

Rules for the Classification of Inland Waterway Ships and for Conformity to Directive 2016/1629/EU

Effective from 1 March 2019

Part G

Additional Requirements for Conformity
to Directive 2006/87/EC

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GENERAL CONDITIONS

Definitions:

"Administration" means the Government of the State whose flag the Ship is entitled to fly or under whose authority the Ship is authorised to operate in the specific case.

"IACS" means the International Association of Classification Societies.

"Interested Party" means the party, other than the Society, having an interest in or responsibility for the Ship, product, plant or system subject to classification or certification (such as the owner of the Ship and his representatives, the ship builder, the engine builder or the supplier of parts to be tested) who requests the Services or on whose behalf the Services are requested.

"Owner" means the registered owner, the ship owner, the manager or any other party with the responsibility, legally or contractually, to keep the ship seaworthy or in service, having particular regard to the provisions relating to the maintenance of class laid down in Part A, Chapter 2 of the Rules for the Classification of Ships or in the corresponding rules indicated in the specific Rules.

"Rules" in these General Conditions means the documents below issued by the Society:

- (i) Rules for the Classification of Ships or other special units;
- (ii) Complementary Rules containing the requirements for product, plant, system and other certification or containing the requirements for the assignment of additional class notations;
- (iii) Rules for the application of statutory rules, containing the rules to perform the duties delegated by Administrations;
- (iv) Guides to carry out particular activities connected with Services;
- (v) Any other technical document, as for example rule variations or interpretations.

"Services" means the activities described in Article 1 below, rendered by the Society upon request made by or on behalf of the Interested Party.

"Ship" means ships, boats, craft and other special units, as for example offshore structures, floating units and underwater craft.

"Society" or "TASNEEF" means Tasneef and/or all the companies in the Tasneef Group which provide the Services.

"Surveyor" means technical staff acting on behalf of the Society in performing the Services.

Article 1

1.1. The purpose of the Society is, among others, the classification and certification of ships and the certification of their parts and components. In particular, the Society:

- (i) sets forth and develops Rules;
- (ii) publishes the Register of Ships;
- (iii) issues certificates, statements and reports based on its survey activities.

1.2. The Society also takes part in the implementation of national and international rules and standards as delegated by various Governments.

1.3. The Society carries out technical assistance activities on request and provides special services outside the scope of classification, which are regulated by these general conditions, unless expressly excluded in the particular contract.

Article 2

2.1. The Rules developed by the Society reflect the level of its technical knowledge at the time they are published. Therefore, the Society, although committed also through its research and development services to continuous updating of the Rules, does not guarantee the Rules meet state-of-the-art science and technology at the time of publication or that they meet the Society's or others' subsequent technical developments.

2.2. The Interested Party is required to know the Rules on the basis of which the Services are provided. With particular reference to Classification Services, special attention is to be given to the Rules concerning class suspension, withdrawal and reinstatement. In case of doubt or inaccuracy, the Interested Party is to promptly contact the Society for clarification.

The Rules for Classification of Ships are published on the Society's website: www.tasneef.ae.

2.3. The Society exercises due care and skill:

- (i) in the selection of its Surveyors
- (ii) in the performance of its Services, taking into account the level of its technical knowledge at the time the Services are performed.

2.4. Surveys conducted by the Society include, but are not limited to, visual inspection and non-destructive testing. Unless otherwise required, surveys are conducted through sampling techniques and do not consist of comprehensive verification or monitoring of the Ship or of the items subject to certification. The surveys and checks made by the Society on board ship do not necessarily require the constant and continuous presence of the Surveyor. The Society may also commission laboratory testing, underwater inspection and other checks carried out by and under the responsibility of qualified service suppliers. Survey practices and procedures are selected by the Society based on its experience and knowledge and according to generally accepted technical standards in the sector.

Article 3

3.1. The class assigned to a Ship, like the reports, statements, certificates or any other document or information issued by the Society, reflects the opinion of the Society concerning compliance, at the time the Service is provided, of the Ship or product subject to certification, with the applicable Rules (given the intended use and within the relevant time frame).

The Society is under no obligation to make statements or provide information about elements or facts which are not part of the specific scope of the Service requested by the Interested Party or on its behalf.

3.2. No report, statement, notation on a plan, review, Certificate of Classification, document or information issued or given as part of the Services provided by the Society shall have any legal effect or implication other than a representation that, on the basis of the checks made by the Society, the Ship, structure, materials, equipment, machinery or any other item covered by such document or information meet the Rules. Any such document is issued solely for the use of the Society, its committees and clients or other duly authorised bodies and for no other purpose. Therefore, the Society cannot be held liable for any act made or document issued by other parties on the basis of the statements or information given by the Society. The validity, application, meaning and interpretation of a Certificate of Classification, or any other document or information issued by the Society in connection with its Services, is governed by the Rules of the Society, which is the sole subject entitled to make such interpretation. Any disagreement on technical matters between the Interested Party and the Surveyor in the carrying out of his functions shall be raised in writing as soon as possible with the Society, which will settle any divergence of opinion or dispute.

3.3. The classification of a Ship, or the issuance of a certificate or other document connected with classification or certification and in general with the performance of Services by the Society shall have the validity conferred upon it by the Rules of the Society at the time of the assignment of class or issuance of the certificate; in no case shall it amount to a statement or warranty of seaworthiness,

structural integrity, quality or fitness for a particular purpose or service of any Ship, structure, material, equipment or machinery inspected or tested by the Society.

3.4. Any document issued by the Society in relation to its activities reflects the condition of the Ship or the subject of certification or other activity at the time of the check.

3.5. The Rules, surveys and activities performed by the Society, reports, certificates and other documents issued by the Society are in no way intended to replace the duties and responsibilities of other parties such as Governments, designers, ship builders, manufacturers, repairers, suppliers, contractors or sub-contractors, Owners, operators, charterers, underwriters, sellers or intended buyers of a Ship or other product or system surveyed.

These documents and activities do not relieve such parties from any fulfilment, warranty, responsibility, duty or obligation (also of a contractual nature) expressed or implied or in any case incumbent on them, nor do they confer on such parties any right, claim or cause of action against the Society. With particular regard to the duties of the ship Owner, the Services undertaken by the Society do not relieve the Owner of his duty to ensure proper maintenance of the Ship and ensure seaworthiness at all times. Likewise, the Rules, surveys performed, reports, certificates and other documents issued by the Society are intended neither to guarantee the buyers of the Ship, its components or any other surveyed or certified item, nor to relieve the seller of the duties arising out of the law or the contract, regarding the quality, commercial value or characteristics of the item which is the subject of transaction.

In no case, therefore, shall the Society assume the obligations incumbent upon the above-mentioned parties, even when it is consulted in connection with matters not covered by its Rules or other documents.

In consideration of the above, the Interested Party undertakes to relieve and hold harmless the Society from any third party claim, as well as from any liability in relation to the latter concerning the Services rendered.

Insofar as they are not expressly provided for in these General Conditions, the duties and responsibilities of the Owner and Interested Parties with respect to the services rendered by the Society are described in the Rules applicable to the specific Service rendered.

Article 4

4.1. Any request for the Society's Services shall be submitted in writing and signed by or on behalf of the Interested Party. Such a request will be considered irrevocable as soon as received by the Society and shall entail acceptance by the applicant of all relevant requirements of the Rules, including these General Conditions. Upon acceptance of the written request by the Society, a contract between the Society and the Interested Party is entered into, which is regulated by the present General Conditions.

4.2. In consideration of the Services rendered by the Society, the Interested Party and the person requesting the service shall be jointly liable for the payment of the relevant fees, even if the service is not concluded for any cause not pertaining to the Society. In the latter case, the Society shall not be held liable for non-fulfilment or partial fulfilment of the Services requested. In the event of late payment, interest at the legal current rate increased by 1.5% may be demanded.

4.3. The contract for the classification of a Ship or for other Services may be terminated and any certificates revoked at the request of one of the parties, subject to at least 30 days' notice to be given in writing. Failure to pay, even in part, the fees due for Services carried out by the Society will entitle the Society to immediately terminate the contract and suspend the Services.

For every termination of the contract, the fees for the activities performed until the time of the termination shall be owed to the Society as well as the expenses incurred in view of activities already programmed; this is without prejudice to the right to compensation due to the Society as a consequence of the termination.

With particular reference to Ship classification and certification, unless decided otherwise by the Society, termination of the contract implies that the assignment of class to a Ship is withheld or, if already assigned, that it is suspended or withdrawn; any statutory certificates issued by the Society will be withdrawn in those cases where provided for by agreements between the Society and the flag State.

Article 5

5.1. In providing the Services, as well as other correlated information or advice, the Society, its Surveyors, servants or agents operate with due diligence for the proper execution of the activity. However, considering the nature of the activities performed (see art. 2.4), it is not possible to guarantee absolute accuracy, correctness and completeness of any information or advice supplied. Express and implied warranties are specifically disclaimed.

Therefore, except as provided for in paragraph 5.2 below, and also in the case of activities carried out by delegation of Governments, neither the Society nor any of its Surveyors will be liable for any loss, damage or expense of whatever nature sustained by any person, in tort or in contract, derived from carrying out the Services.

5.2. Notwithstanding the provisions in paragraph 5.1 above, should any user of the Society's Services prove that he has suffered a loss or damage due to any negligent act or omission of the Society, its Surveyors, servants or agents, then the Society will pay compensation to such person for his proved loss, up to, but not exceeding, five times the amount of the fees charged for the specific services, information or opinions from which the loss or damage derives or, if no fee has been charged, a maximum of AED5,000 (Arab Emirates Dirhams Five Thousand only). Where the fees charged are related to a number of Services, the amount of the fees will be apportioned for the purpose of the calculation of the maximum compensation, by reference to the estimated time involved in the performance of the Service from which the damage or loss derives. Any liability for indirect or consequential loss, damage or expense is specifically excluded. In any case, irrespective of the amount of the fees charged, the maximum damages payable by the Society will not be more than AED5,000,000 (Arab Emirates Dirhams Five Millions only). Payment of compensation under this paragraph will not entail any admission of responsibility and/or liability by the Society and will be made without prejudice to the disclaimer clause contained in paragraph 5.1 above.

5.3. Any claim for loss or damage of whatever nature by virtue of the provisions set forth herein shall be made to the Society in writing, within the shorter of the following periods: (i) THREE (3) MONTHS from the date on which the Services were performed, or (ii) THREE (3) MONTHS from the date on which the damage was discovered. Failure to comply with the above deadline will constitute an absolute bar to the pursuit of such a claim against the Society.

Article 6

6.1. These General Conditions shall be governed by and construed in accordance with United Arab Emirates (UAE) law, and any dispute arising from or in connection with the Rules or with the Services of the Society, including any issues concerning responsibility, liability or limitations of liability of the Society, shall be determined in accordance with UAE law. The courts of the Dubai International Financial Centre (DIFC) shall have exclusive jurisdiction in relation to any claim or dispute which may arise out of or in connection with the Rules or with the Services of the Society.

6.2. However,

- (i) In cases where neither the claim nor any counterclaim exceeds the sum of AED300,000 (Arab Emirates Dirhams Three Hundred Thousand) the dispute shall be referred to the jurisdiction of the DIFC Small Claims Tribunal; and
- (ii) for disputes concerning non-payment of the fees and/or expenses due to the Society for services, the Society shall have the

right to submit any claim to the jurisdiction of the Courts of the place where the registered or operating office of the Interested Party or of the applicant who requested the Service is located.

In the case of actions taken against the Society by a third party before a public Court, the Society shall also have the right to summon the Interested Party or the subject who requested the Service before that Court, in order to be relieved and held harmless according to art. 3.5 above.

Article 7

7.1. All plans, specifications, documents and information provided by, issued by, or made known to the Society, in connection with the performance of its Services, will be treated as confidential and will not be made available to any other party other than the Owner without authorisation of the Interested Party, except as provided for or required by any applicable international, European or domestic legislation, Charter or other IACS resolutions, or order from a competent authority. Information about the status and validity of class and statutory certificates, including transfers, changes, suspensions, withdrawals of class, recommendations/conditions of class, operating conditions or restrictions issued against classed ships and other related information, as may be required, may be published on the website or released by other means, without the prior consent of the Interested Party.

Information about the status and validity of other certificates and statements may also be published on the website or released by other means, without the prior consent of the Interested Party.

7.2. Notwithstanding the general duty of confidentiality owed by the Society to its clients in clause 7.1 above, the Society's clients hereby accept that the Society may participate in the IACS Early Warning System which requires each Classification Society to provide other involved Classification Societies with relevant technical information on serious hull structural and engineering systems failures, as defined in the IACS Early Warning System (but not including any drawings relating to the ship which may be the specific property of another party), to enable such useful information to be shared and used to facilitate the proper working of the IACS Early Warning System. The Society will provide its clients with written details of such information sent to the involved Classification Societies.

7.3. In the event of transfer of class, addition of a second class or withdrawal from a double/dual class, the Interested Party undertakes to provide or to permit the Society to provide the other Classification Society with all building plans and drawings, certificates, documents and information relevant to the classed unit, including its history file, as the other Classification Society may require for the purpose of classification in compliance with the applicable legislation and relative IACS Procedure. It is the Owner's duty to ensure that, whenever required, the consent of the builder is obtained with regard to the provision of plans and drawings to the new Society, either by way of appropriate stipulation in the building contract or by other agreement.

In the event that the ownership of the ship, product or system subject to certification is transferred to a new subject, the latter shall have the right to access all pertinent drawings, specifications, documents or information issued by the Society or which has come to the knowledge of the Society while carrying out its Services, even if related to a period prior to transfer of ownership.

Article 8

8.1. Should any part of these General Conditions be declared invalid, this will not affect the validity of the remaining provisions.



RULES FOR THE CLASSIFICATION OF INLAND
WATERWAY SHIPS AND FOR CONFORMITY
TO DIRECTIVE 2016/1629/EU

Part G
**Additional Requirements for Conformity
to Directive 2016/1629/EU**

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Part G

**Additional Requirements for Conformity
to Directive 2006/87/EC**

Chapter 1

ADDITIONAL COMMON RULES FOR ALL SHIPS

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SECTION 1

GENERAL

1 General

1.1 Purpose and application

1.1.1 (1/1/2017)

The Rules contained in this Part may be used in the following cases:

- a) Tasneef classification is requested together with conformity to Directive 2006/87/EC;
- b) only conformity to Directive 2006/87/EC is requested.

In case a), in addition to the Rules of this Part, those of Parts A, B, C, D and E are also to be applied.

In case of conflicting requirements the Directive prevails.

When requested by the Interested Parties, the Rules contained in Part F are also to be applied. In this case for the relevant items (i.e. fire protection and damage stability) the more stringent Rules are to be applied.

In the above-mentioned case Tasneef will issue a statement of compliance with Directive 2006/87/EC, in addition to the Certificate of Classification if authorized.

However, unless Tasneef is authorised by the Administration, such statement is not a substitute and cannot be used in lieu of the "Community Inland Navigation Certificate" foreseen by the Directive.

In case b), only the requirements contained in this Part are to be applied except where there are no specific requirements in this Part (i.e. structural strength, electrical equipment, etc.), for which the Directive accepts a declaration by an authorised Classification Society and therefore for such items the relevant requirements given in the other Parts of these Rules are to be applied.

In this case Tasneef may issue only a statement of compliance with Directive 2006/87/EC together with the foregoing declaration of conformity to the above-mentioned statement if authorized.

This Part applies at the request of the Interested Parties to all ships covered by Directive 2006/87/EC.

For ships which satisfy the requirements of Part G, a statement certifying compliance with Community Directive 2006/87/EC will be issued by Tasneef if authorized.

Unless Tasneef is authorised by the Administration, said statement cannot be used in lieu of the "Community Inland Navigation Certificate" foreseen by the Directive.

1.2 Definitions

1.2.1 (1/3/2019)

The following definitions shall apply in this Part:

Types of craft

- 1) 'craft': a vessel or item of floating equipment;
- 2) 'vessel': an inland waterway vessel or sea-going ship;
- 3) 'inland waterway vessel': a vessel intended solely or mainly for navigation on inland waterways;
- 4) 'sea-going ship': a vessel certified for sea-going service;
- 5) 'motor vessel': a motor cargo vessel or a motor tanker;
- 6) 'motor tanker': a vessel intended for the carriage of goods in fixed tanks and built to navigate independently under its own motive power;
- 7) 'motor cargo vessel': a vessel, other than a motor tanker, intended for the carriage of goods and built to navigate independently under its own motive power;
- 8) 'canal barge': an inland waterway vessel not exceeding 38,5 m in length and 5,05 m in breadth and usually operating on the Rhine-Rhône Canal;
- 9) 'tug': a vessel specially built to perform towing operations;
- 10) 'pusher': a vessel specially built to propel a pushed convoy;
- 11) 'barge': a dumb barge or tank barge;
- 12) 'tank barge': a vessel intended for the carriage of goods in fixed tanks and built to be towed, either having no motive power of its own or having only sufficient motive power to perform restricted manoeuvres;
- 13) 'dumb barge': a vessel, other than a tank barge, intended for the carriage of goods and built to be towed, either having no motive power of its own or having only sufficient motive power to perform restricted manoeuvres;
- 14) 'lighter': a tank lighter, cargo lighter or ship-borne lighter;
- 15) 'tank lighter': a vessel intended for the carriage of goods in fixed tanks, built or specially modified to be pushed, either having no motive power of its own or having only sufficient motive power to perform restricted manoeuvres when not part of a pushed convoy;
- 16) 'cargo lighter': a vessel, other than a tank lighter, intended for the carriage of goods and built or specially modified to be pushed, either having no motive power of its own or having only sufficient motive power to per-

form restricted manoeuvres when not part of a pushed convoy;

- 17) 'ship-borne lighter': a lighter built to be carried aboard sea-going ships and to navigate on inland waterways;
- 18) 'passenger vessel': a day trip or cabin vessel constructed and equipped to carry more than 12 passengers;
- 19) 'passenger sailing vessel': a passenger vessel built and fitted out also with a view to propulsion under sail;
- 20) 'day trip vessel': a passenger vessel without overnight passenger cabins;
- 21) 'cabin vessel': a passenger vessel with overnight passenger cabins;
- 22) 'high-speed vessel': a motorised craft capable of reaching speeds over 40 km/h in relation to water;
- 23) 'floating equipment': a floating installation carrying working gear such as cranes, dredging equipment, pile drivers or elevators;
- 24) 'worksite craft': a vessel, appropriately built and equipped for use at worksites, such as a reclamation barge, hopper or pontoon barge, pontoon or stone-dumping vessel; see L 389/38 EN Official Journal of the European Union 30.12.2006;
- 25) 'recreational craft': a vessel other than a passenger vessel, intended for sport or pleasure;
- 26) 'ship's boat': a boat for use in transport, rescue, salvage and work duties;
- 27) 'floating establishment': any floating installation not normally intended to be moved, such as a swimming bath, dock, jetty or boathouse;
- 28) 'floating object': a raft or other structure, object or assembly capable of navigation, not being a vessel or floating equipment or establishment;
- 29) 'traditional craft': a craft which, based on its age, its technical nature or construction, its rarity, its meaning for the preservation of traditional principles of seamanship or techniques of inland navigation or its significance for a period from a historic viewpoint, is worthy of being preserved, and is operated for demonstration purposes in particular, or a replica thereof;
- 30) 'replica of a traditional craft': a craft which was largely built from original materials, using an appropriate construction method according to plans or templates as a traditional craft;

Assemblies of craft

- 31) 'convoy': a rigid or towed convoy of craft;
- 32) 'formation': the manner in which a convoy is assembled;
- 33) 'rigid convoy': a pushed convoy or side-by-side formation;
- 34) 'pushed convoy': a rigid assembly of craft of which at least one is positioned in front of the craft providing the

power for propelling the convoy, known as the 'pusher(s)'; a convoy composed of a pusher and a pushed craft coupled so as to permit guided articulation is also considered as rigid;

- 35) 'side-by-side formation': an assembly of craft coupled rigidly side by side, none of which is positioned in front of the craft propelling the assembly;
- 36) 'towed convoy': an assembly of one or more craft, floating establishments or floating objects towed by one or more self-propelled craft forming part of the convoy;

Particular areas on board

- 37) 'main engine room': space where the propulsion engines are installed;
- 38) 'engine room': space where combustion engines are installed;
- 39) 'boiler room': a space housing a fuel-operated installation designed to produce steam or heat a thermal fluid;
- 40) 'enclosed superstructure': a watertight, rigid, continuous structure with rigid walls joined to the deck in a permanent and watertight manner;
- 41) 'wheelhouse': the area which houses all the control and monitoring instruments necessary for manoeuvring the vessel;
- 42) 'accommodation': a space intended for the use of persons normally living on board, including galleys, storage space for provisions, toilets and washing facilities, laundry facilities, ante-rooms and passageways, but not the wheelhouse;
- 43) 'passenger room': rooms on board intended for passengers and enclosed areas such as lounges, offices, shops, hairdressing salons, drying rooms, laundries, saunas, toilets, washrooms, passageways, connecting passages and stairs not encapsulated by walls;
- 44) 'control centre': a wheelhouse, an area which contains an emergency electrical power plant or parts thereof or an area with a centre permanently occupied by on-board personnel or crew members, such as for fire alarm equipment, remote control of doors or fire dampers;
- 45) 'stairwell': the well of an internal staircase or of a lift;
- 46) 'lounge': a room of an accommodation or a passenger area. On board passenger vessels, galleys are not regarded as lounges;
- 47) 'galley': a room with a stove or a similar cooking appliance;
- 48) 'storeroom': a room for the storage of flammable liquids or a room with an area of over 4 m² for storing supplies;
- 49) 'hold': part of the vessel, bounded fore and aft by bulkheads, opened or closed by means of hatch covers,

- intended for the carriage of goods, whether packaged or in bulk, or for housing tanks not forming part of the hull;
- 52) 'fixed tank': a tank joined to the vessel, the walls of the tank consisting either of the hull itself or of a casing separate from the hull;
- 51) 'working station': an area where members of the crew carry out their duties, including gangway, derrick and ship's boat;
- 52) 'passageway': an area intended for the normal movement of persons and goods; see 30.12.2006 EN Official Journal of the European Union L 389/39;
- 53) 'safe area': the area which is externally bounded by a vertical surface running at a distance of 1/5 BWL parallel to the course of the hull in the line of maximum draught;
- 54) 'muster areas': areas of the vessel which are specially protected and in which passengers muster in the event of danger;
- 55) 'evacuation areas': part of muster areas of the vessel from which evacuation of persons can be carried out;
- 56) 'explosive atmosphere' a mixture with air, under atmospheric conditions, of flammable substances in the form of gas, vapour, dust, fibres, or flyings, which, after ignition, permits self-sustaining flame propagation;
- 57) 'hazardous area' an area in which an explosive gas atmosphere is or may be expected to be present, in quantities such as to require special precautions for the construction, installation and use of equipment;
- 58) 'zones' hazardous area classification based upon the frequency of the occurrence and duration of an explosive atmosphere:
- 'Zone 0': areas in which an explosive atmosphere is present continuously or for long periods or frequently,
 - 'Zone 1': areas in which an explosive atmosphere is likely to occur in normal operation occasionally,
 - 'Zone 2': areas in which an explosive atmosphere is not likely to occur in normal operation but, if it does occur, will persist for a short period only. These areas also include areas directly adjoining Zone 1 that are not separated from one another in a gas tight manner.
- 59) 'certified safe type electrical equipment' an electrical equipment which has been tested and approved by the competent authority regarding its safety of operation in an explosive atmosphere;
Marine engineering terms
- 60) 'plane of maximum draught': the water plane corresponding to the maximum draught at which the craft is authorised to navigate;
- 61) 'safety clearance': the distance between the plane of maximum draught and the parallel plane passing through the lowest point above which the craft is no longer deemed to be watertight;
- 62) 'residual safety clearance': the vertical clearance available, in the event of the vessel heeling over, between the water level and the lowest point of the immersed side, beyond which the vessel is no longer regarded as watertight;
- 63) 'freeboard (f)': the distance between the plane of maximum draught and a parallel plane passing through the lowest point of the gunwale or, in the absence of a gunwale, the lowest point of the upper edge of the ship's side;
- 64) 'residual freeboard': the vertical clearance available, in the event of the vessel heeling over, between the water level and the upper surface of the deck at the lowest point of the immersed side or, if there is no deck, the lowest point of the upper surface of the fixed ship's side;
- 65) 'margin line': an imaginary line drawn on the side plating not less than 10 cm below the bulkhead deck and not less than 10 cm below the lowest non-watertight point of the side plating. If there is no bulkhead deck, a line drawn not less than 10 cm below the lowest line up to which the outer plating is watertight shall be used;
- 66) 'water displacement ()': the immersed volume of the vessel, in m³;
- 67) 'displacement (Δ)': the total weight of the vessel, inclusive of cargo, in t;
- 68) 'block coefficient (CB)': the ratio between the water displacement and the product of length LWL, breadth BWL and draught T;
- 69) 'lateral plane above water (AV)': lateral plane of the vessel above the waterline in m²;
- 70) 'bulkhead deck': the deck to which the required watertight bulkheads are taken and from which the freeboard is measured;
- 71) 'bulkhead': a wall of a given height, usually vertical, partitioning the vessel and bounded by the bottom of the vessel, the plating or other bulkheads;
- 72) 'transverse bulkhead': a bulkhead extending from one side of the vessel to the other;
- 73) 'wall': a dividing surface, usually vertical;
- 74) 'partition wall': a non-watertight wall;
- 75) 'length (L)': the maximum length of the hull in m, excluding rudder and bowsprit;
- 76) 'length overall (LOA)': the maximum length of the craft in m, including all fixed installations such as parts of the steering system or power plant, mechanical or similar devices;
- 77) 'length of waterline (LWL)': the length of the hull in m, measured at the maximum draught;
- 78) 'breadth (B)': the maximum breadth of the hull in m, measured to the outer edge of the shell plating (excluding paddle wheels, rub rails, and similar);
- 79) 'breadth overall (BOA)': the maximum breadth of the craft in m, including all fixed equipment such as paddle wheels, rub rails, mechanical devices and the like;
- 80) 'breadth of waterline (BWL)': breadth of the hull in m, measured from the outside of the side plating at the maximum draught line;
- 81) 'height (H)': the shortest vertical distance in m between the lowest point of the hull or the keel and the lowest point of the deck on the side of the vessel;

- 82) 'draught (T)': the vertical distance in m between the lowest point of the hull without taking into account the keel or other fixed attachments and the maximum draught line;
- 83) 'draught overall (T OA)': the vertical distance in m between the lowest point of the hull including the keel or other fixed attachments and the maximum draught line;
- 84) 'forward perpendicular': the vertical line at the forward point of the intersection of the hull with the maximum draught line;
- 85) 'clear width of side deck': the distance between the vertical line passing through the most prominent part of the hatch coaming on the side deck side and the vertical line passing through the inside edge of the slip guard (guardrail, foot rail) on the outer side of the side deck; see L 389/40 EN Official Journal of the European Union 30.12.2006;
- 86) 'steering system': all the equipment necessary for steering the vessel, such as to ensure the manoeuvrability laid down in Chapter 5;
- 87) 'rudder': the rudder or rudders, with shaft, including the rudder quadrant and the components connecting with the steering apparatus;
- 88) 'steering apparatus': the part of the steering system which produces the movement of the rudder;
- 89) 'drive unit': the steering-apparatus drive, between the power source and the steering apparatus;
- 90) 'steering control': the component parts of and circuitry for the operation of a power-driven steering control;
- 91) 'steering apparatus drive unit': the control for the steering apparatus, its drive unit and its power source;
- 92) 'manual drive': a system whereby manual operation of the hand wheel moves the rudder by means of a mechanical transmission, without any additional power source;
- 93) 'manually-operated hydraulic drive': a manual control actuating a hydraulic transmission;
- 94) 'rate-of-turn regulator': equipment which automatically produces and maintains a given rate of turn of the vessel in accordance with preselected values;
- 95) 'wheelhouse designed for radar navigation by one person': a wheelhouse arranged in such a way that, during radar navigation, the vessel can be manoeuvred by one person;
- Properties of structural components and materials
- 96) 'watertight': a structural component or device so fitted as to prevent any ingress of water;
- 97) 'spray-proof and weathertight': a structural component or device so fitted that in normal conditions it allows only a negligible quantity of water to penetrate;
- 98) 'gas-tight': a structural component or device so fitted as to prevent the ingress of gas and vapours;
- 99) 'non-combustible': a substance which neither burns nor produces flammable vapours in such quantities that

they ignite spontaneously when heated to approximately 750°C;

- 100) 'flame-retardant': material which does not readily catch fire, or whose surface at least restricts the spread of flames pursuant to the test procedure referred to in Article 15.11(1)(c);
- 101) 'self-extinguishing': the characteristic of a burning substance whereby it extinguishes itself of its own accord within a short period once the ignition source has been removed, i.e. does not continue to burn;
- 102) 'fire-resistance': the property of structural components or devices as certified by the test procedure referred to in Article 15.11(1)(d);
- 103) 'Code for Fire Test Procedures': the International Code for the Application of Fire Test Procedures adopted under Resolution MSC.61(67) by the Maritime Safety Committee of IMO;
- Signal lights, navigation and information equipment
- 104) 'signal lights': light from navigation lights to indicate vessels;
- 105) 'light signals': light used to supplement optical or acoustic signals;
- 106) 'navigational radar installation': an electronic navigational aid for detecting and displaying the surroundings and traffic;
- 107) 'Inland ECDIS': a system used within the meaning of the current Inland ECDIS Standard for displaying electronic navigational charts for inland waters and associated information, that displays selected information from proprietary electronic navigational charts for inland waters and optionally information from other sensors of the craft;
- 108) 'Inland ECDIS equipment': an installation for displaying electronic navigational charts for inland waters that can be operated in two different modes: information mode and navigation mode;
- 109) 'information mode': use of Inland ECDIS for information purposes only without radar overlay;
- 110) 'navigation mode': use of Inland ECDIS with radar overlay for navigating a craft;
- 111) 'Inland AIS equipment': equipment fitted aboard a vessel and used within the meaning of the current VTT Standard;
- 112) 'VTT standard' the CCNR Standard 'Vessel Tracking and Tracing Standard for Inland Navigation' edition 1.2 (see Note 1) or the technical specifications defined by Implementing Regulation (EU) no. 689/2012 (see Note 2);
- Note 1: Vessel Tracking and Tracing Standard for Inland Navigation standard, Edition 1.2; Resolution CCNR 2013-I-23 dated 29 May 2013.
- Note 2: Commission Implementing Regulation (EU) no. 689/2012 dated 27 July 2012 amending Regulation (EC) no. 415/2007 on the technical specifications applicable to the vessel tracking and location systems referred to in Article 5 of directive 2005/44/EC of the European Parliament and Council on harmonised river information services (RIS) on community navigable waterways (OJ L 202 dated 28.7.2012).

113)'Inland ECDIS standard': the CCNR Standard 'Electronic Chart Display and Information System for Inland Navigation' edition 2.3 (see Note 3) or the technical specifications defined by Implementing Regulation (EU) no. 909/2013 (see Note 4);

Note 3: Electronic Chart Display and Information System for Inland Navigation (Inland ECDIS) Edition 2.3; CCNR Resolution 2012-II-20 dated 29 November 2012.

Note 4: Commission Implementing Regulation (EU) no. 909/2013 of 10 September 2013 on the technical specifications pertaining to the Electronic Chart Display and Information System for Inland Navigation (Inland ECDIS) referred to in Directive 2005/44/EC of the European Parliament and Council (OJ L 258 dated 28.9.2013).

114)'Test Standard for Inland AIS': the CESNI Inland AIS Test Standard edition 2.0 (see Note 5);

Note 5: Inland AIS Test Standard Edition 2.0; CESNI Resolution 2017-II-2 dated 6 July, 2017.

Other definitions

115)'recognised classification society': a classification society that has been recognised in accordance with CCNR or EU procedures respectively

116)'radar installation': an electronic navigational aid for detecting and displaying the surroundings and traffic;

117)'shipboard personnel': all employees on board a passenger vessel who are not members of the crew;

118)'persons with reduced mobility': persons facing particular problems when using public transport, such as the elderly and the handicapped and persons with sensory disabilities, persons in wheelchairs, pregnant women and persons accompanying young children;

119)'ADN': the Regulations annexed to The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) in its current version;

120)'inland navigation vessel certificate': Union certificate for inland navigation vessels or Rhine vessel inspection certificate, issued by the competent authority and which confirms compliance with the technical requirements;

121)'highest class': the highest class is allocated to a vessel where:

- the hull, including the steering and manoeuvring apparatus as well as the anchors and anchor chains, comply with the rules established by a recognised classification society and has been built and tested under its supervision;
- the propulsion machinery as well as the auxiliary engines, the mechanical and electrical equipment,

required for shipboard services, have been manufactured and tested in accordance with the classification society's rules and have been installed under its supervision; the unit as a whole will have successfully undergone post installation testing;

122)'Inland vessel certificate': a certificate issued to an inland waterway vessel by the competent authority, signifying compliance with the technical requirements of this Directive'

123)'expert': a person recognised by the competent authority or by an authorised institution, having specialist knowledge in the relevant area on the basis of his or her professional training and experience, fully conversant with the relevant rules and regulations and the generally accepted technical rules (e.g. EN standards, relevant legislation, technical rules of other Member States of the European Union), and able to examine and give an expert assessment of the relevant systems and equipment;

124)'competent person': a person who has acquired sufficient knowledge in the relevant area on the basis of his or her professional training and experience and is sufficiently conversant with the relevant rules and regulations and the generally accepted technical rules (e.g. EN standards, relevant legislation, technical rules of other Member States of the European Union) to be able to assess the operational safety of the relevant systems and equipment.

Electrical equipment, installations and propulsion systems

125)'power source' an energy carrier or energy converter used for producing useful energy. For rudder machinery propulsion systems the power supply to the steering drive unit and the steering apparatus produced by an on-board network, a battery, an accumulator or an internal combustion engine;

126)'electrical power source' an energy source from which electric power is obtained;

127)'accumulator' a rechargeable storage device for electrical energy on an electro-chemical basis;

128)'battery' a non-rechargeable storage device for electrical energy on an electro-chemical basis;

129)'power electronics' an installation, appliance, assembly or device for converting electrical energy with switching electronic devices or a system comprised thereof.

SECTION 2

SHIPBUILDING REQUIREMENTS

1 Strength and stability

1.1 Application

1.1.1 Reference is to be made to Part B and Part E according to the ship's service notation.

1.1.2 (1/1/2017)

In addition, the minimum thickness of the bottom, bilge and side plates for ships made of steel shall be in conformity with the following requirements:

- a) for vessels that are longer than 40 m: $t_{\min} = f \cdot b \cdot c (2,3 + 0,04 L)$ (mm);
for vessels not more than 40 m in length: $t_{\min} = f \cdot b \cdot c (1,5 + 0,06L)$ (mm), however, not less than 3.00 mm;
- b) $t_{\min} = 0,005 \cdot a \cdot T^{0.5}$ mm.

where:

- a : frame spacing (mm);
f : frame spacing factor:
 $f = 1$ for $a \leq 500$ mm
 $f = 1 + 0,0013 (a - 500)$ for $a > 500$ mm
 $f = 1$ may be taken for the frame spacing when calculating the minimum thickness of the side plates. However, the minimum thickness of the bilge plates may in no case be less than that of the bottom plates and side plates.
- b : factor for bottom, side or bilge plates
1,0 for bottom plates and side plates
1,25 for bilge plates.
- c : factor for the type of structure:
 $c = 0,95$ for vessels with double bottom and wing void, where the partition between wing void and hold is located vertically in line with the coaming.
 $c = 1,0$ for all other types of structure.

1.1.3 In longitudinally framed vessels with double bottom and wing voids, the minimum value calculated for the plate thickness in accordance with the formulae in [1.1.2] may be reduced to the value given in conformity with Part B or Part E, as applicable.

1.1.4 Plates shall be renewed if bottom, bilge or side plates are below the permissible value laid down in this way.

1.1.5 The minimum values calculated in accordance with the method are limit values taking account of normal, uniform wear, and provided that shipbuilding steel is used and that the internal structural components such as frames, frame floor, main longitudinal and transverse structural members are in a good state and that the hull shows no indication of any overloading of the longitudinal strength.

1.1.6 As soon as these values are no longer achieved, the plates in question shall be repaired or replaced. However, lesser thicknesses, of not more than 10% reduction from calculated values, are acceptable locally for small areas. In any event this criterion is not applicable for ships to be classified according to Tasneef Rules. For thickness limits, reference is to be made to Pt A, Ch 3 as applicable for the type of ship and the survey concerned.

1.1.7 Where a material other than steel is used for the construction of the hull, reference is to be made to the Tasneef Rules for the Classification of Ships with Reinforced Plastic, Aluminium Alloy or Wooden Hulls. For the scope of the Directive, Tasneef shall issue a Certificate of Classification or a declaration of conformity to the above Rules.

1.1.8 The stability of vessels shall be in conformity with Pt B, Ch 6 with reference to intact stability and with Part F with reference to damage stability. In any case the additional requirements contained in this Part are also to be complied with.

2 Hull

2.1 Watertight bulkheads

2.1.1 (1/3/2019)

With reference to the positioning of the collision bulkhead and other watertight bulkheads, reference is to be made to Pt B, Ch 1, Sec 1, [1.3.1.1].

In addition is to be installed An aft-peak bulkhead at a suitable distance from the stern where the vessel length L exceeds 25 m in such a way that the buoyancy of the laden vessel is ensured, with a residual safety clearance of 100 mm if water enters the watertight compartment aft of the aft peak bulkhead.

As a general rule, the requirement referred to in the first subparagraph shall be considered to have been met if the aft peak bulkhead has been installed at a distance of between 1,4 m and $0,04 L + 2$ m measured from the aft point of the intersection of the hull with the maximum draught line.

If this distance is greater than $0,04 L + 2$ m, the requirement referred to in the first subparagraph must be proved by calculation.

The distance may be decreased to 1 m. In this case, the requirement referred to in the first subparagraph must be substantiated by calculation on the assumption that the compartment aft of the aft peak bulkhead and the immediately adjacent compartments have been filled with water.

2.2 Internal arrangements

2.2.1 (1/3/2019)

The accommodation, engine rooms and boiler rooms, and the workspaces forming part of these shall be separated

from the holds by transverse watertight bulkheads that extend up to the deck.

No accommodation or installations needed for vessel safety or operation may be located ahead of the plane of the collision bulkhead. This requirement shall not apply to anchor gear or steering apparatus.

The accommodation, engine rooms and boiler rooms, and the workspaces forming part of these shall be separated from the holds by watertight transverse bulkheads that extend up to the deck.

2.2.2 The accommodation shall be separated from engine rooms, boiler rooms and holds in a gas-tight manner and shall be directly accessible from the deck. If no such access has been provided, an emergency exit shall also lead directly to the deck.

2.2.3 The bulkheads specified in [2.1.1] and [2.2.1] and the separation of areas specified in [2.2.2] shall not contain any openings.

However, doors in the after peak bulkhead and penetrations, in particular for shafts and pipework, shall be permitted where they are so designed that the effectiveness of those bulkheads and of the separation of areas is not impaired. Doors in the after peak bulkhead shall be permitted only if it can be determined by remote monitoring in the wheelhouse whether they are open or closed and shall bear the following readily legible instruction on both sides: "Door to be closed immediately after use".

2.2.4 The water inlets and discharges, and the pipework connected to these, shall be such that no unintentional ingress of water into the vessel is possible.

2.2.5 The foresections of vessels shall be built in such a way that the anchors neither wholly nor partly protrude beyond the side plating.

3 Engine and boiler rooms, bunkers

3.1

3.1.1 Engine or boiler rooms shall be arranged in such a way that the equipment therein can be operated, serviced and maintained easily and safely.

3.1.2 The liquid-fuel or lubricant bunkers and passenger areas and accommodation may not have any common surfaces which are under the static pressure of the liquid when in normal service.

3.1.3 Engine room, boiler room and bunker bulkheads, ceilings and doors shall be made of steel or another equivalent non-combustible material.

3.1.4 Insulation material used in engine rooms shall be protected against the intrusion of fuel and fuel vapours.

3.1.5 All openings in walls, ceilings and doors of engine rooms, boiler rooms and bunker rooms shall be such that they can be closed from outside the room. The locking devices shall be made from steel or an equivalently non-combustible material.

3.1.6 Engine and boiler rooms and other premises in which flammable or toxic gases are likely to escape shall be capable of being adequately ventilated.

3.1.7 Companionways and ladders providing access to engine and boiler rooms and bunkers shall be firmly attached and be made of steel or another shock-resistant and non-combustible material.

3.1.8 Engine and boiler room escapes are to be in conformity with Pt C, Ch 3, Sec 1 [9.3].

3.1.9 The maximum permissible sound pressure level in the engine rooms shall be 110 dB(A). The measuring points shall be selected as a function of the maintenance work needed during normal operation of the plant located therein.

SECTION 3 SAFETY CLEARANCE, FREEBOARD AND DRAUGHT MARKS

1 General

1.1 Application

1.1.1 (1/3/2019)

Reference is to be made to Ch.4 of ES-TRIN 2017/1.

SECTION 4

MANOEUVRABILITY

1 General

1.1 Application

1.1.1 (1/3/2019)

Reference is to be made to Ch 5 of ES-TRIN 2017/1.

SECTION 5

STEERING SYSTEM

1 General

1.1 Application

1.1.1 For constructive requirements, reference is to be made to Pt C, Ch 1, Sec 9.

1.1.2 (1/3/2019)

In addition, the requirements stated in Ch.6 of ES-TRIN 2017/1 are to be complied with. Such requirements may be alternative to those given in Pt C, Ch1, Sec 9 when they are more stringent.

SECTION 6

WHEELHOUSE

1 General

1.1 Application

1.1.1 (1/3/2019)

Reference is to be made to Ch.7 of ES-TRIN 2017/1.

SECTION 7

ENGINE DESIGN

1 General

1.1 Application

1.1.1 Engines and their ancillaries shall be designed, built and installed in accordance with the requirements given in Pt C, Ch 1, Sec 1.

1.1.2 (1/1/2017)

Installations requiring regular inspection, particularly steam boilers, other pressure vessels and their accessories, and lifts, shall meet the regulations applying in one of the Member States of the Community. In any case, for boilers and pressure vessels reference is to be made to Pt C, Ch1, Sec 3. Pressure vessels dedicated for the operation of the vessel shall be checked by an expert to verify that they are safe for operation:

- a) before being put into service for the first time,
- b) before being put back into service after any modification or repair, and
- c) regularly, at least every five years.

The inspection shall involve an internal and an external inspection. Compressed-air vessels the interior of which cannot be properly inspected, or the condition of which cannot be clearly established during the internal inspection, are required to undergo additional non-destructive testing or a hydraulic pressure test.

An inspection certificate shall be issued, signed by the expert and showing the date of the inspection.

1.1.3 Only internal combustion engines burning fuels having a flashpoint of more than 55°C may be installed.

1.1.4

Gas emissions and particulate of diesel engines installed on-board inland waterways ships are to be in compliance with the requirements given in Annex II, Part II, Chapter 8a of Directive 2006/87/EC.

2 Safety equipment

2.1 Application

2.1.1 Engines shall be installed and fitted in such a way as to be adequately accessible for operation and maintenance and shall not endanger the persons assigned to those tasks. It shall be possible to make engines secure against unintentional starting.

2.1.2 Main engines, auxiliaries, boilers and pressure vessels, and their accessories, shall be fitted with safety devices.

2.1.3 In case of emergency, it shall also be possible to shut down the motors driving the blower and suction fans

from outside the space in which they are located, and from outside the engine room.

2.1.4 Where necessary, connections of pipes which carry fuel oil, lubricating oil, and oils used in power transmission systems, control and activating systems and heating systems shall be screened or otherwise suitably protected to avoid oil spray or leakages onto hot surfaces, into machinery air intakes, or onto other sources of ignition. The number of connections in such piping systems shall be kept to a minimum.

2.1.5 External high pressure fuel delivery pipes of diesel engines, between the high pressure fuel pumps and fuel injectors, shall be protected with a jacketed piping system capable of containing fuel from a high pressure pipe failure. The jacketed piping system shall include a means for collection of leakages and arrangements shall be provided for an alarm to be given in the event of a fuel pipe failure, except that an alarm is not required for engines with no more than two cylinders. Jacketed piping systems need not be applied to engines on open decks operating windlasses and capstans.

2.1.6 Insulation of engine parts shall meet the requirements of Sec 2, [3.1.6].

3 Propulsion systems

3.1 Application

3.1.1 It shall be possible to start, stop or reverse the ship's propulsion reliably and quickly.

3.1.2 The following shall be monitored by suitable devices which trigger an alarm once a critical level has been reached:

- a) the temperature of the main engine cooling water;
- b) the lubricating oil pressure for the main engines and transmissions;
- c) the oil and air pressure of the main engine reversing units, reversible transmissions or propellers.

3.1.3 Where vessels have only one main engine, that engine shall not be shut down automatically except in order to protect against overspeed.

3.1.4 Where vessels have only one main engine, that engine may be equipped with an automatic device for the reduction of the engine speed only if an automatic reduction of the engine speed is indicated both optically and acoustically in the wheelhouse and the device for the reduction of the engine speed can be switched off from the helmsman's position.

3.1.5 Shaft bushings shall be designed in such a way as to prevent the spread of water-polluting lubricants.

4 Engine exhaust system

4.1 Application

4.1.1 (1/1/2017)

Reference is to be made to Pt C, Ch 1, Sec1,[3.7], Sec 2 [3.4.1] and Sec 8, [15].

The exhaust gases shall be completely ducted out of the vessel.

All suitable measures shall be taken to avoid ingress of the exhaust gases into the various compartments. Exhaust pipes passing through accommodation or the wheelhouse shall, within these, be covered by protective gas-tight sheathing. The gap between the exhaust pipe and this sheathing shall be open to the outside air.

The exhaust pipes shall be arranged and protected in such a way that they cannot cause a fire.

The exhaust pipes shall be suitably insulated or cooled in the engine rooms. Protection against physical contact may suffice outside the engine rooms.

5 Fuel tanks, pipes and accessories

5.1 General

5.1.1 Reference is to be made to Pt C, Ch 1, Sec 8, [9]. In addition, the requirements given below are to be considered. In any case the following requirements are to be considered alternative to those given in Pt C, Ch 1, Sec 8, [9] if they are more stringent.

5.1.2 Liquid fuels shall be stored in steel tanks which are either an integral part of the hull or which are firmly attached to the hull. If so required by the design of the vessel, an equivalent material in terms of fire resistance may be used.

These requirements shall not apply to tanks having a capacity of no more than 12 litres that have been incorporated in auxiliaries during their manufacture. Fuel tanks shall not have common partitions with drinking water tanks.

5.1.3 Tanks and their pipework and other accessories shall be laid out and arranged in such a way that neither fuel nor fuel vapours may accidentally reach the inside of the vessel. Tank valves intended for fuel sampling or water drainage shall close automatically.

5.1.4 No fuel tanks may be located forward of the collision bulkhead.

5.1.5 Fuel tanks and their fittings shall not be located directly above engines or exhaust pipes.

5.1.6 The filler orifices for fuel tanks shall be marked distinctly.

5.1.7 The orifice for the fuel tank filler necks shall be on the deck, except for the daily supply tanks. The filler neck

shall be fitted with a connection piece in accordance with European Standard EN 12827:1999.

Such tanks shall be fitted with a breather pipe terminating in the open air above the deck and arranged in such a way that no water ingress is possible. The cross-section of the breather pipe shall be at least 1,25 times the cross-section of the filler neck.

If tanks are interconnected, the cross-section of the connecting pipe shall be at least 1,25 times the cross-section of the filler neck.

5.1.8 (1/1/2017)

Directly at tank outlets the pipework for the distribution of fuels shall be fitted with a shut-off device that can be operated from the deck, even when the rooms in question are closed.

If the operating device is concealed, the lid or cover shall not be lockable. The operating device shall be marked in red. If the device is concealed it shall be marked with a symbol for the quick-closing valve in accordance with Fig. 9 of Appendix I of Directive 2006/87/EC with a side length of at least 10 cm.

This requirement shall not apply to tanks mounted directly on the engine.

5.1.9 Fuel pipes, their connections, seals and fittings shall be made of materials that are able to withstand the mechanical, chemical and thermal stresses to which they are likely to be subjected. The fuel pipes shall not be subjected to any adverse influence of heat and it shall be possible to inspect them throughout their length.

5.1.10 Fuel tanks shall be provided with a suitable capacity-gauging device. Capacity-gauging devices shall be legible right up to the maximum filling level. Glass gauges shall be effectively protected against impacts, shall be fitted with an automatic closing device at their base and their upper end shall be connected to the tanks above their maximum filling level. The material used for glass gauges shall not deform under normal ambient temperatures. Sounding pipes shall not terminate in accommodation spaces. Sounding pipes terminating in an engine or boiler room shall be fitted with suitable self-closing devices.

5.1.11

- a) Fuel tanks shall be safeguarded against fuel spills during bunkering by means of appropriate on-board technical devices which shall be entered in item 52 of the Community certificate.
- b) If fuel is taken on from bunkering stations with their own technical devices to prevent fuel spills on board during bunkering, the equipment requirements in (a) and paragraph 11 shall no longer apply.

5.1.12 (1/3/2019)

If fuel tanks are fitted with an automatic shut-off device, the sensors shall stop fuelling when the tank is 97% full; this equipment shall meet the fail-safe requirements.

If the sensor activates an electrical contact which can break the circuit provided by the bunkering station by a binary signal, it shall be possible to transmit the signal to the bunkering station by means of a watertight connection plug

meeting the requirements of IEC publication 60309-1:2012 for 40 to 50VDC, housing colour white, earthing contact position ten o'clock.

5.1.13 Fuel tanks shall be provided with openings having leak-proof closures that are intended to permit cleaning and inspection.

5.1.14 Fuel tanks directly supplying the main engines and engines needed for safe operation of the vessel shall be fitted with a device emitting both visual and audible signals in the wheelhouse if their level of filling is not sufficient to ensure further safe operation.

6 Storage of lubricating oil, pipes and accessories

6.1 General

6.1.1 Reference is to be made to Pt C, Sec 8, [10]. In addition, the requirements given below are to be considered. In any case the following requirements are to be considered alternative to those given in Pt C, Sec 8, [10] if they are more stringent.

6.1.2 Lubricating oil shall be stored in steel tanks which are either an integral part of the hull or which are firmly attached to the hull. If so required by the design of the vessel, an equivalent material in terms of fire resistance may be used.

These requirements shall not apply to tanks having a capacity of no more than 25 litres. Lubricating oil tanks shall not have common partitions with drinking water tanks.

6.1.3 Lubricating oil tanks and their pipework and other accessories shall be laid out and arranged in such a way that neither lubricating oil nor lubricating oil vapour may accidentally reach the inside of the vessel.

6.1.4 No lubricating oil tanks may be located forward of the collision bulkhead.

6.1.5 Lubricating oil tanks and their fittings shall not be located directly above engines or exhaust pipes.

6.1.6 The filler orifices for lubricating oil tanks shall be marked distinctly.

6.1.7 Lubricating oil pipes, their connections, seals and fittings shall be made of materials that are able to withstand the mechanical, chemical and thermal stresses to which they are likely to be subjected. The pipes shall not be subjected to any adverse influence of heat and it shall be possible to inspect them throughout their length.

6.1.8 Lubricating oil tanks shall be provided with a suitable capacity-gauging device. Capacity-gauging devices shall be legible right up to the maximum filling level. Glass gauges shall be effectively protected against impacts, shall be fitted with an automatic closing device at their base and their upper end shall be connected to the tanks above their maximum filling level. The material used for glass gauges

shall not deform under normal ambient temperatures. Sounding pipes shall not terminate in accommodation spaces. Sounding pipes terminating in an engine or boiler room shall be fitted with suitable self-closing devices.

7 Storage of oils used in power transmission systems, control and activating systems and heating systems, pipes and accessories

7.1 General

7.1.1 Oils used in power transmission systems, control and activating systems and heating systems shall be stored in steel tanks which are either an integral part of the hull or which are firmly attached to the hull. If so required by the design of the vessel, an equivalent material in terms of fire resistance may be used. These requirements shall not apply to tanks having a capacity of no more than 25 litres. Such oil tanks shall not have common partitions with drinking water tanks.

7.1.2 Such oil tanks and their pipework and other accessories shall be laid out and arranged in such a way that neither oil nor oil vapour may accidentally reach the inside of the vessel.

7.1.3 No such oil tanks may be located forward of the collision bulkhead.

7.1.4 Such oil tanks and their fittings shall not be located directly above engines or exhaust pipes.

7.1.5 The filler orifices for such oil tanks shall be marked distinctly.

7.1.6 Such oil pipes, their connections, seals and fittings shall be made of materials able to withstand the mechanical, chemical and thermal stresses to which they are likely to be subjected. The pipes shall not be subjected to any adverse influence of heat and it shall be possible to inspect them throughout their length.

7.1.7 Such oil tanks shall be provided with a suitable capacity-gauging device. Capacity-gauging devices shall be legible right up to the maximum filling level. Glass gauges shall be effectively protected against impacts, shall be fitted with an automatic closing device at their base and their upper end shall be connected to the tanks above their maximum filling level. The material used for glass gauges shall not deform under normal ambient temperatures. Sounding pipes shall not terminate in accommodation spaces. Sounding pipes terminating in an engine or boiler room shall be fitted with suitable self-closing devices.

8 Bilge pumping and drainage system

8.1 General

8.1.1 Reference is to be made to Pt C, Ch 1, Sec 8, [6].

9 Oily water and used oil stores

9.1 General

9.1.1 It shall be possible to store, on board, oily water accumulated during operation. The engine room bilge is considered to be a store for this purpose.

9.1.2 In order to store used oils there shall, in the engine room, be one or several specific receptacles whose capacity corresponds to at least 1,5 times the quantity of the used oils from the sumps of all of the internal combustion engines and transmissions installed, together with the hydraulic fluids from the hydraulic fluid tanks.

The connections used in order to empty the receptacles referred to above shall comply with European Standard EN 1305:1996.

9.1.3 Where vessels are only used on short-haul operation, the inspection body or Tasneef as applicable may grant exceptions from the requirements of [9.1.2].

10 Noise emitted by vessels

10.1 General

10.1.1 The noise produced by a vessel underway, and in particular the engine air intake and exhaust noises, shall be damped by using appropriate means.

10.1.2 The noise generated by a vessel underway shall not exceed 75 dB(A) at a lateral distance of 25 m from the ship's side.

10.1.3 Apart from transshipment operations, the noise generated by a stationary vessel shall not exceed 65 dB(A) at a lateral distance of 25 m from the ship's side.

11 Emission of gaseous and particulate pollutants from diesel engines

11.1 General

11.1.1 (1/3/2019)

Reference is to be made to Ch.9 of ES-TRIN 2017/1.

SECTION 8

ELECTRICAL INSTALLATION

1 General

For electric propulsion systems and electronic equipment and systems Ch. 11 and Ch.12 of of ES-TRIN 2017/1 apply.

1.1 Application

1.1.1 (1/3/2019)

For the requirements covered by Ch.10 and Ch.19.10 of ES-TRIN 2017/1, this is to be applied in lieu of those requirements given in Pt C, Ch 2 and Pt E.

SECTION 9 EQUIPMENT

1 General

1.1 Application

1.1.1 (1/3/2019)

As far as concerns mooring equipment, reference is to be made to Ch 13, [13.01] and [13.02] of ES-TRIN 2017/1.

1.2 Portable fire extinguishers

1.2.1 Reference is to be made to Pt C, Ch 3, Sec 1, [10.4].

1.3 Permanently installed fire-fighting systems in accommodation spaces, wheel-houses and passenger spaces

1.3.1 (1/3/2019)

Reference is to be made to Pt C, Ch 3, Sec 1, [10.2.1] to [10.2.5].

As far as the checks to be carried out reference is to be made to Ch.13.03a of ES-TRIN 2017/1.

1.4 Permanently installed fire-fighting systems in engine rooms, boiler rooms and pump rooms

1.4.1 (1/3/2019)

Reference is to be made to Pt C, Ch 3, Sec 1, [10.1] and for the checks Ch.13.3.b of ES-TRIN 2017/1.

1.5 Permanently installed firefighting systems for protecting objects

1.5.1 (1/1/2017)

Reference is to be made to Pt C, Ch 3, Sec 1, [10.1.2].

1.6 Ship's boats

1.6.1 (1/3/2019)

The following craft shall carry a ship's boat according to European Standard EN 1914: 2016:

- a) motor vessels and barges exceeding 150 t deadweight;
- b) tugs and pushers with a water displacement of more than 150 m³;
- c) floating equipment;
- d) passenger vessels.

1.6.2 It shall be possible for one person to launch such ship's boats safely within five minutes from the first manual action necessary. If a powered launching device is used, this shall be such that safe, quick launching shall not be impaired if its power supply fails.

1.6.3 Inflatable ship's boats shall be inspected according to the Manufacturer's instructions.

1.7 Lifebuoys and lifejackets

1.7.1 (1/3/2019)

On board craft there shall be at least three lifebuoys in accordance with European Standard EN 14144: 2003. They shall be ready for use and attached to the deck at appropriate points without being attached to their mounting. At least one lifebuoy shall be in the immediate vicinity of the wheelhouse and shall be equipped with a self-igniting, battery-powered light that will not be extinguished in water.

1.7.2 (1/3/2019)

A personalised, automatically inflatable life jacket shall be within reach of every person who is regularly on board a craft. Such life jackets shall conform to:

European Standards EN ISO 12402-2 : 2006, EN ISO 12402-3 : 2006, EN ISO 12402-4 : 2006; or -The 1974 International Convention for the Safety of Life at Sea (SOLAS 1974), Chapter III, Regulation 7.2, and the International Life-Saving Appliance (LSA) Code, sub-section 2.2.

Non-inflatable lifejackets in accordance with these standards shall also be admissible for children.

1.7.3 Lifejackets shall be inspected in accordance with the Manufacturer's instructions.

SECTION 10

SAFETY AT WORK STATIONS

1 General

1.1 Application

1.1.1 *(1/3/2019)*

Reference is to be made to Ch.14 of ES-TRIN 2017/1.

SECTION 11

ACCOMMODATION

1 General

1.1 Application

1.1.1 (1/3/2019)

Reference is to be made to Ch.15 of ES-TRIN 2017/1.

SECTION 12

FUEL FIRED HEATING, COOKING AND REFRIG- ERATING EQUIPMENT

1 General

1.1 Application

1.1.1 Reference is to be made to Pt C, Ch 1, Sec 11 from [1.1] to [1.8].

SECTION 13

LIQUEFIED GAS INSTALLATIONS FOR DOMESTIC PURPOSES

1 General

1.1 Application

1.1.1 Reference is to be made to Pt C, Ch 1, Sec 11, [2].

SECTION 14

ON BOARD SEWAGE TREATMENT PLANTS

1 General

1.1 Application

1.1.1 *(1/3/2019)*

The provisions of Ch.18 of ES TRIN 2017/1 apply.

APPENDIX 1

APPLICABLE STANDARDS FOR THE EQUIPMENT REQUIRED BY DIRECTIVE 2016/1629/EU AS AMENDED

1 General

1.1 Application

1.1.1 (1/3/2019)

The applicable standards for the equipment required by Directive 2006/87/EC as amended are listed below.

- a) Hull (see Ch 3 of of ES-TRIN 2017/1)
 - Hull materials --> Rules for marine equipment
 - Watertight doors --> Rules for marine equipment
 - Insulation material and other non-combustible material --> MED or Type approved in acc. with FTP Code
- b) Steering (see Ch 6 of of ES-TRIN 2017/1)
 - Piping and junctions --> Class requirement in Pt C
 - Flexible hoses --> Class requirement in Pt. C and MED or Type approved ISO 15540-1
 - gyroscope and detectors included --> Annex 5 Part.II of ES-TRIN 2017/1 or MED
 - Steering components --> Class requirement in Pt C and Rules for marine equipment
- c) Wheelhouse (see Ch 7 of ES-TRIN 2017/1)
 - Control indicating and monitoring equipment --> Class requirement in Pt C
 - Navigation lights --> MED and or local requirements
 - Radar --> Annex 5 Part.II of ES-TRIN 2017/1 or MED
 - Loudspeaker --> CE and/or FSS Code
 - Microphone --> CE and/or FSS Code
 - Alarm system --> FSS Code
 - Heating and ventilation --> Class requirement in Pt. C and Rules for marine equipment
- d) Engines and systems (see Ch 8 of ES-TRIN 2017/1)
 - Engine --> Class requirement in Pt. C and Emission in accordance with Ch.9 of ES-TRIN 2017/1
 - Fuel valves --> Class requirement in Pt. C
 - Bilge system components --> Class requirement in Pt. C and Rules for marine equipment
- e) Electrical equipment (see Ch. 10, 11 and 12 of ES-TRIN 2017/1)
 - Electrical components --> Class requirement in Pt. C and Rules for marine equipment
- f) Equipment (see Ch 13 of ES-TRIN 2017/1)
 - Stern anchor operating equipment --> Class requirement in Pt C and D and Rules for marine equipment
 - Anchor equipment --> Class requirement in Pt. C and D and Rules for marine equipment
 - Radiotelephony --> MED
 - Appliances necessary for emitting visual and acoustic signal and for marking the vessel --> Colreg and/or MED and/or national requirements
 - Stand-alone back-up lights for the prescribed mooring lights --> same as mooring lights
 - Mooring cable --> EN 10 204:1991 No 3.1 or Class requirement in Pt B and D
 - Towing cable --> EN 10 204:1991 No 3.1 or Class requirement in Pt. B and D
 - Heaving line --> Class requirement in Pt. B and D
 - Gaff hook --> Class requirement in Pt. B and D
 - First aid kit --> national requirements
 - Embarkation stairway --> ISO 5488
 - Ladder --> MED
 - Portable fire extinguishers --> EN 3-7, EN 3-8 or MED
 - Fixed fire extinguishing system for accommodation ... etc , ER etc ... , objects --> MED or Type approved
 - Ship's boat --> EN 1914 or MED or Type approved
 - Lifebuoys --> MED or Type approved
 - Lifejackets --> MED or Type approved
- g) Safety at work station (see 14 of ES-TRIN 2017/1)
 - Winches --> Rules for marine equipment
 - Cranes --> Rules for marine equipment
- h) Fuel fired heating, cooking and refrigerating equipment (see Ch.16 of ES-TRIN 2017/1)
 - Stoves --> EC marked
 - Heating appliances --> EC marked
 - Pressure vessels --> Class requirement in Pt C
- i) Onboard sewage treatment plant (see Ch. 18 of of ES-TRIN 2017/1))
 - Sewage Plant ' Type approved in acc. with Art. 18.03
- j) Additional requirement for passenger vessels (see Ch. 19 of ES-TRIN 2017/1)
 - Life rafts --> MED or Type approved or ISO 9650
 - Fire protection materials and equipment ' MED or Type approved in acc. with FTP Code.

Part G

**Additional Requirements for Conformity
to Directive 2006/87/EC**

Chapter 2

**SPECIFIC REQUIREMENTS APPLICABLE TO
PASSENGER VESSEL**

- SECTION 1 GENERAL REQUIREMENTS AND VESSEL'S HULL**
- SECTION 2 ADDITIONAL FIRE REQUIREMENTS FOR PASSENGER SHIPS**
- SECTION 3 ADDITIONAL REQUIREMENTS FOR INTACT AND DAMAGE
STABILITY**
- SECTION 4 SPECIFIC REQUIREMENTS FOR PASSENGER SAILING VESSELS**

SECTION 1

GENERAL REQUIREMENTS AND VESSEL'S HULL

1 General provisions

1.1 Application

1.1.1 (1/3/2019)

Reference is to be made to Art 19.01 of ES-TRIN 2017/1.

2 Hull strength and double bottom

2.1

2.1.1 Reference is to be made to Part B and Part E, Ch 1 or Ch 2.

2.1.2 (1/1/2017)

In addition, the minimum thickness of the outside plating of steel passenger vessel plates shall be in conformity to the following requirements:

- a) the minimum thickness t_{min} of the bottom, bilge and side plating of the outer hull of passenger vessels is determined in accordance with the larger value of the following formulae:

$$t_{1min} = 0,006 \cdot a \cdot T^{0.5} \text{ mm.};$$

$$t_{2min} = f \cdot 0,55 \cdot LWL^{0.5} \text{ mm.}$$

In these formulae:

$$f = 1 + 0,0013 \cdot (a - 500);$$

a = longitudinal or transverse frame spacing (mm), and where the frame spacing is less than 400 mm, $a = 400$ mm should be entered;

- b) it is permissible to fall short of the minimum value determined in accordance with (a) above for the plate thickness in cases where the permitted value has been determined and certified on the basis of a mathematical

proof for the sufficient (longitudinal, transverse and local) strength of the vessel's hull;

- c) at no point of the outside plating shall the thickness calculated in accordance with (a) or (b) above be less than 3 mm;
- d) plate renewals shall be carried out when bottom, bilge or side plate thicknesses have fallen short of the minimum value determined in accordance with (a) or (b), in conjunction with (c) above.
- e) where double bottoms are fitted, their height shall be at least 0,60 m, and where wing voids are fitted, their width shall be at least 0,60 m.
- f) windows may be situated below the margin line if they are watertight, cannot be opened, possess sufficient strength.

3 Buoyancy subdivision

3.1 Application

3.1.1 Reference is to be made to Pt E, Ch 1, Sec 1, [1.2.1].

3.2 Openings in watertight subdivision bulkheads and the side shell

3.2.1 Reference is to be made to Pt E, Ch 1, Sec 1, [1.2.3].

3.3 Doors and door closures

3.3.1 Reference is to be made to Pt E, Ch 1, Sec 1, [1.3.4].

4 Additional requirements

4.1 Application

4.1.1 (1/3/2019)

In addition to the requirements of this Section, the provisions of, Ch 19, Articles 19.04, 19.05, 19.06, 19.07, 19.08, 19.09, 19.10 and 19.14 of ES-TRIN 2017/1 are to be complied with.

SECTION 2

ADDITIONAL FIRE REQUIREMENTS FOR PASSENGER SHIPS

1 General

1.1 Application

1.1.1 (1/3/2019)

When conformity to ES-TRIN 2017/1 is requested, fire protection shall comply both with the requirements given in this Section and with those given in Part C, Ch 3, Sec 1.

1.1.2 It is pointed out that in any case when the additional class notation FP(Pax) or EFP is also to be assigned, reference is to be made to the requirements given in Part F.

2 Fire integrity of bulkheads and decks

2.1

2.1.1 (1/3/2019)

The suitability for fire protection of materials and components shall be established by an accredited test institution on the basis of appropriate test methods.

- a) The test institution shall satisfy:
 - 1) the Code for Fire Test Procedures; or
 - 2) European Standard EN ISO/IEC 17025: 2005 concerning the general requirements for the competence of testing and calibration laboratories.
- b) The recognised test methods for determining the non-flammability of materials are:
 - 1) Annex 1, Part 3, of the Code for Fire Test Procedures; and
 - 2) the equivalent regulations of one of the Member States.
- c) The recognised test methods for determining that a material is flame-retardant are:
 - 1) the respective requirements laid down in Annex 1, Parts 5 (Surface flammability test), 6 (Test for the deck coverings), 7 (Test for hanging textiles and plastics), 8 (Test for upholstered furniture) and 9 (Test for components of bedding) of the Code for Fire Test Procedures; and
 - 2) the equivalent regulations of one of the Member States.
- d) The recognised test methods for determining fire resistance are:
 - 1) IMO Resolution A.754 (18); and
 - 2) the equivalent regulations of one of the Member States.
- e) The inspection body may, in accordance with the Code for Fire Test Procedures, prescribe a test on a sample

partition in order to ensure compliance with the provision of [2.1.2].

2.1.2 The tables are to be applied according to the following points:

- a) Tables 1 and 2 apply, respectively, to bulkheads and decks separating adjacent spaces.

Table 1 is to be applied to spaces without an installed sprinkler system.

Table 2 is to be applied to spaces in which a sprinkler system is installed on both sides of the bulkheads and deck.

- b) For determining the appropriate fire integrity standards to be applied to divisions between adjacent spaces, such spaces are classified according to their fire risk as shown in categories (1) to (7) below.

- 1) Control centre:

a wheelhouse, an area which contains an emergency electrical power plant or parts thereof or an area with a centre permanently occupied by on-board personnel or crew members, such as for fire alarm equipment, remote control of doors or fire dampers.

In this way the wheelhouse is to be intended as the area which houses all the control and monitoring instruments necessary for manoeuvring the vessel;

- 2) Stairwell:

the well of an internal staircase or of a lift;

- 3) Muster area;

- 4) Lounge:

a room of an accommodation or a passenger area. On board passenger vessels, galleys are not regarded as lounges.

- 5) Accommodation:

a space intended for the use of persons normally living on board, including galleys, storage space for provisions, toilets and washing facilities, laundry facilities, ante-rooms and passageways, but not the wheelhouse;

- 6) Passenger area:

areas on board intended for passengers and enclosed areas such as lounges, offices, shops, hair-dressing salons, drying rooms, laundries, saunas, toilets, washrooms, passageways, connecting passages and stairs not encapsulated by walls;

- 7) Engine room:

space where combustion engines are installed;

- 8) Main engine room:

space where the propulsion engines are installed;

9) Boiler room:

a space housing a fuel-operated installation designed to produce steam or heat a thermal fluid;

10) Galley:

a room with a stove or a similar cooking appliance;

11) Storeroom:

a room for the storage of flammable liquids or a room with an area of over 4 m² for storing supplies;

12) Passageway:

an area intended for the normal movement of persons and goods;

Table 1 : Fire integrity of bulkheads and decks in spaces without a sprinkler system (1/1/2017)

Rooms	Control centres	Stairwells	Muster areas	Lounges	Engine rooms	Galleys	Storerooms
Stairwells		-	A0	A30	A60	A60	A30
Muster areas			-	A30/B15 (2)	A60	A60	A30/A60 (5)
Lounges				-/A0/B15 (3)	A60	A60	A30
Engine rooms					A60/A0 (4)	A60	A60
Galleys						A0	A60/B1 (6)
Storerooms							-

(1) Partitions between control centres and internal muster areas are to correspond to Type A0, but external muster areas only to Type B15
(2) Partitions between lounges and internal muster areas are to correspond to Type A30, but external muster areas only to Type B15
(3) Partitions between cabins, partitions between cabins and corridors, and vertical partitions separating lounges according to paragraph 10 shall comply with B15, for rooms fitted with pressurised sprinkler systems B0. Partitions between cabins and saunas shall comply with Type A0, for rooms fitted with pressurised sprinkler systems B15
(4) Partitions between engine rooms according to Articles 15.07 and 15.10(6) shall comply with Type A60; in other cases they are to comply with Type A0
(5) Partitions between store rooms for the storage of flammable liquids and control centres and muster areas shall comply with Type A60, for rooms fitted with pressurised sprinkler systems A30
(6) B15 is sufficient for partitions between galleys, on the one hand, and cold storage rooms and food storerooms, on the other.

Table 2 : Fire integrity of bulkheads and decks in spaces with a sprinkler system (1/1/2017)

Rooms	Control centres	Stairwells	Muster areas	Lounges	Engine rooms	Galleys	Storerooms
Control centres	-	A0	A0/B15 (1)	A0	A60	A60	A0/A30
Stairwells		-	A0	A0	A60	A30	A0
Muster areas			-	A30/B15 (2)	A60	A30	A0/A30 (5)
Lounges				-/B15/B0 (3)	A60	A30	A0
Engine rooms					A60/A0 (4)	A60	A60
Galleys						-	A0/B15 (6)
Storerooms							-

(1) Partitions between control centres and internal muster areas are to correspond to Type A0, but external muster areas only to Type B15
(2) Partitions between lounges and internal muster areas are to correspond to Type A30, but external muster areas only to Type B15
(3) Partitions between cabins, partitions between cabins and corridors, and vertical partitions separating lounges according to paragraph 10 shall comply with B15, for rooms fitted with pressurised sprinkler systems B0. Partitions between cabins and saunas shall comply with Type A0, for rooms fitted with pressurised sprinkler systems B15
(4) Partitions between engine rooms according to Articles 15.07 and 15.10(6) shall comply with Type A60; in other cases they are to comply with Type A0.
(5) Partitions between store rooms for the storage of flammable liquids and control centres and muster areas shall comply with Type A60, for rooms fitted with pressurised sprinkler systems A30
(6) B15 is sufficient for partitions between galleys, on the one hand, and cold storage rooms and food storerooms, on the other.

2.1.3 Class A fire insulations are bulkheads, walls and decks which satisfy the following requirements:

- a) They are made of steel or of another equivalent material;
- b) They are appropriately stiffened;
- c) They are insulated with an approved non-combustible material such that the average temperature on the side facing away from the fire rises to not more than 140°C above the initial temperature and at no point, including the gaps at the joints, does a temperature increase of more than 180°C above the initial temperature occur within the following specified periods:
 - Class A60 60 minutes
 - Class A30 30 minutes
 - Class A0 0 minutes;
- d) They are constructed in such a way as to prevent the transmission of smoke and flames until the end of the one-hour normal fire test.

2.1.4 Class B insulations are bulkheads, walls, decks, ceilings or facings that meet the following requirements:

- a) They are made of an approved non-combustible material. Furthermore, all materials used in the manufacture and assembly of partitions are to be non-combustible, except for the facing, which is to be at least flame-retardant;
- b) They demonstrate an insulation value such that the average temperature on the side facing away from the fire rises to not more than 140°C above the initial temperature and at no point, including the gaps at the joints, does a temperature increase of more than 225°C above the initial temperature occur within the following specified periods:
 - Class B15 15 minutes
 - Class B0 0 minutes.
- c) They are constructed in such a way as to prevent the transmission of flames until the end of the first half hour of the normal fire test.

2.1.5 The following passenger areas shall be divided by vertical partitions as referred to in 2.1.1:

- a) passenger areas with a total surface area of more than 800 m²;
- b) passenger areas in which there are cabins, at intervals of not more than 40 m.

The vertical partitions shall be smoke-tight under normal operating conditions and shall be continuous from deck to deck.

2.1.6 Hollows above ceilings, beneath floors and behind wall claddings shall be separated at intervals of not more than 14 m by non-combustible draught stops which, even in the event of fire, provide an effective fireproof seal.

3 Approved materials

3.1

3.1.1 Paints, lacquers and other surface treatment products as well as deck coverings used in rooms except engine rooms and storerooms are to be flame-retardant. Carpets, fabrics, curtains and other hanging textile materials as well as upholstered furniture and components of bedding are to be flame-retardant if the rooms in which they are located are not equipped with a pressurised sprinkler system.

3.1.2 Lounge ceilings and wall claddings, including their substructures, shall, where these lounges do not have a pressurised sprinkler system, be manufactured from non-combustible materials with the exception of their surfaces, which shall be at least flame-retardant.

3.1.3 Furniture and fittings in lounges which serve as muster areas are, where the rooms do not have a pressurised sprinkler system, to be manufactured from non-combustible materials.

3.1.4 Paints, lacquers and other materials used on exposed internal areas shall not produce excessive amounts of smoke or toxic substances. This is to be proven in accordance with the Fire Test Procedures Code.

3.1.5 Insulation materials in lounges are to be non-combustible. This does not apply to insulations used on coolant-carrying pipes. The surfaces of the insulation materials used on these pipes are to be at least flame-retardant.

3.1.6 (1/1/2017)

Awnings and similar mobile installations with which deck areas are fully or partially enclosed and their substructures shall be at least flame-retardant.

4 Stairway enclosure

4.1

4.1.1 Stairs are to be made of steel or another equivalent non-combustible material.

4.1.2 Internal stairs and lifts are to be encapsulated at all levels by walls according to paragraph 2. The following exceptions are permissible:

- a) a staircase connecting only two decks does not need to be encapsulated, if on one of the decks the staircase is enclosed according to 2.1.2;
- b) in a lounge, stairs need not be encapsulated if they are located entirely within the interior of this room, and
 - 1) if this room extends over only two decks, or
 - 2) if there is a pressurised sprinkler system installed in this room on all decks, this room has a smoke extraction system and the room has access on all decks to a stairwell.

5 Openings in “A” and “B” class divisions

5.1

5.1.1 Doors are to have the same fire integrity as the bulkheads where they are installed.

5.1.2 Watertight doors need not be insulated.

5.1.3 Fire doors serving engine rooms, galleys and stairwells are to be of the self-closing type.

5.1.4 Self-closing doors which remain open in normal operation are to be such that they can be closed from a location permanently manned by shipboard personnel or crew members; Once a door has been remotely closed, it is to be possible to reopen and close it safely on the spot;

5.1.5 Walls according to 2.1 shall be continuous from deck to deck or end at continuous ceilings, which satisfy the same requirements as referred to in 2.1

6 Means of escape

6.1

6.1.1 Reference is to be made to Pt E, Ch 1, Sec 1, from [1.3.1] to [1.3.5].

6.1.2 Where cabins for disabled persons are provided, the relevant escape route is to have a clear width not less than 1,3 m. Access doors to and from the vessel are to have a clear width not less than 1,5 m. Dead-end corridors are to have a length not more than 2 m.

The escape route is to be adequately posted.

6.1.3 (1/3/2019)

In addition to the above requirements, reference is also to be made to Ch. 19 of ES TRIN 2017/1 from paragraph 19.06(8) to 19.06(19).

7 Ventilation system

7.1

7.1.1 Ventilation systems and air supply systems are to satisfy the following requirements:

- they are to be designed in such a way as to ensure that they do not cause the spread of fire and smoke;
- openings for air intake and extraction and air supply systems are to be such that they can be closed off;
- ventilation ducts are to be made from steel or an equivalent non-combustible material and be securely connected to each other and to the superstructure of the vessel;
- when ventilation ducts with a cross-section of more than 0,02 m² are passed through partitions of class A in compliance with paragraph 2, they are to be fitted with automatic fire dampers which can be operated from a

location permanently manned by shipboard personnel or crew members;

- ventilation systems for galleys and engine rooms are to be separated from ventilation systems which supply other areas;
- air extraction ducts are to be provided with lockable openings for inspection and cleaning. These openings are to be located close to the fire dampers;
- built-in ventilators are to be such that they can be switched off from a central location outside the engine room.

7.1.2 Galleys are to be fitted with ventilation systems and stoves with extractors. The air extraction ducts of the extractors are to satisfy the requirements according to [7.1.1] and, additionally, be fitted with manually operated fire dampers at the inlet openings.

8 Smoke extraction system

8.1

8.1.1 Control centres, stairwells and internal evacuation areas are to be fitted with natural or mechanical smoke extraction systems. Smoke extraction systems are to satisfy the following requirements:

- They are to be of sufficient capacity and reliability;
- They are to be in compliance with the operating conditions for passenger vessels;
- When the smoke extraction system is also used for the normal ventilation of the spaces served, it is to be designed such that in the event of fire its capacity is not impaired;
- Smoke extraction systems are to have a manually operated triggering device;
- Mechanical smoke extraction systems, in addition, are to be such that they can be operated from a location permanently manned by shipboard personnel or crew members;
- Natural smoke extraction systems are to be fitted with an opening mechanism, operated either manually or by a power source inside the extraction system;
- Manually operated triggering devices and opening mechanisms are to be accessible from inside or outside the room being protected.

9 Water fire-extinguishing system

9.1

9.1.1 Reference is to be made to Pt F, Ch 2, Sec 1, [7].

10 Portable fire extinguishers

10.1

10.1.1 Reference is to be made to Pt F, Ch 2, Sec 1, [8].

11 Fixed fire-extinguishing system

11.1

11.1.1 Reference is to be made to Pt F, Ch 2, Sec 1, [9].

12 Fire detection and alarm system

12.1

12.1.1 Reference is to be made to Pt F, Ch 2, Sec 1, [10].

12.1.2 On cabin vessels there shall be:

- a) two self-contained breathing apparatus sets corresponding to European Standard EN 137: 1993 with full-face masks corresponding to European Standard EN 136: 1998;
- b) two sets of equipment consisting of at least a protective suit, helmet, boots, gloves, axe, crowbar, torch and safety-line, and
- c) four smoke hoods.

12.1.3 (1/1/2017)

Lounges not constantly supervised by shipboard personnel or crew members, galleys, engine rooms and other rooms presenting a fire risk shall be connected to an appropriate fire alarm system. The existence of a fire and its exact whereabouts shall be automatically displayed at a location permanently manned by shipboard personnel or crew members.

13 Alarm system

13.1

13.1.1 Reference is to be made to Pt F, Ch 2, Sec.1, [11].

14 Internal communication facilities on board

14.1

14.1.1 Reference is to be made to Pt F, Ch 2, Sec.1, [12].

14.1.2 In addition to the points listed in the above paragraph, internal communication facilities are also to be provided, where there is no direct communication from the

wheelhouse, in the access and evacuation areas for passengers.

15 Public address system

15.1

15.1.1 Reference is to be made to Pt F, Ch 2, Sec.1, [13].

16 Safety devices and equipment

16.1

16.1.1 Each watertight compartment shall be fitted with a bilge level alarm.

16.1.2 Two motor-driven bilge pumps shall be provided.

16.1.3 A permanently installed drainage system according to Pt C, Ch 1, Sec 8 [6] shall be provided on board.

16.1.4 Cold storage room doors, even when locked, shall also be capable of being opened from the inside.

16.1.5 Where CO₂ bar systems are situated in rooms below deck, these rooms shall be fitted with an automatic ventilation system which turns itself on automatically when the door or hatch to the room is opened. The ventilation ducts shall run down to 0,05 m from the floor of this room.

16.1.6 (1/3/2019)

In addition to the first aid kit according Ch.13 Art 13.02(3)(f) of ES TRIN 2017/1 further first aid kits shall be provided in sufficient number. The first aid kits and their storage shall comply with the requirements set out in Ch. 13 Art. 13.02(3)(f) of ES TRIN 2017/1.

17 Safety organisation

17.1

17.1.1 (1/3/2019)

Reference is to be made to Ch.19.13 of ES-TRIN 2017/1.

18 Derogations

18.1

18.1.1 (1/3/2019)

For derogations to the above requirements, reference is to be made to Ch. 19 Art 19.15 of ES-TRIN 2017/1.

SECTION 3

ADDITIONAL REQUIREMENTS FOR INTACT AND DAMAGE STABILITY

1 General

1.1 Application

1.1.1 (1/3/2019)

When conformity to ES-TRIN 2017/1 is requested, intact stability is to be in conformity with the requirements given in Pt B, Ch 6, [3.1].

1.1.2 (1/1/2017)

With reference to the maximum list angle and minimum freeboard height, the following requirements are to be applied.

In both of the following cases the heeling angle is not to exceed 12°:

- a) in application of the heeling moment due to passengers and wind according to Pt B, Ch 6, 3.1.8 and 3.1.9;
- b) in application of the heeling moment due to passengers and turning according to Pt B, Ch 6, 3.1.8 and 3.1.10;
- c) for a heeling moment resulting from moments due to passengers, wind and turning according to Pt B, Ch 6, 3.1.8, 3.1.9, and 3.1.10, the residual freeboard is to be not less than 200 mm;
- d) for vessels with windows or other openings in the hull located below the bulkhead decks and not closed

watertight, the residual safety clearance is to be at least 100 mm on the application of the three heeling moments resulting from item c).

- e) the moment due to the wind pressure is to be calculated in any case assuming a value of the specific wind pressure equal to 0,25 kN/m²
- f) the maximum righting lever h_{max} shall occur at a heeling angle equal or more than the angle of equilibrium according to a) and b) plus 3° and shall not be less than 0,20 m. However, in case the angle of downflooding is less than the angle of GZ max the righting lever at the downflooding angle shall not be less than 0,20 m;
- g) the downflooding angle shall not be less than the angle of equilibrium according to a) and b) plus 3°.

1.1.3 Damage stability is to meet the requirements given in Pt F, Ch 4, Sec 1.

Pt F, Ch 4, Sec 1, [2] shall be amended as follows:

- passenger vessels not exceeding 45 m in length and authorised to carry up to a maximum of 250 passengers do not need to have two-compartment status.

1.1.4 (1/3/2019)

For derogations, reference is to be made to Ch.19.Art 19.15 of ES-TRIN 2017/1.

SECTION 4

SPECIFIC REQUIREMENTS FOR PASSENGER SAILING VESSELS NOT NAVIGATING ON RHINE

1 General

1.1 Application

1.1.1 (1/3/2019)

Reference is to be made to Ch. 20 of ES-TRIN 2017/1.

Part G

**Additional Requirements for Conformity
to Directive 2006/87/EC**

Chapter 3

**SPECIFIC REQUIREMENTS APPLICABLE TO
OTHER SHIPS**

- | | |
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| SECTION 2 | SPECIFIC REQUIREMENTS APPLICABLE TO FLOATING EQUIPMENT |
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| SECTION 4 | STABILITY OF VESSELS CARRYING CONTAINERS |
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SECTION 1

SPECIFIC REQUIREMENTS APPLICABLE TO CRAFT INTENDED TO FORM PART OF A PUSHED OR TOWED CONVOY OR OF A SIDE-BY-SIDE FORMATION

1 Craft suitable for pushing

1.1 Application

1.1.1 Reference is to be made to Pt E, Ch 1, Sec 3, [2.1.2] and [7].

2 Craft suitable for being pushed

2.1

2.1.1 (1/3/2019)

The following parts of ES-TRIN 2017/1 shall not apply to lighters without steering system, accommodation, engine or boiler rooms:

- a) Chapters 5 to 7 and 15;
- b) Article 8.08(2) to (8), Article 13.02 and Article 13.08(1).

2.1.2 (1/3/2019)

In addition, ship-borne lighters whose length L does not exceed 40 m shall meet the following requirements:

- a) collision bulkheads referred to in Article 3.03(1) of ES-TRIN 2017/1, can be dispensed with if their front faces are able to bear a load at least 2,5 times that set for the collision bulkheads on inland waterway vessels with the same draught and built in accordance with the requirements of a recognised classification society;
- b) by way of derogation from Article 8.08(1) of ES-TRIN 2017/1 compartments of the double bottom to which access is difficult do not have to be drainable unless their volume exceeds 5 % of the water displacement of the ship-borne lighter at the maximum authorised loaded draught.

2.1.3 (1/3/2019)

Craft intended for being pushed shall be fitted with coupling devices ensuring a safe connection to other craft.

3 Craft suitable for propelling side-by-side formations

3.1

3.1.1 Craft intended to propel side-by-side formations shall be equipped with bollards or equivalent devices which, as a result of their number and arrangement, enable the formation to be coupled in a safe manner.

4 Craft suitable for being propelled in convoys

4.1

4.1.1 Craft intended to be propelled in convoys shall be equipped with coupling devices, bollards or equivalent devices which, as a result of their number and arrangement, ensure a safe connection to other craft in the convoy.

5 Craft suitable for towing

5.1

5.1.1 (1/3/2019)

Reference is to be made to Ch. 21 Art 21.05 of ES-TRIN 2017/1.

6 Navigation tests on convoys

6.1

6.1.1 (1/3/2019)

Reference is to be made to Ch. 21 Art 21.06 of ES-TRIN 2017/1.

SECTION 2 SPECIFIC REQUIREMENTS APPLICABLE TO FLOATING EQUIPMENT

1 General

1.1 Application

1.1.1 (1/3/2019)

In the following paragraphs [1.1.1], [1.2] and [1.3], the Chapters and Articles to which they refer are relevant to of ES-TRIN 2017/1.

1.1.2 (1/3/2019)

For construction and equipment of floating equipment, Chapters 3, 7 to 14 and 17 and 21 shall apply. Floating equipment with its own means of propulsion shall also meet the requirements of Chapters 5 and 6. Propulsion units permitting only short-haul operation shall not be considered as having their own means of propulsion.

2 Derogations

2.1

2.1.1 (1/3/2019)

The inspection body may grant derogations from the following requirements:

- a) Article 3.03(1) and (2) shall apply mutatis mutandis;
- b) Article 7.02 shall apply mutatis mutandis;
- c) the maximum sound pressure levels prescribed by Article 15.02 (5), second sentence, may be exceeded while the floating equipment's working gear is operating, provided that, during service, nobody sleeps on board at night;
- d) derogations may be granted from other requirements concerning structure, working gear or equipment provided that equal safety is ensured in each case.

2.1.2 (1/3/2019)

The inspection body may dispense with the application of the following requirements:

- a) Article 13.01(1) shall not apply if, during operation of floating equipment that equipment can be securely anchored by means of a working anchor or piles. However, floating equipment with its own means of propulsion shall have at least one anchor meeting the requirements in Article 13.01 (1), where an empirical coefficient k is taken to be equal to 45, and the smallest height is taken for T ;
- b) Article 15.02(1), second part of sentence, if the accommodation can be adequately lit by means of electricity.

2.1.3 (1/3/2019)

In addition, the following shall apply:

- a) for Article 8.08(2), second sentence, the bilge pump shall be motor driven;
- b) for Article 8.10(3), the noise may exceed 65 dB(A) at a lateral distance of 25 m from the ship's side of any stationary floating equipment while its working gear is operating;
- c) for Article 13.03(1), at least one further portable extinguisher is required if working gear not permanently attached to the craft is placed on the deck;
- d) for Article 17.02(2), in addition to the liquefied gas equipment for domestic use, there may also be other liquefied gas facilities. Those facilities and their accessories shall meet the requirements of one of the Member States.

3 Additional requirements

3.1

3.1.1 Floating equipment on which persons are present during operation shall be fitted with a general alarm system. The alarm signal shall be clearly distinguishable from other signals and, within accommodation and at all work stations, shall produce a sound pressure level that is at least 5 dB(A) higher than the maximum local sound pressure level. It shall be possible to actuate the alarm system from the wheelhouse and the main work stations.

3.1.2 (1/3/2019)

Working equipment shall have sufficient strength to withstand the loads it is subjected to and shall meet the requirements of one of the Member States of the CCNR or of Directive 2006/42/EC, as amended.

3.1.3 The stability (resistance to overbalancing) and strength of working equipment, and where appropriate its attachments, shall be such that it may withstand the forces resulting from the expected heel, trim and movement of the floating equipment.

3.1.4 If loads are lifted by means of hoists, the maximum authorised load deriving from stability and strength shall be prominently displayed on panels on deck and at the control stations. If the lifting capacity can be increased by connecting additional floats, the values authorised both with and without these additional floats shall be clearly stated.

4 Residual safety clearance

4.1

4.1.1 Reference is to be made to Pt B, Ch 6, Sec 2, [3.2.4].

5 Residual freeboard

5.1

5.1.1 Reference is to be made to Pt B, Ch 6, Sec 2, [3.2.4].

5.1.2 (1/3/2019)

In addition, reference is to be made to Ch 22, Article 22.05 of ES-TRIN 2017/1.

6 Heeling test

6.1

6.1.1 Reference is to be made to Pt B, Ch 6, Sec 1, [2.2].

6.1.2 If during a heeling test it is not possible to achieve adequate heeling angles, or if the heeling test causes unreasonable technical difficulties, this may be replaced by a calculation of the craft's centre of gravity and weight. The result of the weight calculation shall be checked by measuring the draught, and the difference shall not exceed 5%.

7 Confirmation of stability

7.1

7.1.1 (1/1/2017)

Reference is to be made to Pt B, Ch 6, Sec 2, [3.2.1], [3.2.2], [3.2.3] and [3.2.5].

In [3.2.8] the value of p_w is to be assumed not less than 0,25 kN/m².

8 Confirmation of stability in the case of reduced residual freeboard

8.1

8.1.1 Reference is to be made to Pt B, Ch 6, Sec 2, [3.2.16].

9 Draught marks and draught scales

9.1

9.1.1 (1/3/2019)

Reference is to be made to Article 22.09 of ES-TRIN 2017/1.

10 Floating equipment without confirmation of stability

10.1

10.1.1 (1/3/2019)

The application of Articles 22.4 to 22.8 may be dispensed with for floating equipment:

- a) whose working gear can in no way alter its heeling or trim, and
- b) where any displacement of the centre of gravity can be reasonably excluded.

10.1.2 However,

- a) at maximum load the safety clearance shall be at least 300 mm and the freeboard at least 150 mm;
- b) for apertures which cannot be closed spray-proof and weathertight, the safety clearance shall be at least 500 mm.

SECTION 3

SPECIFIC REQUIREMENTS APPLICABLE TO WORKSITE CRAFT

1 Operating conditions

1.1

1.1.1 (1/3/2019)

Worksite craft designated as such in the Inland waterways vessel certificate set out in Part I or II of Annex V may navigate outside worksites only when unloaded. That restriction shall be entered on the Inland waterways vessel certificate.

1.1.2 For this purpose worksite craft shall have a certificate issued by the competent authority indicating the duration of works and the geographical boundaries of the worksite in which the craft may be operated.

2 Application of Part I of ES TRIN 2017/1

2.1

2.1.1 (1/3/2019)

Reference is to be made to Ch 23, Article 23.02 of ES-TRIN 2017/1.

3 Derogations

3.1

3.1.1 (1/3/2019)

Reference is to be made to Ch 23, Article 23.03 of ES-TRIN 2017/1.

4 Safety clearance and freeboard

4.1

4.1.1 Reference is to be made to Pt B, Ch 6, Sec 2, [3.2.18].

5 Ship's boats

5.1

5.1.1 (1/3/2019)

Worksite craft shall not be required to have a ship's boat where:

- a) they are not self-propelled, or
- b) a ship's boat is available elsewhere on the worksite.

That derogation shall be entered on the Inland waterways vessel certificate.

SECTION 4

STABILITY OF VESSELS CARRYING CONTAINERS

1 General

1.1

1.1.1 Reference is to be made to Pt B, Ch 6, Sec 2, [3.3] and [3.4].

SECTION 5

SPECIFIC REQUIREMENTS APPLICABLE TO CRAFT LONGER THAN 110 M

1 General

1.1

1.1.1 (1/3/2019)

Reference is to be made to Ch.28 of ES-TRIN 2017/1.

SECTION 6 SPECIFIC REQUIREMENTS APPLICABLE TO HIGH-SPEED VESSELS

1 General

1.1

1.1.1 Reference is to be made to Pt E, Ch 1, Sec 20.

SECTION 7

EQUIPMENT OF VESSELS WITH REGARD TO MANNING

1 General

1.1

1.1.1 (1/3/2019)

Reference is to be made to Ch.31 of ES-TRIN 2017/1.

SECTION 8

TRANSITIONAL AND FINAL PROVISIONS

1 General

1.1

1.1.1 (1/3/2019)

Reference is to be made to Pt. IV of ES-TRIN 2017/1.

SECTION 9

MISCELLANEOUS

1 General

1.1

1.1.1 (1/3/2019)

For the application of the requirements given in this Part G, reference is also to be made, when applicable to ES-TRIN

2017/1 EUROPEAN STANDARD ANNEXES, Pt II, ADDITIONAL REQUIREMENTS FOR SPECIFIC EQUIPMENT USED ON BOARD.

SECTION 10

SPECIFIC REQUIREMENTS APPLICABLE TO RECREATIONAL CRAFT

1 General

1.1 Application

1.1.1 (1/3/2019)

Reference is to be made to Ch.26 of ES-TRIN 2017/1.

SECTION 11

SPECIAL PROVISIONS APPLICABLE TO CRAFT EQUIPPED WITH PROPULSION OR AUXILIARY SYSTEMS OPERATING ON FUELS WITH A FLASHPOINT EQUAL TO OR LOWER THAN 55 °C

1 General

1.1 Application

1.1.1 (1/3/2019)

Reference is to be made to Ch.30 ES-RIN 2017/1.