

Annex 1 - Directive 2009/45/EC as now amended by 2016/844/EU: Changes and Impacts

Please Note – In the context of this Directive, “new ship” still means a ship constructed on or after 1 July 1998					
	Directive 2009/45/EC – Annex I (As previously amended by 2010/36)	Directive 2009/45/EC - Annex I, as now amended by Directive 2016/844/EU <i>The page numbers shown are those in published Directive 2016/844/EU</i>	Ships affected	New Requirement / or new application of existing requirement	Comments
	CHAPTER II-1 – SUB-DIVISION AND STABILITY, MACHINERY AND ELECTRICAL INSTALLATIONS	CHAPTER II-1 – SUB-DIVISION AND STABILITY, MACHINERY AND ELECTRICAL INSTALLATIONS			
1	N/A	A-1 / 4 – Protection Against Noise <i>Page 53</i>	Class B, C and D Ships Constructed on or after 1 January 2018	Ships of 1600 gross tonnage and above are now required to be constructed to reduce on-board noise and to protect personnel from noise in accordance with IMO Code on noise levels adopted by (MSC.337(91)). It should be noted that this Code is applicable to Crew areas only and not passenger areas. However ambiguity remains about areas which are work spaces with passenger access.	
2	Part C /6 Steering Gear 6.2.2.2 Removed and Replaced by amended text	Part C / 6 Steering Gear 6.2.2.2 The main steering gear and rudder stock where fitted shall... <i>Page 53</i>	New Class B, C and D Ships	The replacement introduces the amended SOLAS text for the testing of ships main steering gear. The performance requirement remains 35 deg -30 deg in 28 secs as per SOLAS however the condition the vessel needs to be in prior to testing has been amended. This requirement is applicable to all vessels no matter the date of construction and is seen as a relaxation of the testing condition requirements. The new requirement allows for the vessel to be at a sea going condition other than the deepest draught and maximum service condition when the steering trials are conducted if: <ul style="list-style-type: none"> • The ship is at an even keel and the rudder is fully submersed and the ship is running ahead at a speed corresponding to MCR. • The rudder is not fully immersed however an appropriate speed has been calculated and attained at which the force on the rudder is equivalent to the rudder being fully immersed and the ship running at maximum service speed. • The rudder force and torque at the sea trial condition have been reliably extrapolated to the full load condition. The speed of the ship needs to correspond to the MCR condition. It is not envisaged that this will have a great impact on Domestic passenger ships as the draught does not changed dramatically in the loaded and ballast condition in a way that a vessel, such as a bulk carrier or tanker does.	It is not envisaged that this will have an impact on UK Domestic passenger ships because these do not in general have the change in draught which would allow the provisions of this requirement to be taken account of. Anticipated compliance cost NIL
3	Part C /6 Steering Gear 6.2.3.2	Part C /6 Steering Gear 6.2.3.2 If fitted, the auxiliary steering gear shall be.... <i>Page 53</i>	New Class B, C and D Ships and existing Class B Ships	This replacement introduces the amended SOLAS text for the testing of Ships auxiliary steering gear. The performance requirement remain 15 deg – 15 deg in 1 minute as per SOLAS however the condition the vessel needs to be in prior to testing has been amended. The trial conditions which can be applied are identical to those outlined for the testing of the main steering gear.	It is not envisaged that this will have an impact on UK Domestic passenger ships because these and passenger ships do not in general have the change in draught which would allow the provisions of this requirement to be taken account of. Anticipated compliance cost NIL

Annex 1 - Directive 2009/45/EC as now amended by 2016/844/EU: Changes and Impacts

4	Part C / 15 – Protection against Noise. – New Class B, C and D Ships	Part C / 15 Protection against Noise <i>Page 54</i>	New Class B, C and D Ships not covered under regulation A-1/4	<p>The applicability of the requirement has been changed to be applicable to Class B, C and D ships not covered by the IMO Noise Code i.e. less than 1600 gross tonnage.</p> <p>The technical content of the requirement to ensure that noise in machinery spaces is reduced to an acceptable level and to isolated/insulate/supply ear protection where this cannot be achieved is unchanged.</p> <p>This is therefore deemed not to add any additional requirement into the Directive.</p>	<p>This does not introduce additional costings as it was previously the case that Class B,C and D ships had to comply with the requirement. This simply clarifies that the requirement is now applicable to ships not covered by the IMO Noise code.</p> <p>NIL cost expected.</p>
CHAPTER II-2 – FIRE PROTECTION, FIRE DETECTION AND FIRE EXTINCTION					
5	Part A/2 –Definitions	Part A/2 – Definitions <i>Page 54</i>	New Class B, C and D ships and existing Class B ships	<p>This addition introduces the definition for both a fire damper and also a smoke damper in order to define the terms which are used in the ventilation duct requirements (amendment 9a –ventilation systems in Ships)</p>	<p>Specialist industry comment is that the definitions provided are useful.</p>
6	Part A/6.8.2.1	Part A/6.8.2.1 <i>Page 54</i>	All ships constructed on or after 1 January 2018	<p>This amendment introduces the requirement for fixed firefighting systems to protect the hazard areas on all internal combustion machinery. Previously the requirement to fit firefighting systems was limited to main propulsion and power generation internal combustion machinery only.</p> <p>This will potentially introduce some additional firefighting systems e.g. hydraulic power packs / IC driven fire pumps etc.</p>	<p>Machinery spaces over a certain size. Therefore impact is likely to be limited.</p>
7	Part A/11.1 A fire Fighter's outfit shall consist of:	Part A/11.1 For Ships constructed before 1 July 2019, a fire fighter's outfit shall consist of: <i>Page 54</i>	All ships constructed before 1 July 2019	<p>The replacement of this text puts a limit on when the standards for fire fighters out fits utilised prior to the in force date of Fire Safety Systems Code</p>	<p>Clarification of existing requirements.</p>
8	Part A/11.1.1	Part A/11.1.1.3 <i>Page 54</i>	All ships constructed before 1 July 2019	<p>This addition introduces the requirement that after 1 July 2019 all self-contained compressed air breathing apparatus shall comply with the relevant requirements of the Fire Safety Systems Code. It should be noted that this applies to the breathing apparatus ONLY and not the rest of the fire fighters outfit.</p> <p>This will have some cost for existing ships which do not carry compliant firefighting equipment.</p>	<p>c£540 for a compliant breathing apparatus set (depending on exchange rate for Norwegian Krona)</p>
9	Exchange N/A	Part A/11.1a <i>Page 55</i>	All ships constructed after 1 July 2019	<p>This addition introduces the complete requirement of the FSS Code to Firefighters outfits. This applies to the complete outfit and not just the breathing apparatus.</p>	<p>c£430 for a compliant Firefighter's outfit (depending on exchange rate for Norwegian Krona)</p>
10	N/A	Part A/11.4a <i>Page 55</i>	New Class B, C and D ships and existing Class B ships.	<p>This addition introduces the requirement to carry a radio set for each fire party for fire-fighters communication. For LNG and Ro-Ro passenger this these radios need to be of an explosion-proof type or intrinsically safe.</p> <p>Ships constructed on or after 1 January 2018 need to comply from date of build. Ships constructed before 1 January 2018 need to comply before 1 July 2019.</p>	<p>c£930 for a compliant radio set and charger (depending on exchange rate for Norwegian Krona)</p>
11	N/A	Part A/15.2.6 – Instructions, on-board training and drills. <i>Page 55</i>	New Class B, C and D and Existing Class B Ships.	<p>This addition introduces the requirement to ensure that all breathing apparatus bottles are replaced and recharged prior to the ship sailing.</p> <p>This requirement will not impose any further costs and the bottles would need to be refilled/replaced after a drill in any event.</p>	<p>This will have a minimum cost as ships already to need ensure bottles are full and ready for use. This requirements prevents the need of a Charging set to be fitted on board.</p>

Annex 1 - Directive 2009/45/EC as now amended by 2016/844/EU: Changes and Impacts

12	Part B/ 5.1 In addition to complying with the specific provisions for fire integrity of bulkheads and decks mentioned elsewhere in this part, the minimum fire integrity of bulkheads and decks shall be as prescribed in table 5.1.	Part B/ 5.1or 5.1(a) and 5.2 or 5.2(b), as appropriate. When approving structural precautions for fire protection in new ships, account shall be taken of the risk of heat transfer between heat bridges at intersection points and where the thermal barring devices terminate. <i>Page 55</i>	New Class B, C and D	This amendment references the new additional tables and also draws attention to the importance of taking account of the risk of heat transfer between heat bridges at intersection points. This will not on its own impart cost however will when read with the latter table revisions. This will however only affect New ships.	
13	N/A	Part B/ Table 5.1(a) <i>Page 55</i>	Class B,C and D Ships constructed on or after 1 January 2018	This amendment introduces a new table setting standards for fire integrity of bulkheads separating adjacent spaces and is applicable to all ships constructed on or after 1 January 2018. The requirements for bulkhead standards are in the main the same as the previous requirements with the uplift of some bulkheads between compartments and special category spaces.	
14	N/A	Part B/5.4 (Table 5.2(a)) <i>Page 56</i>	Class B, C and D ships constructed on or after 1 January 2018	This amendment introduces a new table setting standards for fire integrity of decks separating adjacent spaces and is applicable to all ships constructed on or after 1 January 2018. The requirements for deck heads are largely unchanged from those required for pre 1 January 2018 ships with an increased requirement for some deck heads between special category spaces and adjoining compartments and aligns directly to the latest requirements.	
15	N/A	Part B/6.3.4 <i>Page 57</i>	Class B, C and D ships constructed on or after 1 January 2018.	This requirement introduces a requirement that two means of escape need to be fitted to a main workshop within a machinery space. One of these routes is required to provide a continuous shelter to a safe position outside the machinery space. 16As this is a requirement for vessels constructed on or after 1 January 2018 and aligns directly to the latest requirements within SOLAS it is not envisaged that this will impart additional cost on existing vessels.	This is likely to have a minimum cost. Only larger domestic passenger ships will have workshops within machinery spaces. The extra cost of designing in a 2 nd means of escape would arise, and could be dealt with, at the design stage.
16	9 Ventilation systems	9 Ventilation systems for ships built before the 1 January 2018 (R32) <i>Page 57</i>	Class B, C and D Ships built before 1 January 2018	The amendment of the title makes the existing requirements relevant only for ships built before 1 st January 2018 and allows for the introduction of the new ventilation requirements for vessels built after 1 January 2018. The current requirements are limited to main vertical zones and deck penetrations and do not set prescriptive technical standards, instead they reference SOLAS.	No anticipated cost
17	N/A	9a Ventilation systems in ships New section with prescriptive requirements. <i>Page 57</i>	Class B, C and D ships constructed on or after 1 January 2018	This new requirement introduces requirements for ventilation ducting and closures on ships constructed after 1 January 2018. These requirements are far more prescriptive than those previously applied and so taken in isolation could introduce cost to the vessel construction however this will not be above that already required for SOLAS certification.	Specialist industry advice suggests that the majority of these changes will carry a NIL compliance cost. Exceptions are:- - Automatic fire or/and smoke dampers which will involve a HIGH increase over manual dampers – up to 1000%; and, - Filters for laundry exhaust ducts which will involve a LOW increase on previous system requirement costs – around 10%.
18	N/A	Part B 13.4, 13.4.1, 13.5, 13.6 <i>Page 61</i>	Class B, C and D Ships constructed on	This addition introduces requirements for fire detection systems in unmanned machinery spaces and spaces where some automation is controlled from a control room.	

Annex 1 - Directive 2009/45/EC as now amended by 2016/844/EU: Changes and Impacts

			or after 1 January 2018	<p>Requirements are also introduced for fire detection systems in spaces containing incinerators.</p> <p>Requirements are also introduced for the standard of fire detection system including:</p> <ul style="list-style-type: none"> • Position and type of detectors. • Position of alarm panel and where the panel should be sited in instances where the bridge is unmanned whilst alongside. • The requirement to test the system after installation in various operating modes i.e. different machinery configurations. 	
19	Part B 14.1.2.2	<p>Part B 14.1.1.2</p> <p>The requirements of Regulations II-2/A/12, II-2/B/7, II-2/B/9 and II-2/B/9a for maintaining the integrity of vertical zones shall be applied equally to decks and bulkheads forming the boundaries separating horizontal zones from each other and from the remainder of the ship.</p> <p>Page 62</p>	New Class B,C and D ships and existing Class B ships carrying more than 36 passengers	<p>This amendment introduces the requirement of B/9a concerning ventilation into the requirement to maintain the integrity of horizontal zones in the same way as vertical zones are maintained.</p>	<p>This is a new requirement that must be incorporated at the design and construction stage. Any extra costs will therefore arise at that stage.</p>
20	Part B 14.1.2.2	<p>Part B 14.1.2.2</p> <p>In new ships built before 1 January 2018 carrying not more than 36 passengers..... Table 5.1</p> <p>In ships built on or after 1 January 2018 carrying not more than 36 passengers Table 5.1a</p> <p>Page 62</p>	New Class B, C and D ships built before 1 January 2018	<p>This amendment introduces table 5.1a and 5.2a which set new requirements for the rating of bulkheads and deck heads between special category spaces and other spaces.</p> <p>The requirement defines the dates at which time the new standards need to be applied i.e. 1 January 2018.</p> <p>It is not envisaged that this will impart significant cost increases as the requirements will only be applied to new vessels and not retrospectively.</p>	
	CHAPTER III- LIFESAVING APPLIANCES	CHAPTER III- LIFESAVING APPLIANCES			
21	Table attached to Regulation 2.6	<p>Table attached to Regulation 2.6</p> <p>Page 62</p>	New and Existing Class B, C and D Ships	<p>This amendment replaces the existing LSA provision table with the latest SOLAS amended table.</p> <p>Changes appear to be limited to the footnotes only.</p>	<p>Line throwing apparatus is no longer required on vessels under 24m in length. There will therefore be a related cost saving on such newbuild vessels. Representative costs are:-</p> <p>Thrower c£320 Replacement rocket c£130 Total saving c£550</p>
22	III/9/2a	<p>III/9/2a</p> <p>Not later than the first scheduled dry-docking after 1 January 2018, but not later than 1 July 2019, lifeboat on-load release mechanisms not complying with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code shall be replaced with equipment that complies with the Code (*).</p> <p>Page 64</p>	New and Existing Class B, C and D Ships	<p>This requirement requires lifeboat on load release hooks to be replaced with Code compiling types before the next scheduled dry-docking after 1 January 2018 and in any case no later than 1 January 2019.</p>	<p>Indicative cost range of £14500 to £25000 per lifeboat. Costs will vary depending on manufacturer, size, number fitted and associated labour costs.</p>
23	N/A	<p>Regulation 10a</p> <p>Page 64</p>	<p>Class B, C and D ships built on or after 1 January 2018.</p> <p>Ships constructed before 1 January 2018</p>	<p>This requirement introduces the need to have a plan identifying the procedure and equipment required to recover a person from the water in line with IMO guidance.</p> <p>Vessels constructed before 1 January 2018 are required to have a plan in place prior to their first safety equipment survey after the in-force date.</p> <p>RO-RO ships already need to comply with this requirement as an addition RO RO type requirement. It is not seen that this requirement will impart any further cost on the vessel.</p>	<p>Possible cost as equipment would need to be purchased and crew would need to conduct training.</p>

Annex 1 - Directive 2009/45/EC as now amended by 2016/844/EU: Changes and Impacts

24	N/A	Regulation 13.9 <i>Page 64</i>	New and existing Class B, C and D ships	<p>This requirement introduces the need for a ship to hold enclosed space rescue drills at least every year and defines what each drill must consist of which includes:</p> <ul style="list-style-type: none"> • Checking PPE • Checking communications • Checking the use of metres and other atmosphere monitoring devices • Checking the condition and use of rescue equipment. • Instructions in first aid and resuscitation techniques. <p>As the required equipment will be carried on board it is not envisaged that this requirement will in part any cost onto the Ship.</p>	<p>Possible cost as equipment would need to be purchased and crew would need to conduct training.</p> <p>NB - Required under DSM and ISM Codes.</p>
25	N/A	<p>Regulation 14- Records The date when musters are held, details of abandon ship drills and fire drills, enclosed space entry and rescue drills, drills of other life-saving appliances and on board training shall be recorded in such log-book as may be prescribed by the administration. If a full muster, drill or training session is not held at the appointed time, an entry shall be made in the log-book stating the circumstances and the extent of the muster, drill or training session held. <i>Page 65</i></p>	New and existing Class B, C and D Ships.	<p>This new requirement requires that all drills held on board the ship are recorded in an agreed format and that where drills are not conducted in the required time frame the reasons are logged.</p> <p>As this is a recording issue it is not envisaged that any significant extra costs will be put on the Ship.</p>	<p>No extra cost in terms of time spent recording as this is already required under DSM Code.</p>