

# SC Secondary Means of Venting Cargo Tanks

## 140

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### Reg. II-2/4.5.3.2.2

Where the arrangements are combined with other cargo tanks, either stop valves or other acceptable means shall be provided to isolate each cargo tank. Where stop valves are fitted, they shall be provided with locking arrangements which shall be under the control of the responsible ship's officer. There shall be a clear visual indication of the operational status of the valves or other acceptable means. Where tanks have been isolated, it shall be ensured that relevant isolating valves are opened before cargo loading or ballasting or discharging of those tanks is commenced. Any isolation must continue to permit the flow caused by thermal variations in a cargo tank in accordance with regulation 11.6.1.1.

### Reg. II-2/11.6.3.2 Secondary means for pressure/vacuum relief

A secondary means of allowing full flow relief of vapour, air or inert gas mixtures to prevent over-pressure or under-pressure in the event of failure of the arrangements in paragraph 6.1.2. Alternatively, pressure sensors may be fitted in each tank protected by the arrangement required in paragraph 6.1.2, with a monitoring system in the ship's cargo control room or the position from which cargo operations are normally carried out. Such monitoring equipment shall also provide an alarm facility which is activated by detection of over-pressure or under-pressure conditions within a tank.

### Interpretation

1. A P/V breaker fitted on the IG main may be utilised as the required secondary means of venting where the cargo is homogenous or for multiple cargoes where the vapours are compatible and do not require isolation.
2. The height requirements of Reg. II-2/4.5.3.4.1 and 11.6.2 and the requirements for devices to prevent the passage of flame of Reg. II-2/4.5.3.3 are not applicable to the P/V breaker provided the settings are above those of the venting arrangements required by Reg. II-2/11.6.1.
3. Where the venting arrangements are of the free flow type and the masthead isolation valve is closed for the unloading condition, the IG systems will serve as the primary under-pressure protection with the P/V breaker serving as the secondary means.

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### Notes:

1. This UI is to be uniformly implemented by IACS Societies on ships contracted for construction on or after 1 July 2013.
2. The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contract for construction", refer to IACS Procedural Requirement (PR) No. 29.

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4. Inadvertent closure or mechanical failure of the isolation valves required by SOLAS Reg. II-2/4.5.3.2.2 and the FSS Code, Ch. 15, 2.3.2.2 need not be considered in establishing the secondary means where the cargo is homogenous or for multiple cargoes where the vapours are compatible and do not require isolation since:

a) The valves are operated under the control of the responsible ship's officer and a clear visual indication of the operational status of the valves is required by SOLAS Reg. II-2/4.5.3.2.2, as amended, and

b) The possibility of mechanical failure of the valves is remote due to their simplicity.

5. For ships that apply pressure sensors in each tank as an alternative secondary means of venting as per SOLAS Reg. II-2/11.6.3.2, the setting of the over-pressure alarm shall be above the pressure setting of the P/V-valve and the setting of the under-pressure alarm shall be below the vacuum setting of the P/V-valve. The alarm settings are to be within the design pressures of the cargo tanks. The settings are to be fixed and not arranged for blocking or adjustment in operation\*.

\* An exception is permitted for ships that carry different types of cargo and use P/V-valves with different settings, one setting for each type of cargo. The settings may be adjusted to account for the different types of cargo.

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