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Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation

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Item 4 (b) of the provisional agenda

Standardization of technical and safety requirements in inland navigation: Recommendations on Harmonized Europe-Wide Technical Requirements for Inland Navigation Vessels (Resolution No. 61, revision 2)

Aligning of the annex to resolution No. 61, revised, with the Instructions for the application of the European Standard laying down Technical Requirements for Inland Navigation Vessels Edition 2017

Note by the secretariat

Mandate

1. This document is submitted in line with cluster 5: Inland Waterway Transport, paragraph 5.1 of the programme of work 2018-2019 (ECE/TRANS/2018/21/Add.1) adopted by the Inland Transport Committee at its eightieth session (20-23 February 2018) (ECE/TRANS/274, para. 123).
2. It is recalled that the Working Party on Inland Water Transport at its sixtieth session had decided to align the annex to resolution No. 61 with the European Standard laying down Technical Requirements for Inland Navigation vessels (ES-TRIN) (ECE/TRANS/SC.3/203, para. 67) adopted by the European committee for drawing up common standards in the field of inland navigation (CESNI). The present document reproduces the text of the Instructions for the application of the technical standard ES-TRIN 2017: Part III, "Special provisions" (ESI-III-8 to ESI-II-10) and Part IV, "Transitional provisions" (ESI-IV-1).
3. The Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation may wish to develop a new appendix to the annex to resolution No. 61, using the instructions mentioned above as the basis.

Annex

Proposal for a new appendix of the annex to resolution No. 61, revision 2 “Instructions for the application of the technical standard”

ESI-III-8 Recreational craft

(Article 26.01(2) in conjunction with Article 7.02, Article 8.05(5), Article 8.08(2) and Article 8.10)

1. General

Recreational craft of up to 24 metres length, that are placed on the market, have to comply with the requirements of Directive 2013/53/EU. According to Article 3 in conjunction with Article 2 of this Directive, recreational craft having a length of 20 metres or more shall carry an inland navigation vessel certificate attesting the craft's compliance with the technical requirements of this Standard. Since double inspection or certification for certain equipment, arrangements and installations of newly built recreational craft which can result from certain provisions in Article 26.01 of Standard should be avoided, this Instruction gives information on those requirements listed in Article 26.01 that are already sufficiently covered under Directive 2013/53/EU.

2. Requirements in Article 26.01 which are already covered under Directive 2013/53/UE

For recreational craft subject to Directive 2013/53/EU the inspection body shall as regards to the issuance of the inland navigation vessel certificate (initial inspection) not require further inspection or certification of the following requirements of Article 26.01(2), provided that the craft presented for inspection has been placed on the market no more than 3 years before the date of presentation to the inspection body and no modifications to the craft have been carried out, and the Declaration of Conformity refers to the following harmonised Standards or their equivalence:

Article 7.02:	EN ISO 11591: 2000	(Unobstructed view)
Article 8.05(5):	EN ISO 10088: 2013	(Fuel tanks and pipes)
Article 8.08(2):	EN ISO 15083: 2003	(Bilge pumping)
Article 8.10:	EN ISO 14509-1: 2008 and EN ISO 14509-3: 2009, (Noise emission)	

ESI-III-9 Proof of buoyancy, trim and stability of the separated parts of a vessel

(Article 28.04, in conjunction with Article 27.02 and Article 27.03)

1. When proving the buoyancy, trim and stability of the parts of a vessel which have been separated in accordance with Article 28.04(2)(a), it shall be assumed that both parts were partly or fully unloaded beforehand or that containers extending beyond the hatch coaming were suitably protected from slipping.

2. For each of the two parts, the following requirements shall therefore be met when calculating stability in accordance with Article 27.03 (Limit conditions and method of calculation for proof of stability for the transport of secured containers):

- metacentric height \overline{MG} shall be not less than 0.50 m,
- there shall be a residual safety clearance of 100 mm,
- the speed to be taken into account shall be 7 km/h,

- the wind pressure shall be taken to be 0.01 t/m².

3. The heeling angle ($\leq 5^\circ$) does not have to be complied with for the parts of the vessel separated in accordance with Article 28.04(2) since this angle — derived from the coefficient of friction — was specified for non-secured containers.

The heeling lever resulting from the free surfaces of liquids shall be taken into account in accordance with the formula given in Article 27.02(1)(e).

4. The requirements set out in (2) and (3) shall also be deemed to have been met if, for each of the two parts, the stability requirements set out in Section 9.1.0.95.2 of ADN regulation are met.

5. The proof of stability of separated parts of the ship can be based on the assumption that they are homogeneously loaded because - if not already the case - this can be achieved prior to separation, or else because the vessel is going to be largely unloaded

ESI-III-10

Equipment for vessels to be operated according to standards S1 or S2

(Articles 31.01, 31.02 and 31.03)

1. General introduction

According to Article 31.01, vessels which are intended to be operated according to standards S1 and S2 shall comply with the provisions of Chapter 31. The inspection body shall confirm in the inland navigation vessel certificate that the vessel complies with these provisions.

These provisions are supplementary equipment requirements which apply in addition to the requirements with which a vessel has to comply for the inland navigation vessel certificate to be issued. Provisions of Chapter 31 which might be interpreted in different ways will be clarified in this instruction.

2. Article 31.02 – Standard S1

2.1 (1) – Arrangement of the propulsion system

If a vessel is fitted with a directly reversible main engine, the compressed air system which is required to reverse the direction of thrust shall:

- a) be kept permanently pressurised by an automatically adjusting compressor; or
- b) when an alarm is triggered in the wheelhouse be pressurised by means of an auxiliary engine which can be started from the steering position. If the auxiliary engine has its own fuel tank, there shall — in accordance with Article 8.05(13) — be a warning device in the wheelhouse to indicate if the level of filling is not sufficient to ensure further safe operation.

2.2 (2) – Bilge levels in the main engine room

If a bow steering system is necessary to comply with the manoeuvring requirements of Chapter 5, the room containing the bow steering system shall be deemed to be a main engine room.

2.3 (3) – Automatic fuel supply

2.3.1 If the propulsion system has a daily-supply tank,

- a) its contents shall be sufficient to ensure an operation period of the propulsion system of 24 hours, assuming a consumption of 0.25 litres per kW per hour;
- b) the fuel supply pump for refilling the daily-supply tank shall be operated continuously; or

- c) the fuel supply pump shall be fitted with:
 - a switch that automatically switches on the fuel supply pump when the daily-supply tank reaches a certain low level, and
 - a switch that automatically switches off the fuel supply pump when the daily-supply tank is full.

2.3.2 The daily-supply tank shall have a level alarm device which meets the requirements of Article 8.05(13).

2.4. (4) – *No particular force required for the steering system*

Hydraulically operated steering systems fulfil this requirement. Manually operated steering systems shall not require a force of more than 160 N in order to be operated.

2.5. (5) – *Visual and acoustic signals required under way*

Visual signs do not include cylinders, balls, cones or double cones required under national or international navigational authority regulations.

2.6. (6) – *Direct communication and communication with the engine room*

2.6.1 Direct communication shall be deemed to be ensured if:

a) direct visual contact is possible between the wheelhouse and the control positions for the winches and bollards on the fore section or the stern of the vessel and in addition the distance from the wheelhouse to these control positions is not more than 35 m; and

b) the accommodation is directly accessible from the wheelhouse.

2.6.2 Communication with the engine room shall be deemed to be ensured if the signal referred to in Article 7.09(3) second sentence, can be operated independently from the switch referred to in Article 7.09(2).

2.7. (7) – *Cranks and similar rotating means of operation*

These include:

a) manually operated anchor winches (the maximum force required shall be deemed to be that when the anchors are hanging freely);

b) cranks for lifting hatches;

c) cranks on mast and funnel winches.

These do not include:

a) warping and coupling winches;

b) cranks on cranes, unless intended for ship's boats.

2.8. (10) – *Ergonomic arrangement*

The provisions are deemed to be fulfilled if:

a) the wheelhouse is arranged in accordance with European Standard EN 1864: 2008; or

b) the wheelhouse is designed for radar navigation by one person; or

c) the wheelhouse meets the following requirements:

aa) the control units and monitoring instruments are in the forward field of vision and within an arc of not more than 180° (90° to starboard and 90° to port), including the floor and ceiling. They shall be clearly legible and visible from the normal position of the helmsman;

bb) the main control units such as the steering wheel or steering lever, the engine controls, the radio controls, and the controls for the acoustic signals and the warning and manoeuvring signals required under national or international navigational authority regulations, as appropriate, shall be arranged in such a way that the distance between the controls on the starboard side and those on the port side is not more than 3 m. The helmsman shall be able to operate the engines without letting go of the controls for the steering system and while still being able to operate the other controls such as the radio system, the controls for the acoustic signals and the warning and manoeuvring signals required under national or international navigational authority regulations, as appropriate;

cc) the warning and manoeuvring signals required under national or international navigational authority regulations, as appropriate, are operated electrically, pneumatically, hydraulically or mechanically. By way of derogation, it may be operated by means of a tension wire only if safe operation from the steering position is possible in this way.

3. Article 31.03 – Standard S2

3.1 (1) – Motor vessel operating separately

Motor vessels which according to the inland navigation vessel certificate are also suitable for pushing but which:

- a) do not have hydraulically or electrically operated coupling winches; or
- b) whose hydraulically or electrically operated coupling winches do not meet the requirements of (3.3) of this instruction,

shall be given the standard S2 as motor vessel operating separately. The entry ‘Standard S2 does not apply to the motor vessel when pushing’ shall be entered under item 47 of the inland navigation vessel certificate.

3.2 (3) – Pushed convoys

Motor vessels which according to their inland navigation vessel certificate are suitable for pushing and are fitted with hydraulically or electrically operated coupling winches that fulfil the requirements of (3.3) of this instruction but which do not have their own bow thruster shall be given the standard S2 as motor vessel pushing a convoy. The entry ‘Standard S2 does not apply to the motor vessel when operating separately’ shall be entered under item 47 of the inland navigation vessel certificate.

3.3 (3), first sentence, and (4)(d), first sentence — Special winches or equivalent devices for tensioning the cables (coupling devices)

The coupling devices required are the minimum equipment specified in accordance with Article 21.01(2) which, according to (2.1) and (2.2) of instruction ESI-III-6 (longitudinal connections), serve to take up the coupling forces and which meet the following requirements:

- a) the device shall provide the tensioning force required for the coupling only by mechanical means;
- b) the controls for the device shall be located on the device itself. By way of derogation, remote control is permitted provided that:
 - the person operating the device has an unobstructed direct view of the device from the control position,
 - there is a device at the control position to prevent unintentional operation,
 - the device has an emergency stop;
- c) the device shall have a braking device which acts immediately if the controls are released or the motive force fails;

d) it shall be possible for the coupling cable to be released manually if the motive force fails.

3.4 (3), second sentence, and (4)(d), second sentence — *Operating the bow thruster*

The control for operating the bow thruster shall be permanently installed in the wheelhouse. The requirements of Article 7.04(8) shall be complied with. The electric cabling to operate the bow thruster shall be permanently installed up to the fore section of the pushing motor vessel or the pusher.

3.5 (4) – *Equivalent manoeuvrability*

Equivalent manoeuvrability is ensured by a propulsion system consisting of:

- a) a multi-propeller drive and at least two independent propulsion systems with similar power output;
- b) at least one cycloidal propeller;
- c) at least one rudder propeller; or
- d) at least one 360° water-jet propulsion system.

PART IV TRANSITIONAL PROVISIONS

ESI-IV-1 Application of transitional provisions

(Chapters 19 to 30, Chapter 32 and Chapter 33)

1. Application of transitional provisions in joining together parts of craft

1.1 Principles

Where parts of different vessels are joined together, status quo protection shall be granted only for the parts which belong to the vessel which retains its inland navigation vessel certificate. Transitional provisions may therefore be invoked only for those parts. Other parts shall be treated as a newly built vessel.

1.2 Application of the transitional provisions in detail

1.2.1 Where parts of different vessels are joined together, transitional provisions may be invoked only for those parts which belong to the vessel which retains its inland navigation vessel certificate.

1.2.2 Parts which do not belong to the vessel which retains its vessel certificate shall be treated as a newly built craft.

1.2.3 After a vessel has had part of another vessel added to it, the former shall receive the ENI number of the craft, which retains its inland navigation vessel certificate as the converted craft.

1.2.4 Where an existing inland navigation vessel certificate is retained or a new inland navigation vessel certificate is issued for a craft after a conversion, the year of construction of the oldest part of the craft shall additionally be entered in the inland navigation vessel certificate.

1.2.5 If a new fore section is attached to a craft, the engine for the bow thruster system installed in the fore section shall also comply with the current requirements.

1.2.6 If a new stern section is attached to a vessel, the engines installed in the stern section shall also comply with the current requirements.

1.3 *Examples*

1.3.1 A vessel is put together from two older vessels (vessel 1 year of construction 1968; vessel 2 year of construction 1972). The whole of vessel 1 apart from the fore section is used; of vessel 2, the fore section is used. The assembled vessel receives vessel 1's inland navigation vessel certificate. The fore section of the assembled vessel must now be fitted inter alia with anchor niches.

1.3.2 A vessel is put together from two older vessels (vessel 1 year of construction 1975; vessel 2 year of construction 1958, oldest component 1952). The whole of vessel 1 apart from the fore section is used; of vessel 2, the fore section is used. The assembled vessel receives vessel 1's inland navigation vessel certificate. The fore section of the assembled vessel must now be fitted inter alia with anchor niches. The oldest component from the original vessel 2, with year of construction 1952, is additionally entered in the inland navigation vessel certificate.

1.3.3 The stern section of a vessel of year of construction 2001 is attached to a vessel of year of construction 1988. The engine of the vessel of year of construction 1988 is to remain in the vessel. In this case, the engine has to be type approved. The engine would also have to be type approved if it was the engine in the 2001 stern section.

2. **Application of transitional provisions in the case of a change in the type of craft (intended use of the craft)**

2.1 *Principles*

2.1.1 In any decision on the application of transitional provisions in the case of change of the type of craft (vessel type; intended use of the vessel), as regards to this Standard safety considerations shall be key.

2.1.2 It shall constitute a change in the type of craft if the safety requirements applying to the new type of craft are different from those for the old type; this is so if special provisions of Chapters 19 to 30 of this Standard are applicable to the new type which were not applicable to the old type.

2.1.3 In the case of a change in the type of craft, all special provisions and all requirements specific to this type of craft shall be complied with fully; transitional provisions may not be invoked for these requirements. This also applies to parts which are taken over from the existing craft and come under these special requirements.

2.1.4 The conversion of a tanker into a dry cargo vessel shall not constitute a change in the type of craft as defined in 2.1.2.

2.1.5 In the case of conversion of a cabin vessel into a day-trip vessel, all new parts shall comply fully with the current requirements.

2.2 *Application of the transitional provisions in detail*

2.2.1 Article 32.02(2) (N.R.C.), resp. Article 33.02(2) applies to the parts of the craft that are renewed; hence new parts of the craft cannot be subject to the transitional provisions.

2.2.2 For the parts of the craft that are not converted, the transitional provisions shall continue to be applicable with the exception of parts according to 2.1.3, second sentence.

2.2.3 If the dimensions of the craft are modified, the transitional provisions no longer apply to those parts of the craft that are connected with this modification (e.g. distance of collision bulkhead, freeboard and anchor).

2.2.4 In the case of a change in the type of craft, the special requirements that only apply to the new type of craft shall be applicable. All parts and items of equipment that are affected by the conversion of the craft must satisfy the current requirements Part II and III of this Standard.

2.2.5 The craft shall then be granted a new or amended inland navigation vessel certificate and a note shall be made in fields 7 and 8 of the certificate both of the original construction and of the conversion.

2.3 *Examples*

2.3.1 A cargo vessel (year of construction 1996) is converted into a passenger vessel. Chapter 19 of this Standard then applies to the whole vessel, without invoking transitional provisions. If the fore section is not modified either according to the conversion plans or in accordance with Chapter 19, the vessel does not need to present any anchor niches in accordance with Article 3.03.

2.3.2 A tug (year of construction 1970) is converted into a pusher. The physical conversion consists solely of changing the deck equipment and installing a pushing device. All transitional provisions for a 1970 vessel remain applicable, except for the Chapters 5, 7 (in part), Article 13.01 and Article 21.01.

2.3.3 A motor tanker (year of construction 1970) is converted into a pusher. The physical conversion consists of separating off the fore section and the cargo section, as well as changing the deck equipment and installing a pushing device. All transitional provisions for a 1970 vessel remain applicable, except for the provisions of Chapters 5, 7 (in part), Article 13.01 and Article 21.01.

2.3.4 A motor tanker is converted into a motor cargo vessel. The motor cargo vessel must comply with current workplace safety requirements, particularly those referred to in Article 14.04 of Chapter 14 of this Standard.

3. Application of transitional provisions in the case of conversion of passenger vessels

3.1 *Application of the transitional provisions*

3.1.1 Conversion measures that are necessary in order to comply with requirements of Chapter 19, no matter when they are carried out, shall not constitute conversion 'C' within the meaning of Article 32.02(2), Article 32.03(1) or Article 32.05(5), resp. Article 33.02 and Article 33.03, of this Standard.

3.1.2 In the case of conversion of a cabin vessel into a day-trip vessel, all new parts shall comply fully with the current requirements.

3.2 *Examples*

3.2.1 A passenger vessel (year of construction 1995) must have a second independent propulsion system installed by 1 January 2015 at the latest. If no other voluntary conversions are made on this passenger vessel, it is not necessary to carry out a stability calculation in accordance with the new requirements, but if there is an objective need for one, a stability calculation may be carried out in accordance with the original stability requirements of the RVIR or a Member State.

3.2.2 A passenger vessel (year of construction 1994, inland navigation vessel certificate last renewed 2012) will be extended by 10 m in 2016. In addition, this craft must be given a second independent propulsion system. Also, a new stability calculation will be necessary, which must be carried out in accordance with Chapter 19 for the one-compartment status and the two-compartment status.

3.2.3 A passenger vessel (year of construction 1988) receives a more powerful propulsion system including propellers. This is such a major conversion that a stability calculation is required. This must be carried out in accordance with current requirements.