

United States Coast Guard



FOREIGN PASSENGER VESSEL ANNUAL CERTIFICATE OF COMPLIANCE EXAM PROCESS GUIDE

DIRECTIONS FOR USE

This booklet:

-Is designed to assist qualified Foreign Passenger Vessel Examiners (FPVE's) with completing examinations in a comprehensive manner while walking each deck from bow to stern.

-Contains an extensive list of systems and equipment that may be examined during an Annual Certificate of Compliance (COC) exam. It is a memory jogger and should not be construed as an exhaustive check list of examination procedures.

-Does not establish or change Federal laws or regulations. Refer to IMO publications, CFR's, the Port State Control Job Aid, NVIC's, MMS work instructions, and any locally produced guides for specific regulatory references.

Annual Foreign Passenger Vessel Exam Policy:

Annual examinations: Performed to ensure all systems previously examined during the Initial COC continue to be maintained in proper operating condition; to verify that the flag Administration and/or RO have performed annual renewal surveys as required by SOLAS Chapter I, Regulation 7. FPVE's should focus on firefighting, lifesaving, and emergency systems and should witness a comprehensive fire and boat drill. In addition, FPVE's should examine the vessel for any modifications that affect the vessel's structural fire protection and means of escape but that were completed without approval by the vessel's flag Administration or review by the USCG Marine Safety Center.

Waste Streams: At least one waste stream should be targeted for a thorough and detailed examination. The stream selection will be based on the FPVE's discretion, taking into account the FPVE's impression about the condition of the various waste stream systems on board the vessel, weighing the need to examine all systems over a reasonable period of time, and maintaining randomness so that the operator has no advance knowledge of the waste stream that may be selected.

Drills: Drills shall be evaluated in accordance with the ship's established onboard training and instructions. Review the ships written procedures to determine what to expect in terms of crew duties and actions during the drill to include crowd control, crisis management scenario(s) and evacuation contingencies.

References:

- USCG Marine Safety Manual, Vol. II: Materiel Inspection, Section D: Port State Control, Chapter 7: Procedures Applicable to Foreign Passenger Vessels – COMDTINST 16000.7B
- Foreign Passenger Vessel Examiners Tactics, Techniques, and Procedures (TTP) - CGTTP 3-72.2
- NVIC 4-04 Environmental Inspection Checklist

Some items listed are not mandatory, but fall under the umbrella of "Management Policy". SMS documentation should address all the elements discussed in this standard. If any elements are not addressed there should be a rationale for its omission. If the areas listed are corporate policy as set out in the company's SMS documentation, then the vessel should be held accountable for the actions as required in 33 CFR 96 and SOLAS Chapter IX.

Foreign Passenger Vessel Data for MISLE

Vessel Name		IMO Number	
Classification Society		Flag State	
ISM Issuer:			
Outstanding conditions of class or non-conformities Y <input type="checkbox"/> N <input type="checkbox"/>			
Special Notes in MISLE Y <input type="checkbox"/> N <input type="checkbox"/>		Operational Controls Placed on Vessel Y <input type="checkbox"/> N <input type="checkbox"/>	
Call Sign		Length of Vessel	
Net Tons	Deadweight		Gross Tons
Keel Laid Date	Delivery Date		Last Conversion Date
Propulsion		Horsepower	
Steering Type		Number of shafts / Pods	
Emergency Contact Information			
Bilge Pump Number		Capacity	Units
Fire Pump Number		Capacity	Units
Lifeboats	Rescue Boats	Tenders	Life rafts
Life Raft Davits	MES	WTDs	Semi-WTD
Total Passengers	Total Crew		Total Onboard

Pre-Exam

TEAM ASSIGNMENTS	LOCATION & TEST EQUIPMENT	TASKS
Team 1 (_____) Qualified <input type="checkbox"/> (_____) Qualified <input type="checkbox"/> Break-in <input type="checkbox"/>	Bridge or Conference Room Documentation / Navigation Safety / COC	Documentation, Manuals, & Certificates; Vessel Security; and, Navigation Safety Conduct Waste Stream audit paperwork with Environmental Officer
Team 2 (_____) Qualified <input type="checkbox"/> (_____) Qualified <input type="checkbox"/> Break-in <input type="checkbox"/>	Midway and all above decks <ul style="list-style-type: none"> ▪ Smoke detectors ▪ Manual Call Points ▪ Section valves 	Lifesaving, active & structural fire protection, ILO & High Risk Areas.
Team 3 (_____) Qualified <input type="checkbox"/> (_____) Qualified <input type="checkbox"/> Break-in <input type="checkbox"/>	All decks above bulkhead deck to midway <ul style="list-style-type: none"> ▪ Smoke detectors ▪ Manual Call Points ▪ Section valves 	Fire Protection; ILO & High Risk Areas; Waste Streams..
Team 4 (_____) Qualified <input type="checkbox"/> (_____) Qualified <input type="checkbox"/> Break-in <input type="checkbox"/>	Engine spaces and bulkhead deck and below <ul style="list-style-type: none"> ▪ Smoke detectors ▪ Heat detectors 	Fire Protection, Machinery Equipment.

- COC completed and signed
- Critical profile for vessel printed
- Ship has onboard at least one crewmember with CVSSA crime scene training.
- Profile checked for special notes and deficiencies
- Last activity reviewed for drill location / boats used, waste stream
- New MISLE Activity opened
- When was the vessel last in the States _____
- Team members identified and assigned. Safety brief conducted with examination team.

Initial Meeting Questions for the Master

- What time will debarkation be completed? _____
- What is the ships schedule / departure time? _____
- What time would be best to hold the drills? _____
- Do you conduct a brief before the drill?
- Is there anything that might interfere with the inspection?
(Bunkering, loading stores, etc.)
- Will Class be on board?
- Are there any other inspections scheduled today (CDC,
Agriculture, etc.)?
- Are there any outstanding conditions of Class? (If so, could we
get a copy of the class report?)
- Are there any non-conformities (deficiencies) outstanding?
- Have there been any outbreaks of Norovirus or any other
diseases?
- Is there an escort assigned to each inspection team?
- Can you energize low location lighting prior to our inspection?
- Are there any questions or concerns from the Captain or
Officers?
- May we have a private space to consult with other team
members concluding our walk through?
- Number of decks _____ and MVZs _____?
- Space last fire drill conducted _____?
- Copies of crew questionnaires for drill?

Certificates

Document Name	Agency	Port Issued	Date Issued	Expiration Date	Last Endorsed
Certificate of Registry					
Classification Document					
International Tonnage Certificate (ITC)					
Passenger Ship Safety Certificate (PSSC)					
International Load Line Certificate					
Document of Compliance (DOC)(ISM)					
Safety Management Certificate (SMC)					
Safe Manning Certificate					
International Oil Pollution Prevention Certificate (IOPP)					
International Air Pollution Prevention Certificate (IAPP)					
Engine IAPP (EIAPP) (for each engine) & EIAPP Supplements					
International Energy Efficiency Certificate (IEEC)					
Ship Energy Efficiency Management Plan (SEEMP)					
International Ship Security Certificate (ISSC)					
Continuous Synopsis Record (CSR)					

TEAM ONE: DOCUMENTS, SECURITY, WASTE STREAM & BRIDGE

Team one will need a Bridge Officer, Security Officer and the person in charge of the licenses.

Documents

- Garbage Management Plan
- Certificate of Financial Responsibility (COFR)
- Bunker delivery notes / Fuel samples onboard
- Lifesaving equipment maintenance record
- Training logs, drill records and SOLAS training manual
- Decision support system for emergency management
- Operations limitations manual
- Exemptions to SOLAS certificates
- Working language established and recorded
- Safety Management System (SMS):
- Fixed fire fighting certificates
- Liferaft / MES inspection reports
- Ballast water management plan and reports.
- Licenses, endorsements and medical certificates
- Vessel/Coast Guard SAR Plan
- Shipboard Oil Pollution Plan (SOPEP)
- Non-Tank Vessel Response Plan
- Lifeboat / Tender Certificate(s)
- Passenger Terminal Security Plan
- STCW mandatory training requirements
- Environmental records in conjunction with selected waste stream audit

Notes:

Navigation Safety

- Charts/Pubs for U.S. waters (Updates, physical and electronic)
- Bridge radio distress panel
- Aircraft Radio with batteries for lifeboats
- INMARSAT installation / NAVTEX & INMARSAT printers
- Radar(s) and ARPA.
- Voyage Data Recorder (VDR) (Annual servicing completed)
- Steering gear instructions / Steering Gear Test
- Lifesaving signals table
- Fire door and watertight door control panel indicator
- Fire and smoke detection panel.
- Sprinkler/water mist control panel
- GMDSS/ GMDSS lifeboat radios (VHF). GMDSS Shore Maintenance Program.
- SARTS (two, one on each side)
- LRIT Equipment
- EPRIB for ship (float free) / EPRIB for lifeboats. (not float free)

Notes:

TEAM TWO: MIDWAY AND ALL ABOVE DECKS

Team Two will need a radio, keys to technical lockers, cans of smoke, and equipment to test section valves. Have the Low Location Lighting turned on prior to departing on the inspection.

- Section valves (flow alarms, tamper alarms).
- Smoke detectors (operation, audible alarm if equipped).
- Fire shutters in upper deck galleys.
- Fire screen doors (local control, bridge indication panel).
- Technical lockers and fire stations (fireman's outfit, stowage).
- Stairways (loose gear, seating, opening into stairway).
- Low location lighting (placement of lighting if luminescent strips).
- Back stage areas (electrical installations and stowage).
- Emergency exits (properly marked and not blocked, EEBDs).
- Signage is clearly visible and pointing in the right direction throughout.
- Cabins (egress instructions, life jackets, smoke detection).
- Proper space categorization through area.
- Muster stations (assembly areas) and embarkation areas (lighting, signage and instructions).
- Main dining rooms (paths to exits, signage and doors).
- Lifeboats and rescue boats (condition, equipment).
- Tender boats (additional equipment, Class certificate, crew training).
- Davit systems (condition, operation, wire rope replacement).
- Public address system operation.
- Marine evacuation system (MES) and its operating instructions.
- Life rafts (storage, markings, obstructions, hydrostatic release).
- CVSSA compliance with Security Officer (logs, monitoring, contact information, security guides, cabin security latches)

Notes:

FIRE DRILL: *Forward and upper boundaries, and medical teams*

- Were fire boundaries fwd and above of the affected area set?
- Was equipment for cooling boundaries laid out and used?
- Were fire screen doors throughout area closed?
- Adjacent spaces in the affected area evacuated and marked?
- Was the power secured in the affected areas? Ventilation?
- PA heard throughout area, even after power secured?
- Were medical teams available?
- Did medical teams have necessary equipment available, and did they utilize the appropriate route of egress?

PASSENGER EVACUATION: *Forward Stairway and muster stations.*

- Are stairway guides in place?
- Are they properly identified?
- Are muster stations clearly marked?
- Are life jackets available along evacuation route?
- Is someone in charge of muster area? Second PIC assigned?

ABANDON SHIP: *Inboard side lifeboats / tenders*

- Check boat equipment, question boat crews.
- Witness operation of boat engines and operation of rudders.
- Question of life raft davit crew for competency (if applicable)
- Question MES crew for competency (if applicable)
- Was there positive control of the deck?

Notes:

TEAM THREE: MIDWAY AND ALL DECKS TO BULKHEAD DECK

Team Three will need a radio, keys to technical lockers, cans of smoke, and equipment to test section valves. Have the Low Location Lighting turned on prior to departing on the inspection.

- Section valves (flow alarms, tamper alarms).
- Smoke detectors (operation, audible alarm if equipped).
- Main and crew galleys (fire protection, escapes, sanitation, etc.).
- Fire screen doors (local control, bridge indication panel).
- Technical lockers and fire stations (fireman's outfit, stowage).
- Stairways (loose gear, seating, opening into stairway).
- Low location lighting (placement of lighting if luminescent strips).
- Photo lab, paint lockers (handling of waste and flammables).
- Main laundry spaces (stowage, cleaning, and maintenance of lint screens/traps).
- Emergency exits (properly marked and not blocked, EEBDs).
- Signage is clearly visible and pointing in the right direction throughout.
- Public address system operation
- Proper space categorization through area.
- Crew cabins (over-crowding, fire hazards, electrical).
- Refers and cold storage (escapes and alarms).
- Hospital spaces (signage, no stowage in rooms). With Medical Officer - staff compliance with training requirements of CVSSA, rape kits.
- Crew dining rooms and office spaces (paths to exits, signage).
- Drencher system on mooring decks (unobstructed, intact).
- Saunas (materials, escape routes)
- CVSSA compliance (contact information, cabin security latches)

Notes:

FIRE DRILL *Aft and below boundaries and staging area*

- Were fire boundaries aft and below of the affected area set?
- Was equipment for cooling boundaries laid out and used?
- Were fire screen doors throughout area closed?
- Adjacent spaces in the affected area evacuated and marked?
- Was the power secured in the affected areas? Ventilation?
- PA heard throughout area, even after power secured?
- Staging area had proper command and control?
- Staging area located in safe area?

PASSENGER EVACUATION: *Aft stairway and muster stations.*

- Are stairway guides in place?
- Are they properly identified?
- Are muster stations clearly marked?
- Are life jackets available along evacuation route?
- Is someone in charge of muster area? Second PIC assigned?

ABANDON SHIP: *Outboard side lifeboats / tenders*

- Check boat equipment, question boat crews.
- Boats are turned out and lowered to deck without incident.
- Witness operation of boat engines and operation of rudders.
- Was there positive control of the deck?
- Witness disconnect of boat hooks.
- Witness deployment and retrieval of fast rescue boats.
- Witness deployment of life raft (if applicable)
- Question MES crew for competency (if applicable)

Notes:

TEAM FOUR: ENGINE SPACES / BULKHEAD DECK AND BELOW

Team Four will need an Engineer and Electrician with a radio, keys to any locked spaces and authority to test equipment.

- Emergency generator (run under load, both means of starting).
- Transitional power battery installation (matting, ventilation).
- Bunkering stations (emergency shut downs, communications, containment).
- Steering gear (pilot house and local control, loss of phase, loss of power and low level alarms).
- Water tight doors (local and remote).
- Main control, switch boards, computers, check stowage and fire load.
- Check bilges for excessive oil, soft or cement patches on vital piping or hull.
- Examine main and emergency fire pumps, and topping pump if installed.
- Examine sprinkle/water mist system; topping pumps, pump failures, pressure, and alarms. **(Examination should be coordinated with teams testing section valves to observe automatic operation).**
- Main propulsion components (excessive leaks, lagging).
- Main and auxiliary generators (excessive leaks, lagging).
- Emergency escapes (signage, new security locks, EEBDs).
- Proper space categorization through area.
- Remote shut downs for fuel and ventilation (operation).
- Communications between bridge and machinery space
- Garbage and incinerator rooms (fire protection, material storage).
- Flammable liquid lockers (approved spaces, fire fighting, MSDS).

Notes:

FIRE DRILL: *On scene, and fire party organization.*

- Was there positive control of the team by the leader?
- Was the equipment kept clear of the fire doors and fire parties?
- Was smoke control a factor?
- Were hoses properly laid out and handled?
- Was the power secured in the affected areas? Ventilation?
- PA heard throughout area, even after power secured?
- Firefighter's outfits properly donned and include all gear?

PASSENGER EVACUATION: *Amidships stairway and muster stations.*

- Are stairway guides in place?
- Are they proper identified?
- Are muster stations clearly marked?
- Are life jackets available along evacuation route?
- Is someone in charge of muster area? Second PIC assigned?

ABANDON SHIP: *Outboard side and outboard lifeboats / tenders.*

- Check boat equipment, question boat crews.
- Boats are turned out and lowered to deck without incident.
- Witness operation of boat engines and operation of rudders.
- Was there positive control of the deck?
- Witness disconnect of boat hooks.
- Witness deployment and retrieval of fast rescue boats.
- Witness deployment of life raft (if applicable)
- Question MES crew for competency (if applicable)

Notes:

Waste Stream

- Complete certificates / equipment data / records information
- Review SMS environmental procedures
- Examine MSD, OWS, garbage logs, oil record book
- Determine if gray water requirements apply
- Make waste stream selection for a detailed exam
- C1 Oil Pollution Handling Waste Stream
 - Oily water separator (piping, oil content meter, operational)
 - White box (if equipped)
 - Oil pollution placards
 - Oil transfer procedures (posted, person in charge, emergency info)
 - Containment
 - Bilge water management (residues, capacity of tanks, detergents)
- C2 Gray Water Waste Stream
 - Sources and prohibited sources (galley, laundry, photo labs)
 - Testing / records
 - Capacity
 - Vessel's gray water handling procedures (SMS).

Notes:

Escape Requirements

- Escape routes from the machinery spaces.
- Two means of escape from ro-ro spaces located at the fore and aft ends of the space.
- Openings in enclosed spaces adjoining an open deck can be used as emergency exits.
- Simple “mimic” plans showing “you are here” position and escape routes marked by arrows are prominently displayed in each cabin and public spaces.
- Handrails or handholds provided in corridors along entire escape route.

Electrical Requirements

- All public spaces and alleyways are provided with supplementary electric lighting.
- A portable rechargeable battery operated lamp is provided in every crew space alleyway, recreational space and every working space is normally occupied unless supplementary emergency lighting is provided.

Stability Management

- Vehicle ramp openings are weathertight and have alarms and indicators that sound at the navigation bridge.
- Television surveillance and water leakage detection installed.
- Special category and ro-ro spaces are continuously patrolled or monitored by effective means (i.e. television surveillance).
- Posted operating procedures for closing and securing all shell doors, loading doors and other closing appliances.

Special Requirements

- Special category and ro-ro spaces contain a power ventilation system separate from other ventilation systems.
- Means provided on navigation bridge loss of required ventilation.
- Arrangements provided a rapid shutdown and effective closure of the ventilation system from outside the space.
- Vehicle spaces and ro-ro spaces which are not special category spaces and are capable of being sealed from a location outside of the cargo spaces are fitted with a fixed gas fire-extinguishing system.
- Ro-ro and vehicle spaces not capable of being sealed and special category spaces are fitted with an approved fixed pressure water-spraying system for manual operation which can protect all parts of any deck and vehicle platform.

- Spaces above the bulkhead deck, scuppers are fitted to ensure water is rapidly discharged directly overboard when fixed pressure-spraying fire extinguishing systems are provided.
- Portable fire extinguishers are provided at each deck level in each hold or compartment where vehicles are carried and spaced no more than 20 m apart on both sides of the space.
- Three water-fog applicators.
- One portable foam applicator unit.

Lifesaving Requirements

- At least on rescue boat is a fast rescue boat approved by the administration.
- At least two crews are trained and drilled regularly.
- Every liferaft is provided with float-free stowage arrangements.
- Every liferaft is fitted with a boarding ramp.
- Every liferaft is either automatically self-righting or be a canopied reversible liferaft.
- Liferafts are fitted with a radar responder in the ratio of one transponder for every four liferafts. Containers of liferafts fitted with transponders are clearly marked.
- A means of rapidly recovering survivors from the water and transferring from rescue units or survival craft to the ship.
- There are sufficient numbers of lifejackets stowed in the vicinity of the muster stations so passengers do not have to return to their cabins to collect their lifejackets.
Each lifejacket is fitted with a light complying with the requirements of the Code.

Drills

Coordinate the timing of drills with the Master and/or ship's Safety Officer IAW ships written procedures. Ship officers should determine the drill location and its progression (also determines beforehand what props, such as smoke, are used by the crew).

Review the ships written procedures to determine what to expect in terms of crew duties and actions during the drill to include crowd control, crisis management scenario(s) and evacuation contingencies. Evaluate drills (fire, abandon ship, security) according to these procedures.

Note: If crew appears unfamiliar with their duties or incapable of safely responding, request that the drill be stopped. Notify the Master that the drill was unsuccessful and that additional training and/or additional exercises are necessary. Provide the crew with at least one additional opportunity to demonstrate competency before detaining the vessel.

Type of drill held. _____

Drill Location: _____

How was the drill initiated? _____

Did the ship's general alarm sound throughout vessel? _____

Liferaft the same size as those utilized on the vessel? _____

Debrief with Master and ship's Safety Officer

Notes:

Rating crew drills is subjective; therefore the results and comments on this sheet are for training purposes only and will not be included in the final report. The official comments and deficiencies, if any, will be recorded on the Certificate of Compliance and the Official Coast Guard Boarding Forms.

S= Satisfactory **N =** Needs improvement **U =** Unsatisfactory
NA = Not Applicable

Drill	Item	
Fire Drill	Initial notifications	S N U NA
	Initial response properly equipped	S N U NA
	General alarms and signals	S N U NA
	Electrical and Ventilation Secured	S N U NA
	Boundaries set and maintained	S N U NA
	Boundaries cooling	S N U NA
	Evacuation of effected area.	S N U NA
	Teams properly equipped	S N U NA
	Smoke control	S N U NA
	Passengers Control	S N U NA
	Communications w/ bridge	S N U NA
	Fire fighting parties	S N U NA
	On Scene Command	S N U NA
Passenger Muster and Evacuation	Announcements clear and precise	S N U NA
	Stairway guides in place & knowledgeable	S N U NA
	Muster areas properly manned.	S N U NA
	Evacuation routes clearly marked.	S N U NA
Abandon ship	Boat crews knowledgeable	S N U NA
	Boats lowered in a safe manner	S N U NA
	Boats operated in a safe manner	S N U NA
	Liferaft rigged properly	S N U NA
	MES crew knowledgeable	S N U NA

Table 9.1 Bulkheads not bounding either main vertical zones or horizontal zones

Spaces	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Control Stations	(1)	B-0a	A-0	A-0	A-0	A-0	A-60	A-60	A-60	A-0	A-0	A-60	A-60	A-60
Stairways	(2)		A-0a	A-0	A-0	A-0	A-0	A-15	A-15	A-0c	A-0	A-15	A-30	A-15
Corridors	(3)			B-15	A-60	A-0	B-15	B-15	B-15	B-15	A-0	A-15	A-30	A-0
Evacuation stations and external escape routes	(4)					A-0	A-60b,d	A-60b,d	A-60b,d	A-0d	A-0	A-60b	A-60b	A-60b
Open deck spaces	(5)						A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0
Accommodation spaces of minor fire risk	(6)						B-0	B-0	B-0	C	A-0	A-0	A-30	A-0
Accommodation spaces of moderate fire risk	(7)							B-0	B-0	C	A-0	A-15	A-60	A-15
Accommodation spaces of greater fire risk	(8)								B-0	C	A-0	A-30	A-60	A-15
Sanitary & similar spaces	(9)									C	A-0	A-0	A-0	A-0
Tanks, voids and auxiliary machinery spaces having little or no fire risk	(10)										A-0a	A-0	A-0	A-0
Auxiliary machinery spaces cargo spaces, cargo and other oil tanks and similar spaces of moderate fire risk	(11)											A-0a	A-0	A-0
Machinery space and main galleys	(12)												A-0a	A-0
Store-rooms, workshops, pantries, etc.	(13)													A-0a
Other spaces in which flammable liquids are stowed	(14)													
														A-30

Table 9.2 Decks not forming steps in main vertical zones nor

Space below\	Space above→	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Control Stations	(1)	A-30	A-30	A-15	A-0	A-0	A-0	A-15	A-30	A-0	A-0	A-0	A-60	A-0	A-60
Stairways	(2)	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-30	A-0	A-30
Corridors	(3)	A-15	A-0	A-0a	A-60	A-0	A-0	A-15	A-15	A-0	A-0	A-0	A-30	A-0	A-30
Evacuation stations and external escape routes	(4)	A-0	A-0	A-0	A-0	-	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0
Open deck spaces	(5)	A-0	A-0	A-0	A-0	-	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0
Accommodation spaces of minor fire risk	(6)	A-60	A-15	A-0	A-60	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0
Accommodation spaces of moderate fire risk	(7)	A-60	A-15	A-15	A-60	A-0	A-0	A-15	A-15	A-0	A-0	A-0	A-0	A-0	A-0
Accommodation spaces of greater fire risk	(8)	A-60	A-15	A-15	A-60	A-0	A-15	A-15	A-30	A-0	A-0	A-0	A-0	A-0	A-0
Sanitary & similar spaces	(9)	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0
Tanks, voids and auxiliary machinery spaces having little or no fire risk	(10)	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0a	A-0	A-0	A-0	A-0
Auxiliary machinery spaces cargo spaces, cargo and other oil tanks and similar spaces of moderate fire risk	(11)	A-60	A-60	A-60	A-60	A-0	A-0	A-15	A-30	A-0	A-0	A-0a	A-0	A-0	A-30
Machinery space and main galleys	(12)	A-60	A-60	A-60	A-60	A-0	A-60	A-60	A-60	A-0	A-0	A-30	A-30a	A-0	A-60
Store-rooms, workshops, pantries, etc.	(13)	A-60	A-30	A-15	A-60	A-0	A-15	A-30	A-30	A-0	A-0	A-0	A-0	A-0	A-0
Other spaces in which flammable liquids are stowed	(14)	A-60	A-60	A-60	A-60	A-0	A-30	A-60	A-60	A-0	A-0	A-0	A-0	A-0	A-0

Notes: To be applied to tables 9.1 and 9.2, as appropriate.

g Where adjacent spaces are in the same numerical category and superscript "a" appears, a bulkhead or deck between such spaces need not be fitted if deemed unnecessary by the Administration. For example, in category (12) a bulkhead need not be required between a galley and its annexed pantries provided the pantry bulkhead and decks maintain the integrity of the galley boundaries. A bulkhead is, however, required between a galley and machinery space even though both spaces are in category (12).

b The ship's side, to the waterline in the lightest seagoing condition, superstructure and deckhouse sides situated below and adjacent to liferafts and evacuation slides may be reduced to "A-30".

g Where public toilets are installed completely within the stairway enclosure, the public toilet bulkhead within the stairway enclosure can be of "B" class integrity.

d Where spaces of categories (6), (7), (8) and (9) are located completely within the outer perimeter of the assembly station, the bulkheads of these spaces are allowed to be of "B-0" class integrity. Control positions for audio, video and light installations may be considered as part of the assembly station.

(1) Control stations

Spaces containing emergency sources of power and lighting, the ship's radio equipment, centralized fire alarm equipment, centralized emergency public address system stations and equipment, Wheelhouse and chartroom, Fire control stations, Control room for propulsion machinery when located outside the propulsion machinery space.

(2) Stairways

Interior stairways, lifts, totally enclosed emergency escape trunks, and escalators (other than those wholly contained within the machinery spaces) for passengers and crew and enclosures thereto. In this connection, a stairway which is enclosed at only one level shall be regarded as part of the space from which it is not separated by a fire door.

(3) Corridors

Passenger and crew corridors and lobbies

(4) Evacuation stations and external escape routes

Survival craft stowage area, Open deck spaces and enclosed promenades forming lifeboat and liferaft embarkation and lowering stations, Assembly stations, internal and external. External stairs and open decks used for escape routes. The ship's side to the waterline in the lightest seagoing condition, superstructure and deckhouse sides situated below and adjacent to the liferaft and evacuation slide embarkation areas

(5) Open deck spaces

Open deck spaces and enclosed promenades clear of lifeboat and liferaft embarkation and lowering stations. To be considered in this category, enclosed promenades shall have no significant fire risk, meaning that furnishings shall be restricted to deck furniture. In addition, such spaces shall be naturally ventilated by permanent openings. Air spaces (the space outside superstructures and deckhouses).

(6) Accommodation spaces of minor fire risk

Cabins, offices and dispensaries containing furniture and furnishings of restricted fire risk, Public spaces containing furniture and furnishings of restricted fire risk and having a deck area of less than 50 m².

(7) Accommodation spaces of moderate fire risk

Spaces as in category (6) above but containing furniture and furnishings of other than restricted fire risk, Public spaces containing furniture and furnishings of restricted fire risk and having a deck area of 50 m² or more, Isolated lockers and small store-rooms in accommodation spaces having areas less than 4 m² (in which flammable liquids are not stowed), Motion picture projection and film stowage rooms, Diet kitchens (containing no open flame), Cleaning gear lockers and Laboratories (in which flammable liquids are not stowed), Pharmacies, Small drying rooms (having a deck area of 4 m² or less), Specie rooms and Operating rooms.

(8) Accommodation spaces of greater fire risk

Public spaces containing furniture and furnishings of other than restricted fire risk and having a deck area of 50 m² or more, sale shops, Barber and beauty parlors, saunas

(9) Sanitary and similar spaces

Communal sanitary facilities, showers, baths, water closets, etc., Small laundry rooms, Indoor swimming pool area, Isolated pantries containing no cooking appliances in accommodation spaces, Private sanitary facilities shall be considered a portion of the space in which they are located.

(10) Tanks, voids and auxiliary machinery spaces having little or no fire risk.

Water tanks forming part of the ship's structure, Voids and cofferdams, Auxiliary machinery spaces which do not contain machinery having a pressure lubrication system and where storage of combustibles is prohibited, such as: ventilation and air-conditioning rooms; windlass room; steering gear room; stabilizer equipment room; electrical propulsion motor room; rooms

containing section switchboards and purely electrical equipment other than oil-filled electrical transformers (above 10 kVA); shaft alleys and pipe tunnels; and spaces for pumps and refrigeration machinery (not handling or using flammable liquids). Closed trunks serving the spaces listed above, Other closed trunks such as pipe and cable trunks.

(11) Auxiliary machinery spaces, cargo spaces, cargo and other oil tanks and other similar spaces of moderate fire risk

Cargo oil tanks. Cargo holds, trunkways and hatchways. Refrigerated chambers. Oil fuel tanks (where installed in a separate space with no machinery). Shaft alleys and pipe tunnels allowing storage of combustibles. Auxiliary machinery spaces as in category (10) which contain machinery having a pressure lubrication system or where storage of combustibles is permitted. Oil fuel filling stations. Spaces containing oil-filled electrical transformers (above 10 kVA). Spaces containing turbine and reciprocating steam engine driven auxiliary generators and small internal combustion engines of power output up to 110 kW driving generators, sprinkler, drencher or fire pumps, bilge pumps, etc. Closed trunks serving the spaces listed above.

(12) Machinery spaces and main galleys

Main propulsion machinery rooms (other than electric propulsion motor rooms) and boiler rooms. Auxiliary machinery spaces other than those in categories (10) and (11) which contain internal combustion machinery or other oil-burning, heating or pumping units. Main galleys and annexes Trunks and casings to the spaces listed above.

(13) Store-rooms, workshops, pantries, etc.

Main pantries not annexed to galleys. Main laundry. Large drying rooms (having a deck area of more than 4 m2). Miscellaneous stores. Mail and baggage rooms. Garbage rooms. Workshops (not part of machinery spaces, galleys, etc.). Lockers and store-rooms having areas greater than 4 m2, other than those spaces that have provisions for the storage of flammable liquids.

(14) Other spaces in which flammable liquids are stowed

Paint lockers. Store-rooms containing flammable liquids (including dyes, medicines, etc.). Laboratories (in which flammable liquids are stowed)

Conversions:

Temperature: Fahrenheit = Celsius ($^{\circ}\text{F} = 9/5 (^{\circ}\text{C} + 32) / ^{\circ}\text{C} = 5/9 (^{\circ}\text{F} - 32)$)					
0	=	-17.8	80	=	26.7
200	=	93.3	90	=	32.2
32	=	0	100	=	37.8
40	=	4.4	110	=	43.3
50	=	10.0	120	=	48.9
60	=	15.6	150	=	65.6
70	=	21.1	200	=	93.3
250	=	121.1	300	=	148.9
400	=	204.4	500	=	260
600	=	315.6	1000	=	537.8
Pressure: Bars to PSI (1 bar = 14.5037738 pounds per square inch)					
1 Bar	=	14.5 psi	5 Bars	=	72.5 psi
2 bars	=	29.0 psi	6 Bars	=	87.0 psi
3 Bars	=	43.5 psi	7 Bars	=	101.5 psi
4 Bars	=	58.0 psi	8 Bars	=	116.0 psi
			9 Bars	=	130.5 psi
			10 Bars	=	145.0 psi

