

Cruise Ship NCOE Recommended Practice



RP-05: Best Practice for Documenting Fire Door Deficiencies

Revision Date: July 31, 2024

References:

74 SOLAS 20 II-2/9.4.1.1.1

“Openings shall be provided with permanently attached means of closing which shall be at least as effective for resisting fires as the divisions in which they are fitted.”

74 SOLAS 20 II-2/9.4.1.1.2

“The construction of doors and door frames in “A” class divisions, with the means of securing them when closed, shall provide resistance to fire as well as to the passage of smoke and flame equivalent to that of the bulkheads in which the doors are situated.”

74 SOLAS 20 II-2/9.4.1.1.5

“Fire doors in main vertical zone bulkheads, galley boundaries and stairway enclosures other than power-operated watertight doors and those which are normally locked shall satisfy the following requirements...”

74 SOLAS 20 II-2/9.4.1.2.1

“Doors and door frames in “B” class divisions and means of securing them shall provide a method of closure which shall have resistance to fire equivalent to that of the division.”

74 SOLAS 20 II-2/9.4.1.2.2

“Cabin doors in “B” class divisions shall be of self-closing type. Hold-back hooks are not permitted.”

Discussion: Fire door noncompliance is the most common finding of PSCOs during COC examinations. There is a variety of failure modes of fire doors, and PSCOs often list multiple doors under one deficiency, which is an effective way to streamline documentation of deficiencies on the Form B. However, it is not appropriate to list multiple failure modes in the same deficiency. This Recommended Practice is published to highlight noncompliance of fire doors in different divisions of the vessel. The relevant statutory cites are listed above for new ships, but the requirements are similar under II-2/30 for ships subject to SOLAS 2001 Consolidated Edition.

Best Practice for Documenting Fire Door Deficiencies in MVZ, Galley & Stairway Boundaries:

The 15 prescriptive requirements listed in regulation 9.4.1.1.5 (i.e., closure time, door indicator, remote closure alarm) apply only to doors in main vertical zone bulkheads, galley boundaries, and stairway enclosures. It is important to note the division type when recording a noncompliant door. Fire doors in other types of divisions do not necessarily need to be self-closing nor meet any of the other 9.4.1.1.5 requirements. The proper way to document noncompliance for this item is as follows:

Vessel System: 07 – Fire Safety

Vessel SubSystem: N/A – No Subsystem

Vessel Component: 07105 – Fire doors/opening in fire-resisting divisions

Deficiency Cite: 74 SOLAS 20 II-2/9.4.1.1.5

Example:

No.	Code	Description	Cite (<i>Convention</i>)
1	07105	Fire doors in main vertical zone bulkheads, galley boundaries and stairway enclosures shall be self-closing and be capable of closing with an angle of inclination of up to 3.5° opposing closure. PSCO observed the following doors do not latch fully closed: 2.4.01, 5.5.02.	74 SOLAS 20 II-2/9.4.1.1.5.1

No.	Code	Description	Cite (<i>Convention</i>)
2	07105	Fire doors in main vertical zone bulkheads, galley boundaries and stairway enclosures shall have an approximate closure time of no more than 40 s and no less than 10 s from the beginning of their movement. PSCO observed the following: stairway fire door 08-4-28 closed in 4 s; galley fire door 04-5-33 closed in 6 s; galley fire door 04-5-36 closed in 6 s.	74 SOLAS 01 II-2/30.4.2

No.	Code	Description	Cite (<i>Convention</i>)
3	07105	Fire doors in main vertical zone bulkheads, galley boundaries and stairway enclosures that are double-leaf doors equipped with a latch necessary to their fire integrity shall have a latch that is automatically activated by the operation of the doors when released by the system. PSCO observed double-leaf door 5.08.12 in stairway enclosure not close in sequence, preventing the door from closing completely.	74 SOLAS 20 II-2/9.4.1.1.5.12

No.	Code	Description	Cite (<i>Convention</i>)
4	07105	Fire doors in main vertical zone bulkheads, galley boundaries and stairway enclosures shall be capable of remote release from the continuously manned central control station, either simultaneously or in groups, and shall be capable of release also individually from a position at both sides of the door. PSCO observed galley roller shutter fire door 18.7.01 would not close upon activation of local release mechanism.	74 SOLAS 20 II-2/9.4.1.1.5.3

Best Practice for Documenting Other Fire Doors That Do Not Latch Closed: PSCOs may also encounter openings in fire boundaries that are not main vertical zone bulkheads, galley boundaries and stairway enclosures. While these doors are not required to be self-closing, they must still have a means of closing that is as secure as the fire division in which they are fitted. A common observation is when the latch bolt on the door does not secure into the strike plate on the door frame, or the door is blocked by an object and cannot be closed. Remember, if the door is not required to be self-closing by SOLAS, then the crew may push the door closed to ensure the latch bolt is secured in the strike plate. Cabin doors are required to be self-closing, and hold-backs (i.e., ropes, wedges, other stoppers) are not permitted. Consideration should be given by the PSCO when crew are actively working in the doorway or the space being served by the door. The proper way to document noncompliance for this item is as follows:

Vessel System: 07 – Fire Safety

Vessel SubSystem: N/A – No Subsystem

Vessel Component: 07105 – Fire doors/opening in fire-resisting divisions

Deficiency Cite: 74 SOLAS 20 II-2/9.4.1.1.1

Examples:

No.	Code	Description	Cite (<i>Convention</i>)
5	07105	Openings shall be provided with permanently attached means of closing which shall be at least as effective for resisting fires as the divisions in which they are fitted. PSCO observed fire doors A.21 and 3.85 not close and latch completely.	74 SOLAS 20 II-2/9.4.1.1.1

No.	Code	Description	Cite (<i>Convention</i>)
6	07105	Openings shall be provided with permanently attached means of closing which shall be at least as effective for resisting fires as the divisions in which they are fitted. PSCO observed fire doors 4.3.2 and 4.3.5 unable to be closed due to placement of abandoned luggage carts.	74 SOLAS 20 II-2/9.4.1.1.1

No.	Code	Description	Cite (<i>Convention</i>)
7	07105	Doors and door frames in “B” class divisions and means of securing them shall provide a method of closure which shall have resistance to fire equivalent to that of the division. PSCO observed fire doors 2-8-10 and 4-10-12 not close and latch completely.	74 SOLAS 20 II-2/9.4.1.2.1

No.	Code	Description	Cite (<i>Convention</i>)
8	07105	Doors and door frames in “B” class divisions and means of securing them shall provide a method of closure which shall have resistance to fire equivalent to that of the division. PSCO observed fire doors 1-3-15 and 1-5-27 not close and latch completely.	74 SOLAS 01 II-2/31.1.1

No.	Code	Description	Cite (<i>Convention</i>)
9	07105	Cabin doors in “B” class divisions shall be of self-closing type. Hold-back hooks are not permitted. PSCO observed cabin doors 1224, 1226, 1228, and 1230 held open by hold-back wedges and left unattended during the passenger evacuation drill.	74 SOLAS 20 II-2/9.4.1.2.2

Best Practice for Documenting Noncompliant Integrity of Doors or Door Frames: PSCOs may encounter fire doors or door frames that do not provide equivalent fire resistance as the boundary. This may be due to deteriorated condition as a result of mechanical abuse or corrosion. Another condition is the absence of required fittings (i.e., handles, lock cylinders). The proper way to document noncompliance for this item is as follows:

Vessel System: 07 – Fire Safety

Vessel SubSystem: N/A – No Subsystem

Vessel Component: 07105 – Fire doors/opening in fire-resisting divisions

Deficiency Cite: 74 SOLAS 20 II-2/9.4.1.1.2

Examples:

No.	Code	Description	Cite (<i>Convention</i>)
10	07105	The construction of doors and door frames in “A” class divisions, with the means of securing them when closed, shall provide resistance to fire as well as to the passage of smoke and flame equivalent to that of the bulkheads in which the doors are situated. PSCO observed missing key lock cylinder in fire door 1.6.11.	74 SOLAS 20 II-2/9.4.1.1.2

No.	Code	Description	Cite (<i>Convention</i>)
11	07105	The construction of all doors and door frames in “A” class divisions, with the means of securing them when closed, shall provide resistance to fire as well as to the passage of smoke and flame equivalent to that of the bulkheads in which the doors are situated. PSCO observed fire door 04.4.31 damaged and warped, preventing it from closing in the door frame.	74 SOLAS 01 II-2/30.2