dedicated to traditional craft only outside the Rhine (Zone R). The ban of these traditional craft would have been maintained on the Rhine. However, following the opinion of the CCNR’s Inspection Regulations Committee in October 2016, the CESNI/PT Working Group dropped this geographical restriction. Indeed, the amendments to ES-TRIN enable the existing high level of safety of the navigation of the Rhine to be preserved.

5.3 Consequences of these amendments

Article 1.01 (1.29) and (1.30) are supplemented by definitions of “traditional craft” and “replica of a traditional craft”, thus defining the material scope of Chapter 24. Instruction ESI-I-2 introduces the definition of a ‘traditional craft expert’.

Article 24.01 lays down the principles for determining the technical requirements applicable to traditional craft, but also for determining the supplementary provisions, in the event of non-compliance, to ensure equivalent safety.

Article 24.02 introduces the procedure for recognising a vessel as a “traditional craft” by explaining the required inspections and documents. When the Inspection body determines compliance with the definition of “traditional craft”, then the endorsement “traditional craft” is entered on the inland navigation vessel certificate and a “traditional craft” annex to this certificate is issued. The template of this annex is added to Annex 3, Section V, of ES-TRIN.

In addition, Article 24.02(6) lays down essential requirements in the event of non-compliance with the contents of ES-TRIN identified during the inspection or in the documentation:

"a) only the crew or persons who are on official business on board can remain on the craft while under way, and

b) operation of machines or mechanically-driven equipment on board which are easily accessible is permitted only if no one is on board, except the crew or persons who are on official business on board."

Derogations from these requirements remain possible within the regulatory frameworks (Article 25 of Directive (EU) 2016/1629 and Article 2.20 of the RVIR).

Article 24.03 allows the Inspection body to impose additional conditions based on the concept of use and safety, as well as the state of the traditional craft's construction, fitting out and equipment.

6. Manufacturer's plate, safety devices and shipboard documentation

The work on this topic led to the following provisions of ES-TRIN being modified: Article 14.12(4); Article 32.02(2), to Article 14.12; Article 32.05(5), to Article 14.12.

6.1 Needs to be addressed by the amendments

These amendments are to be seen in the context of the moratorium on transitional provisions adopted by the CCNR in 2014 (Resolution CCNR 2014-I-16). This moratorium had the effect of temporarily postponing the application of various technical requirements to existing craft. This moratorium is only the first step in a process driven by economic considerations and by the desire to look for alternative solutions having regard to the fundamental objective of improving navigational and crew safety

Similar to the RVIR, the temporary postponement of the application of the provisions on manufacturer's plates for already existing cranes, protection devices, certificates on board has been incorporated into ES-TRIN 2015.

Investigations in the Netherlands have revealed that the requirements for cranes regarding manufacturer's plate, safety devices and shipboard documentation for such cranes may not be observed for cranes installed before 1995. A 3-year moratorium has been applied to the corresponding transitional provisions of the RVIR. During the period of this postponement, investigations were carried out to establish what are the really indispensable adaptive measures and to what extent an adequate level of safety can be demonstrated for cranes in the absence of the manufacturer's plates and of certificates on board.

The amendments to ES-TRIN are based on the additional investigations and provide a lasting solution as regards the requirements concerning the manufacturer's plates on the already existing cranes, the protection devices and certificates on board. They aim to enable "proportionate" technical requirements to be applied in full for vessels in service while taking account of the fundamental objective of improving navigational and crew safety.

6.2 Possible alternative to the amendments

Another alternative would have been to adapt the transitional provisions as they affect vessels brought into service after 1995. However, the preparatory work did not find this adaptation to be necessary and it could run counter to the fundamental objective of improving navigation and crew safety.

6.3 Consequences of these amendments

a) Cranes manufacturer's plate

Article 32.02(2), to 14.14(2): For vessels in service before 1995, the absence of manufacturer's plates does not necessarily imply a lower safety level and can benefit from an open-ended "N.R.C." transitional provision. The requirement does not therefore apply to vessels and service unless the parts in question are replaced or converted.

b) Safety devices

Article 14.12(4): The proposed amendment clarifies, without legal changes, the requirements concerning safety devices, for new vessels and vessels in service alike.

Article 32.02(2), to 14.12(4): For vessels in service before 1995, the current expiry date of the transitional provision (extended from 2015 to 2020 by the moratorium) is retained. However, should the second sentence of Article 14.12(4) not be applicable in practice, those work station and passageway locations where the safety clearance is less than 0.50 m must be clearly marked as such.

Article 32.02(2), to 14.12(5): Moreover, for vessels in service before 1995, the current expiry date of the transitional provision of Article 14.12(5) (extended from 2015 to 2020 by the moratorium) is retained.

c) Shipboard documentation

Article 32.02(2), to 14.12(9): For vessels in service before 1995, the current expiry date of the transitional provision (extended from 2015 to 2020 by the moratorium) is retained. The requirement applies at the latest upon first renewal of the inland navigation vessel certificate after 1.1.2020.

If, after 1.1.2020, operating instructions can no longer be obtained from the manufacturer, they will be written by a specialist. Thereafter, as of the first test in accordance with Article 14.12(6)(c), these operating instructions will be approved by the expert conducting this test.

d) Transitional provisions for vessels put into service after 1995

Article 32.05(5) to Article 14.12(2), (4), (5) and (9): the current expiry date of the transitional provision (extended from 2015 to 2020 by the moratorium) is retained. This amendment of ES-TRIN 2017 corresponds in practice to deletion of the footnote associated with Article 14.12.

7. Installation and measurement of the breather pipe and connections of the fuel tanks

The work on this topic led to the following provisions of ES-TRIN being modified: Article 32.02(2) to Article 8.05, (6), 3rd to 6th sentences.

7.1 Needs to be addressed by the amendments

These amendments are to be seen in the context of the moratorium on transitional provisions adopted by the CCNR in 2014 (Resolution CCNR 2014-I-16). This moratorium had the effect of temporarily postponing the application of various technical requirements to traditional craft. This moratorium is only the first step in a process driven by economic considerations and by the desire to look for alternative solutions having regard to the fundamental objective of improving navigational and crew safety

Similar to the RVIR, the temporary postponement of the application of the provisions on the installation and measurements of breather pipes and connections of the fuel tanks on existing craft has been incorporated into ES-TRIN 2015.

An insufficient measurement of breather pipes and connections can cause fuel to escape thus causing water pollution when bunkering. Breather pipes and connections are frequently integral to the vessel structure such that altering the pipes' cross section is no easy matter.

The temporary postponement in applying the provisions of Article 8.05(6), 3rd to 6th sentences enabled the CESNI/PT Working Group to look into the possibility of using special connecting pipes when filling the fuel tanks, enabling a sufficient reduction in the cross-section of the filler neck. This reduction in the cross-section would allow the desired ratio between the filler neck and the breather pipe.

In February 2016, the CESNI Working Group adopted the following interpretation of the provisions of Article 8.05(6), 3rd to 5th sentences:

The cross-section of the tank's breather pipe and connecting pipes must be at least 1,25 times the cross-section of the filler neck. An absolute size is not required. Putting it another way, the following version could also be conceivable: The filling line may not exceed 0,8 times the cross-section of the smallest breather or connecting pipe. This can be achieved by fitting a short reduction piece to the filler neck that is inseparably joined with the latter by means of an insoluble adhesive. The appropriate connecting piece for this reduction piece complies with EN 12827."

A reduction of the filler neck cross-section could result in an unacceptable increase of the pressure in the bunker hoseline. Should this occur the monitoring system will interrupt the filling, thus preventing any problems.

Following the adoption of this interpretation, the amendments aim to incorporate a lasting solution into ES-TRIN 2017.

7.2 Possible alternative to the amendments

None

7.3 Consequences of these amendments

Article 32.02(2) to Article 8.05, (6), 3rd to 6th sentences: For vessels in service before 1995, the current expiry date of the transitional provision (extended from 2015 to 2020 by the moratorium) is retained. The requirement applies at the latest upon first renewal of the inland navigation vessel inspection certificate after 1.1.2020. This amendment of ES-TRIN 2017 corresponds in practice to deletion of the associated footnote (this requirement is no more of a temporary nature).

8. Provisions pertaining to the moratorium on transitional provisions

The work on this topic led to the following provisions of ES-TRIN being modified: Article 32.02(2) to Article 8.10(3); Article 32.02(2) to Article 13.07; Article 32.02(2) to Article 19.06(6)(c); Article 32.02(2) to Article 19.07; Article 32.02(2) to Article 19.08(3)(a); Article 32.03(2) to Article 3.04(7); Article 32.03(2) to Article 7.01(2); Article 32.03(2) to Article 8.10(2); Article 32.03(2) to Article 15.02(5); Article 32.05(5) to Article 13.07; Article 32.05(5) to Article 19.06(6)(c); Article 32.05(5) to Article 19.07; Article 32.05(5) to Article 19.08(3)(a)

8.1 Needs to be addressed by the amendments

These amendments are to be seen in the context of the moratorium on transitional provisions adopted by the CCNR in 2014 (Resolution CCNR 2014-I-16). This moratorium had the effect of temporarily postponing the application of various technical requirements to existing craft. This moratorium is only the first step in a process driven by economic considerations and by the desire to look for alternative solutions having regard to the fundamental objective of improving navigation and crew safety.

In October 2016, CESNI Committee noted that work is still in progress on certain topics covered by the moratorium and decided to extend the corresponding temporary requirements in ES-TRIN until 31.12.2019. Indeed, significant work is taking place in 2017 based on contributions by the industry. Lasting solutions should be incorporated into the future version of ES-TRIN.

The amendments aimed to implement the CESNI decision in ES-TRIN 2017, in particular by amending the corresponding footnotes.

8.2 Possible alternative to the amendments

Do not extend the transitional provisions. It would have implied high costs for the industry and would have been contrary to the wish of lasting solutions.

8.3 Consequences of these amendments

In Articles 32.02(2), 32.03(2) and 32.05(5), the footnotes pertaining to the temporary requirements have been modified as follows: the date 30.11.2017 has been replaced by 31.12.2019.

9. Provisions concerning protection against falls

The work on this topic led to the following provisions of ES-TRIN being modified: Article 14.02(4), (5) and (6); Article 14.04(2); Article 32.02(2), to Article 14.02(4); Article 32.02(2), to Article 14.04; Article 32.05(5), to Article 14.02(4); Article 32.05(5), to Article 14.04(2); Article 33.02(2), to Article 14.02(4); Article 33.02(2), to Article 14.04.

9.1 Needs to be addressed by the amendments

In ES-TRIN 2015, the temporary requirements concerning protection against falls (Articles 14.02(4), (5) and (6) and 14.04 (2)), as well as the associated transitional provisions, expire on 30 November 2017. These temporary requirements arise from similar provisions in the RVIR (Resolution CCNR 2011-I-12) and in Directive 2006/87/EC (Directive 2012/48/EU amending Annexes to Directive 2006/87/EC). The evaluation and extension of these temporary requirements was extensively discussed within the Joint Working Group (JWG).

In March 2017, CESNI decided to convert the temporary requirements into final requirements in ES-TRIN 2017 but to apply the latter only to Newly-built craft and to the Replacement or Conversion of the parts or areas concerned (N.R.C. without an end date). The other craft, unless the parts or areas concerned have been modified between 2011 and 2017, remain subject to the previous requirements.

The amendments aim to implement the CESNI decision in ES-TRIN 2017, with the objective of reducing the number of drownings during navigation.

9.2 Possible alternative to the amendments

CESNI examined and refrained from the following alternatives:

- Converting the temporary requirements into final requirements in ES-TRIN 2017 (new and existing craft).
- Incorporating the old requirements in ES-TRIN 2017 (namely those applicable before 1st December 2011).

9.3 Consequences of these amendments

The requirements in Articles 14.02(4), (5) and (6) and 14.04(2) become final. In other words, the footnotes are deleted in ES-TRIN 2017.

The transitional provisions pertaining to Articles 14.02(4) and 14.04(2) become “N.R.C. without an end date”. Existing craft continue to be subject to the old requirements (namely those applicable before 1st December 2011), including the associated transitional provisions.

To take account of the associated transitional provisions and to ensure the upgrading of the existing fleet, the following footnote has been added in respect of Articles 32.02(2) to Article 14.02(4) and 33.02(2) to Article 14.02(4):

“However at the latest on renewal of the inland navigation vessel certificate after 1.1.2015, the crafts must comply with the following requirements:

- The outer edges of the decks, as well as work stations where persons might fall more than 1 m, shall be fitted with bulwarks or coamings that are at least 0.70 m height or with continuous guard rails in accordance with European Standard EN 711 : 1995, comprising a handrail, intermediate rail at knee height and foot rail.
- Side decks shall be fitted with a foot rail and continuous handrail that is secured to the coaming. Coaming handrails shall not be required where sidedecks are fitted with non-retractable shipside guard rails. ”

10. Correction of transitional provisions on equipment with a type approval

The work on this topic led to the following provisions of ES-TRIN being amended or added: Article 32.02(2), to Article 7.05(1); Article 32.02(2), to Article 7.06; Article 32.02(2), to Chapter 18; Article 32.05(5), to Article 7.05(1); Article 32.05(5), to Article 7.06; Article 32.05(5), to Chapter 18; Article 33.02(2), to Article 7.05(1); Article 33.02(2), to Article 7.06; Article 33.02(2), to Chapter 18.

10.1 Needs to be addressed by the amendments

In addition to the work relating to the legal basis for the type approval procedures, the CESNI/PT Working Group identified the need to supplement the transitional provisions in ES-TRIN. The objective is to ensure legal certainty for certain items of equipment for which type approval was awarded under the different legal frameworks that applied before the ES-TRIN came into force.

A number of situations need to be considered for these type approved items of equipment:

a) installation is no longer permitted but equipment already installed can remain in use (for example: Inland AIS devices with type approval in compliance with edition 1.0 or 1.01 of the test standard);

b) installation and use on-board continues to be permitted subject to certification of installation (for example: navigational radar installations approved after 1st January 1990).

The amendments occasionally refer to earlier requirements in the RVIR or in directive 2006/87/EC. This being so, in the interests of clarity, the CESNI/PT Working Group decided to refer to the resolution / directive that has amended the basic text.

Finally, given CESNI's adoption of a test standard for Inland AIS (Resolution CESNI 2017-II-2), the amendments also aim to ensure the transition for Inland AIS equipment approved in accordance with the requirements of the Inland AIS test standard published by the CCNR. The devices in question can still be fitted and used.

10.2 Possible alternative to the amendments

None. The amendments ensure legal certainty in ES-TRIN 2017.

10.3 Consequences of these amendments

Transitional provisions have been added to Articles 32.02(2), 32.05(5) and 33.02(2) to allow the continued fitting and use of radar installations, rate of turn indicators or on board sewage treatment plants that comply with the CCNR or EU requirements, provided there is an appropriate installation certificate.

Transitional provisions have been added to Articles 32.02(2), 32.05(5) and 33.02(2) to allow the continued fitting and use of Inland AIS equipment that complies with CCNR requirements. The relevant the CCNR requirements are the very ones incorporated in ES-TRIN with no impact on existing legislation.

11. Provisions on navigation and information equipment, including the reference to a test standard for Inland AIS

The work on this topic led to the following provisions of ES-TRIN being amended or added: Article 1.01(7.4), (7.8), (7.9) and 7.11; Article 7.06(2) and (3) and Annex 5.

11.1 Needs to be addressed by the amendments

The amendments' objectives are as follows:

- to update ES-TRIN to take account of the work done by the CCNR in 2015 on Inland ECDIS equipment operated in navigation mode and on connecting external sensors to navigational radar installations;
- to achieve consistency between static references and CCNR standards or European Union regulations, and to take account of the standard for Inland AIS adopted by CESNI;
- to achieve consistency between the requirements applicable to tachographs and the other provisions of Annex 5;
- to delete the geographical restriction on the provisions applicable to Inland AIS equipment and tachographs (Sections IV and V of the Annex 5 to the ES-TRIN);
- to delete Section VII of Annex 5 of ES-TRIN 2015, given the foreseen development of a centralised tool for approvals.

11.2 Possible alternative to the amendments

One alternative would be to retain the provisions in ES-TRIN 2015. However, legal uncertainties and inconsistencies would remain in the technical requirements.

11.3 Consequences of these amendments

The definitions of “Inland ECDIS” and “Inland AIS equipment” are clarified in Article 1.01 whereas definitions of “VTT standard”, “Inland ECDIS standard” and test standard for Inland AIS” are added. These definitions simplify the drafting of technical requirements while facilitating the updating of possible future references. Because the accurate references to standards published by the EU or the CCNR are only mentioned in Article 1.01, if new standards are published in the future, the Article 1.01 of ES-TRIN can be easily amended.

Editorial corrections have been made to Article 7.06, in particular to take account of the new definitions.

Additions to Annex 5, Section I, Article 3, clarify the requirements applicable to Inland ECDIS equipment being operated in navigation mode.

Additions to Annex 5, Section III, Article 1 clarify the requirements applicable in the event of external sensors being connected to navigation radar installations.

The geographical restriction “Rhine only” for Inland AIS equipment is deleted in Annex 5, Section IV. Editorial corrections have also been made and references updated.

The geographical restriction “Rhine only” for tachographs is deleted in Annex 5, Section V. The structure is also brought into line with the rest of Annex 5: a new Article 1 is created.

12. Updating of references to certain EN/ISO standards

The work on this topic led to the following provisions of ES-TRIN being modified: Article 8.05(11), subparagraph 2; Article 9.04(1); Article 13.02(3)(a); Article 13.04(5); Article 13.07(1); Article 14.02(4) and (6); Article 18.10; Article 19.06(10)(a); Article 19.11(1)(a); Article 19.12(10)(a); Article 32.02(2), to Article 19.06(10)(a); Article 32.04(5); Article 32.05(5), to Article 19.06(10)(a); Annex 3, Section I, (44); Annex 5, Section II, Article 2.03(2), 1st subparagraph; Annex 5, Section II, Article 4.03(2); Annex 7, Section I, (3.1), 1st sentence; ESI-I-1 (44); ESI-II-5, Article 2, Article 3, Annex; ESI-II-13(3), 2nd sentence; ESI-III-3, Articles 2.1 to 2.3 ; ESI-III-4, (7.7); ESI-III-8, Article 2, subparagraphs 2 to 5.

12.1 Needs to be addressed by the amendments

ES-TRIN provides for the compliance with European and International Standards by some materials or parts used in shipbuilding and marine equipment. The same applies to measuring devices to be used in tests and with regard to requirements of testing institutes or processes. The standards are regularly updated or replaced with new standards by the relevant standard setting organisations. The respective predecessor standards are cancelled and become invalid. Subsequently, the relevant citations of standards in ES-TRIN must be adapted. To that end, either the publication date of the relevant standard is changed or the title of the cancelled standard is replaced with that of the new standard.

12.2 Possible alternative to the amendments

Possible alternative to the proposed amendments might have been:

1. to leave the existing provisions unchanged;
2. to dispense with including the standards' publication dates;
3. as a matter of principle, not to make any reference to standards, but to include the contents of standards in the provisions.

Alternative 1. will result in the impossibility of complying with the relevant provisions of the ES-TRIN, since affected materials, parts, equipment, or measuring devices will no longer be available after a short period of time.

Alternative 2. will lead to legal uncertainty, since the name of a standard might include standards with different issue dates and different contents (requirements). The regulator still needs to review any changes to standards, since it has to be determined on a case-by-case basis, whether an amended standard should still be cited in ES-TRIN.

Alternative 3. will complicate and raise the costs of construction, equipment, and testing of inland water vessels, since the economic and regulatory environment of inland shipping is using standards. The technical requirements are furthermore getting increasingly voluminous and testing vessels and their equipment will become more complex. The administrative burden will become much higher.

12.3 Consequences of these amendments

The proposed amendments to the citations of standards in ES-TRIN lead to clear, consistent, and comprehensible regulations, facilitating the application of the technical requirements. In detail, the consequences are as follows:

Regulation	Consequences of the amendment
Article 8.05(11), paragraph 2	No consequences for the shipping industry; existing equipment may still be used
Article 13.02(3)(a), penultimate paragraph	No significant consequences for the shipping industry; editorial improvement of the Standard; reduction of the number of test certificates; with effect from 2024 all wires pre-dating 2004 must receive a new test certificate or be replaced, but wires don't get that old.
Article 13.04(5), 3rd sentence	No consequences for the shipping industry. The change is only editorial.
Article 13.07(1), introductory sentence	No consequences for the shipping industry before 2036. Compared with the previous **2009** version, what is new in the 2016 standard - apart from editorial changes - is: - Engine power output limited - Stability test process simplified. Compared with the earlier **1997** version, what is new in the 2016 standard - apart from editorial changes - is: - Requirements on the handling characteristics of motorised boats, - Certification of electrically powered dinghies.
Article 14.02(4) and (6)	No consequences for the shipping industry worth the mention; existing guardrails as per standard EN 711 : 1995 will continue to be permissible until 2016 (application of Article 32.04(5)). Standard EN 711:2016 has been amended as compared with the 1996 edition in the following respects: - Additionally, standardisation of spring-mounted stanchions, - Guardrail with a minimum diameter and made only of wire, not plastic. - Requirements on guardrail tension, - Anti-fall protection in the vicinity of the bollard platforms, - Breakage resistance required on passenger vessels, - Climbing aids prohibited on passenger vessels.
Article 18.10, introductory sentence	No consequences for the shipping industry. The change is only editorial.
Article 19.06(10)(a)	For passenger vessels that entered service before 1.1.2006, the transitional provision for Article 32.02(2) allows existing guardrails to continue in use until the first renewal of the inland navigation vessel certificate after 2045. For passenger vessels that entered service after 1.1.2006, existing guardrails compliant with standard EN 711 : 1995 will continue to be accepted until September 2036 (application of Article 32.05(5)).

Regulation	Consequences of the amendment
Article 19.11(1)(a)(bb)	No consequences for the shipping industry. The change is only editorial.
Article 19.12(10)(a)	Existing respirators compliant with standard EN 137 : 1993 will continue to be permitted until 2026 (application of Article 32.04(5)). Possible increased cost of future respirator purchases as a result of additional device requirements.
Article 32.02(2), ad Article 19.06(10)(a) 1st sentence	No consequences for the shipping industry. The change is only editorial (by analogy with the wording of Article 32.02(2), ad Article 13.03(1)).
Article 32.04(5)	No consequences for the shipping industry, indeed improve of legal certainty.
Article 32.05(5), ad Article 19.06(10)(a) 1st sentence	No consequences for the shipping industry. The change is only editorial. (by analogy with the wording of Article 32.05(5), ad Article 13.03(1).)
Annex 3, Section I(44)	No significant consequences for the shipping industry. This amendment is related to amendment 8.
Annex 5, Section II, Article 2.03(2), 1st paragraph	No significant consequences for the shipping industry.
Annex 5, Section II, Article 4.03(2)	No consequences for the shipping industry; modification of the test methods for manufacturers of rate-of-turn indicators.
Annex 7, Section I (3.1), 1st sentence	No consequences for the shipping industry ; modification of the test methods for manufacturers of on-board sewage treatment plant type
ESI-I-1(44)	No consequences for the shipping industry. This amendment is to do with the model inland navigation vessel certificate adopted in ES-TRIN 2015/1.
ESI-II-5, Article 2, Article 3, Annex	No consequences for the shipping industry; changes to the requirements for measuring devices of testing institutes.
ESI-II-13(3), 2nd sentence	No consequences for the shipping industry.
ESI-III-3, Article 2.1 to 2.3	No consequences for the shipping industry; modification of the test requirements for equipment manufacturers.
ESI-III-4(7.7)	No significant consequences for the shipping industry.
ESI-III-8, Article 2, paragraph 2 to 5	No significant consequences for the shipping industry; the modifications are consistent with the list of harmonised standards envisaged by Directive 2013/53/EU.

13. Updating of the reference to the International Code for the Application of Fire Test Procedures (FTP code)

The work on this topic led to the following provisions of ES-TRIN being amended or added:

Article 1.01(6.8); Article 19.11(1), Article 32.02 to Article 19.11(1); Article 32.05(5), to Article 19.11(1); Article 33.02(2), to Article 19.11(1).

13.1 Needs to be addressed by the amendments

The Code for Fire Test Procedures (FTP) 2010 was adopted under Resolution MSC.307(88) by the Maritime Safety Committee of the International Maritime Organization (IMO) on 3rd December 2010, to come into force on 1st July 2012 (subsequently referred to as the 2010 edition).
Type-approval certificates for equipment tested in accordance with the previous edition of the FTP code were allowed to be awarded up until 30th June 2013 and remain valid until 30th June 2018 at the latest.

ES-TRIN 2015 refers to the 1996 edition of the FTP code. The amendments aim to update the provisions of ES-TRIN to take account of the adoption of the FTP 2010.

The CESNI/PT Working Group undertook a careful examination of the changes made to the FTP code between the 1996 and 2010 editions.

13.2 Possible alternative to the amendments

The CESNI/PT Working Group examined the legal consequences were the reference to the 1996 edition of the FTP code to be maintained. This alternative would not have ensured legal certainty and nor take account of market realities.

13.3 Consequences of these amendments

The definition of “code for fire test procedures” has been updated in Article 1.01 of ES-TRIN. The concomitant modifications of Chapter 10 and the associated definitions required the definitions to be renumbered. The new definition of “code for fire test procedures” therefore appears in (6.8).

Given the reorganisation of the annexes in the FTP code 2010, the references in Article 19.11(1) of ES-TRIN have been updated. Numerous editorial corrections have been made to the English version of ES-TRIN to ensure consistency with the English version of the FTP code.

Transitional provisions “without an end date” have been added to Articles 32.02, 33.05, and 33.02. The new requirements apply only to Newly-built craft and to Replacement or Conversion parts or areas (N.R.C.).

14. Editorial corrections and deletion of transitional provisions that have expired

In addition to the amendments clarified above, ES-TRIN also incorporates numerous editorial corrections and deletes transitional provisions that have expired.

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