

IMO/MSC.1/Circ.677/Rev.1 Newly released revision of the IMO/677 concerning high velocity pressure vacuum valve. April 2025

The revision of the IMO/MSC/circ.677 has been underway for some years now and is the result of the various working groups inside IMO and ISO. This is highly important for all IMO classified tankers and dual fuel prepared vessels. Whether it is EU-flagged vessels or not, this update is now the minimum requirement for all vessels where the IMO/MSC.1/Circ.677/Rev.1 is applicable and mandatory.

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	MSC.1/Circ.677/Rev.1 22 January 2025					
REVISED STANDARDS FOR THE DESIGN, TESTING AND LOCATING OF DEVICES TO PREVENT THE PASSAGE OF FLAME INTO CARGO TANKS IN TANKERS						
1 The Committee, at its forty-ninth session (so developed, which were attached to MSC/Circ.37	2 to 6 April 1984), adopted the standards 3.					
2 The Committee agreed that the inert gas system was to be considered as equivalent to devices to prevent the passage of flame into cargo tanks only if vent outlets on ships fitted with inert gas systems were at least fitted with devices to prevent the passage of flame into cargo tanks, but that these devices need not comply with the test requirement for endurance burning. The Committee noted that, in the standards, emphasis was laid on compliance with test specifications rather than on construction. It was then understood that, in the case of a tanker fitted with an inert gas system, the provision of flashback would suffice and a well-designed and fitted flame screen could meet this criterion. In summary, if a flame screen met the standards, it would be accepted.						
3 The Committee, at its fifty-fifth session (11 the standards contained in MSC/Circ.373 and disse	to 22 April 1988), adopted amendments to minated them as MSC/Circ.373/Rev.1.					
4 The Committee, at its sixty-fourth session (5 to 9 December 1994), recognizing the necessity to clarify some provisions in the revised standards, adopted further amendments thereto, which are incorporated in the <i>Revised standards for the design, testing and locating</i> of devices to prevent the passage of flame into cargo tanks in tankers (MSC/Circ.677).						
5 The Committee, at its 109th session (2 t amendments made to the Revised standards (1 MSC.1/Circ.1324, and having noted a need to re approved <i>Revised standards for the design, testin</i> <i>passage of flame into cargo tanks in tankers</i> for circ	to 6 December 2024), recalling previous MSC/Circ.677) by MSC.1/Circ.1009 and vise an ISO standard reference therein, og and locating of devices to prevent the culation as MSC.1/Circ.677/Rev.1.					
6 Member Governments are invited to give ef with the application of SOLAS regulation II-2/4.5.3.	fect to the revised standards in conjunction					
7 This circular applies to the devices installed	d on or after 4 December 2026.					
8 The present circular supersedes MSC/Circ.677, as amended by MSC.1/Circ.1009 and MSC.1/Circ.1324, as of 4 December 2026.						

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We have the following comments which will have a direct impact in the way valves, flame arresters and detonation arresters are defined in the specification for ships; where the device is to be installed on December 4th, 2026, and later.

This means that the Yards should include this in the specification, already now.

The changes/updates are:

- ISO15364:2021 All high velocity pressure vacuum valves shall be defined in the type-approval certificate with the actual setting at which they intend to install the valve on each project. Which means that valves need to be tested for each setting and approved by the authorities.
- According to ISO15364:2021 the leakage in appendix J is now formative, meaning that the leakage of the valves installed should be less than the allowable leakage shown in the table in appendix J. The result of the leakage test shall be visible on the FAT delivered with the valves.
- 3. High velocity pressure vacuum valves shall be fire/flame and flash back tested on the actual length on which they are intended to be installed according to the ISO16852:2016 referred to in ISO15364:2021.

All high velocity pressure vacuum valves to be installed on a vessel smaller than 18kdwt, shall in addition be endurance burn tested.

On the type-approval certificate, the following in connection with this update should be visible:

- 1. ISO15364:2021.
- 2. ISO16852:2016.
- 3. The actual setting for the specific project.
- 4. The MESG value applicable for the specific project.
- 5. Break off ICE thickness.
- 6. Minimum pipe diameter for each size.
- 7. Max pipe length allowable.



Example of data required on the type approval certificate:

Model	Opening	Outlet	Minimum pipe	Maximum pipe	Explosion	Max. ice cap
	setting	diameter	diam., D in mm	length, L	group IIB	thickness, T

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