Australian Government
Australian Maritime Safety Authority

Summary of proposed changes

Consultation: National Standard for Commercial Vessels (NSCV) Part C4 – Fire Safety

Contents

Theme 1: Categorisation of machinery spaces

Location of change	Proposed change	Reason for change
1.4 – Definitions Table 3 – categories of spaces Table 10 – spaces requiring a fire detection system Table 18 – Portable fire extinguishers by space Chapter 7 – Additional measures for machinery spaces	Create a “medium machinery space” category that captures spaces with characteristics similar to a small machinery space but without the 10m3 limitation. Provide requirements for fire detection, fire extinguishers and other additional measures for these spaces.	This change addresses a gap in the current categorisation of machinery spaces and provides requirements for these spaces (greater than 10m3 but with similar risk profile to small machinery space) not currently covered. The policy concept for this change is that medium machinery spaces retain the moderate fire risk categorisation of small machinery spaces but have appropriate additional fires safety requirements applied from machinery spaces.

Theme 2: Smoke detectors and alarms

Location of change	Proposed change	Reason for change
5.3 – Smoke detectors Table 12 - Spaces requiring smoke alarms	For vessels not required to have a fixed fire detection in accommodation spaces - require smoke alarms fitted in accommodation spaces, stairways, corridors and escape	This change seeks to improve fire detection and response times and apply other industries best practices. It introduces the concept of “interconnected” smoke alarms in

Location of change	Proposed change	Reason for change
	routes to be photoelectric and interconnected. Provide new requirements for positioning of alarms.	place of the previous “self-contained” provision applying to accommodation spaces not required to have a fixed fire detection system and provides requirements on the positioning of detectors. The change aims to control risk identified in international marine incident investigation reports.

Theme 3: Fire extinguishers

Location of change	Proposed change	Reason for change
Table 19 – Minimum size and rating of portable fire extinguishers	Replace requirement for 30B extinguishers with 20B.	The in-force version of C4 prescribes 9L 30B rated foam extinguishers for machinery spaces > 750kW. These extinguishers contain PFAS and are being phased out due to health and environmental concerns. 9L 20B foam extinguishers are the nearest commercially available equivalent that do not contain PFAS. Consultation with industry established that the size of fires practicably able to be fought in machinery spaces can be managed with a 9L 20B foam extinguisher.
Table 40 – Additional dangerous goods fire safety requirements	Provide 1 x 9kg dry powder or 2 x 9L foam fire extinguishers on DGV 2 vessels	The in-force version of C4 additional portable fire requirements for DGV 2 vessels is 1 x 12kg “or equivalent”.

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		There is no prescribed extinguisher rating to enable equivalence. Additionally, consultation with industry indicated there was limited availability of 12kg DCP extinguishers and those available were not certified to the referenced Australian Standard. It was established in consultation with industry that a contemporary 9 kg dry powder extinguisher provided a similar rating to when the standard was initially drafted and was a suitable replacement. Additionally, it was established that where appropriate for the DG being carried, two 9 L foam fire extinguishers would provide an equivalent firefighting capability.

Theme 4: Deck finish materials

Location of change	Proposed change	Reason for change
Table 9 – Fit-out material limitations	Provide critical radiant flux levels for deck finish materials. Provide a maximum smoke development rate requirement in Category IV Vessels for linings, ceilings and doors and deck finish materials in spaces without fixed fire systems.	The National Construction Code 2022 no longer defines Levels 1,2 and 3. These concepts will now be specified in C4. The in-force version of C4 relies on the referenced standard to prescribe a limit on smoke generation potential and toxicity.

Theme 5: Dangerous goods

Location of change	Proposed change	Reason for change
Chapter 1 – 1.4 definitions Chapter 14 – 14.1.1 Application and 14.1.4 Information to reduce the likelihood and consequences of fire.	The definition of 'dangerous goods' has been amended to align to the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code) instead of the National Code of Practice for the storage and Handling of Workplace Dangerous Goods (NOHSC).	The in-force version of C4 references the NOHSC code developed by the now defunct National Occupational Health and Safety Commission which has not been updated since 2001. The NOHSC code is considered superseded having been replaced by the Model WHS laws. The replacement of the reference to the NOHSC in C4 with the reference to the ADG Code (and the corresponding definition of dangerous goods) is considered to provide a practical solution. Although, the ADG Code does not specifically apply to the maritime sector, dangerous goods shipped domestically will likely be brought to port via road or rail in compliance with the ADG code. Therefore, the definition of dangerous goods in C4 being aligned to the ADG is considered to provide a practical solution to industry.
Chapter 15 – 15.1, 15.3 Packaging, containment and stowage	Amendment to clause 15.1 to provide a carve out for the carriage of fuel on the open deck of the vessel that forms part of the stores required for the navigation, safety, maintenance or the intended operation of the vessel's tenders provided that specified conditions are met.	The carve out is proposed for the carriage of fuel on board DCVs that is to be used for the intended operation of the vessel's tenders. It provides for fuel to be stored on the open deck in containers that comply with the requirements of NSCV Part C5.

Location of change	Proposed change	Reason for change
		Carriage is subject to conditions that are designed to mitigate operational risk.

Theme 6: Fire resisting divisions

Location of change	Proposed change	Reason for change
1.4 Definitions	Include RINA Rules for the Classification of Yachts 2025 within the definition for fire resisting divisions.	RINA Class rules have been used for the type approval of fire resisting division insulation materials. These rules permit RINA Class to accept reduced size test specimens for material certification.
4.5.4 SFP near bilges	Amended figure 1 to provide section view of extent of fire resisting division and 300mm maximum termination height above keel.	The in-force version of C4 figure 1 only provides a profile view showing 300mm termination height for fire resisting division above keel, creating uncertainty for designers on requirement for fire resisting division extent.
4.5.1 SFP on Boundaries of Fuel Tanks	Add note under Table 5, 6 and 7 clarifying SFP requirements at 7.3.2.2 (7.2.2.2 in in-force version) for fuel tank boundaries in high-risk spaces.	The in-force version of C4, 7.2.2.2 limited the modification of SFP requirements of Tables 4, 5 and 6 by the table keys in high fire risk spaces but this was not clear when applying the SFP table requirements at Table 4, 5 and 6.

Theme 7: Wood fired heaters

Location of change	Proposed change	Reason for change
9.2 – Heating appliances	Clarify that wood fire heaters are considered an “exposed flame” and are not permitted.	The in-force version of C4 contains a provision that “no heater is to be fitted with an exposed element or flame “. There is uncertainty within industry whether this provision prohibited the installation of a wood fired heater. It is considered that these installations need to be opened to replenish fuels, at which time the flame would be exposed and pose an elevated fire risk.

Theme 8: Categories of spaces

Location of change	Proposed change	Reason for change
Chapter 3 Vessel categorisation Table 1 - Categories of spaces	Amend examples contained in Table 3 to include Personal Watercraft, tenders and battery powered equipment of various electrical storage capacities.	It is increasingly common for "white boats" to have garages or similar storage spaces below decks for toys or tenders that have petrol engines and associated fuel tanks or lithium-ion battery powered equipment. However, it is currently unclear what the fire risk categorisation of these spaces are.

Theme 9: Requirements for lithium battery technology

Location of change	Proposed change	Reason for change
Chapter 18 - Additional measures for EES systems (newly drafted) 3.4 EES Spaces Schedule 1	Include fire safety requirements for Battery Electric Energy Storage spaces to control risks associated with thermal runaway. Provide requirements for “conventional vessels” adopting Lithium-Ion battery installations proportionate to the storage capacity of the installation.	Existing C4 Fire Safety has no requirements for Lithium battery installations. This gap in the prescribed standards restricts accredited marine surveyors from reporting on compliance for electrical energy storage systems.

Theme 10: Referenced documents

Location of change	Proposed change	Reason for change
Chapter 1 Preliminary - 1.3 Reference documents	Referenced documents that have been superseded were replaced with their current, valid versions. References found to be no longer applicable or valid were removed. Additional references were added where appropriate, i.e. ADG Code, lithium battery technology	Superseded referenced documents were replaced with their current, valid versions. References that were no longer applicable or valid were removed. Additional references, such as the ADG Code and those relevant to lithium battery technology, were added to ensure the standard remains accurate and up to date.