

**A. Category A Machinery Spaces**

- a. Inert Gas**
  - i. Scrubber Effluent Line <sup>(1)</sup>
  - ii. Main Line
- b. Seawater (See Note 1)**
  - i. Non-essential Systems
- c. Freshwater**
  - i. Non-essential Systems
- d. Sanitary/Drains/Scuppers**
  - i. Sanitary Drains (Internal)
  - ii. Scuppers and Discharges (Overboard) <sup>(1,8)</sup>
- e. Vents/Sounding**
  - i. Water tanks/Dry Spaces
- f. Miscellaneous**
  - i. Service Air (Non-essential)
  - ii. Brine

**B. Other Machinery Spaces**

- a. Inert Gas**
  - i. Scrubber Effluent Line <sup>(1)</sup>
  - ii. Main Line
- b. Seawater (See Note 1)**
  - i. Non-essential Systems
- c. Freshwater**
  - i. Non-essential Systems
- d. Sanitary/Drains/Scuppers**
  - i. Sanitary Drains (Internal)
  - ii. Scuppers and Discharges (Overboard) <sup>(1,8)</sup>
- e. Vents/Sounding**
  - i. Water tanks/Dry Spaces
- f. Miscellaneous**
  - i. Service Air (Non-essential)
  - ii. Brine

**C. Cargo Pump Rooms**

- a. Inert Gas**
  - i. Water Seal Effluent Line <sup>(1)</sup>
- b. Seawater (See Note 1)**
  - i. Non-essential Systems
- c. Freshwater**
  - i. Non-essential Systems
- d. Sanitary/Drains/Scuppers**
  - i. Scuppers and Discharges (Overboard) <sup>(1,8)</sup>
- e. Vents/Sounding**
  - i. Water tanks/Dry Spaces
- f. Miscellaneous**
  - i. Service Air (Non-essential)
  - ii. Auxiliary Low Pressure Steam (Pressure  $\leq$  7Bar) <sup>(9)</sup>

**D. Ro-Ro Cargo Holds**

- a. Seawater (See Note 1)**
  - i. Non-essential Systems
- b. Freshwater**
  - i. Condensate Return
  - ii. Non-essential Systems
- c. Sanitary/Drains/Scuppers**
  - i. Sanitary Drains (Internal)
  - ii. Scuppers and Discharges (Overboard) <sup>(1,8)</sup>
- d. Vents/Sounding**
  - i. Water tanks/Dry Spaces
- e. Miscellaneous**
  - i. Service Air (Non-essential)
  - ii. Brine
  - iii. Auxiliary Low Pressure Steam (Pressure  $\leq$  7Bar) <sup>(9)</sup>

**E. Other Dry Cargo Holds**

- a. Seawater (See Note 1)**
  - i. Non-essential Systems
- b. Freshwater**
  - i. Condensate Return
  - ii. Non-essential Systems
- c. Sanitary/Drains/Scuppers**
  - i. Deck Drains (Internal)
  - ii. Sanitary Drains (Internal)
  - iii. Scuppers and Discharges (Overboard) <sup>(1,8)</sup>
- d. Vents/Sounding**
  - i. Water tanks/Dry Spaces
- e. Miscellaneous**
  - i. Service Air (Non-essential)
  - ii. Brine
  - iii. Auxiliary Low Pressure Steam (Pressure  $\leq$  7Bar) <sup>(9)</sup>

**F. Cargo Tanks**

- a. Cargo (Flammable Cargoes With Flash Point  $\leq$  60°C)**
  - i. Cargo Lines
  - ii. Crude Oil Washing Lines
  - iii. Vent Lines
- b. Inert Gas**
  - i. Water Seal Effluent Line <sup>(1)</sup>
  - ii. Distribution Lines
- c. Flammable Liquids (Flash Point  $>$  60°C)**
  - i. Hydraulic Oil
- d. Seawater (See Note 1)**
  - i. Ballast <sup>(10)</sup>
  - ii. Tank Cleaning Services, Fixed Machines
- e. Sanitary/Drains/Scuppers**
  - i. Scuppers and Discharges (Overboard)

- f. Vents/Sounding**
  - i. Water tanks/Dry Spaces <sup>(10)</sup>
- g. Miscellaneous**
  - i. Auxiliary Low Pressure Steam (Pressure  $\leq$  7Bar)

#### **G. Fuel Oil Tanks**

- a. Inert Gas**
  - i. Water Seal Effluent Line <sup>(1)</sup>
- b. Flammable Liquids (Flash Point > 60°C)**
  - i. Cargo Lines
  - ii. Fuel Oil
  - iii. Hydraulic Oil
- c. Seawater (See Note 1)**
  - i. Bilge Main and Branches
  - ii. Ballast
  - iii. Non-essential Systems
- d. Freshwater**
  - i. Cooling Water, Essential Services
  - ii. Non-essential Systems
- e. Sanitary/Drains/Scuppers**
  - i. Deck Drains (Internal)
  - ii. Sanitary Drains (Internal)
  - iii. Scuppers and Discharges (Overboard)
- f. Vents/Sounding**
  - i. Water tanks/Dry Spaces
  - ii. Oil Tanks (Flashpoint > 60°C)
- g. Miscellaneous**
  - i. Control Air
  - ii. Service Air (Non-essential)
  - iii. Auxiliary Low Pressure Steam (Pressure  $\leq$  7Bar)

#### **H. Ballast Water Tanks**

- a. Cargo (Flammable Cargoes With Flash Point  $\leq$  60°C)**
  - i. Cargo Lines <sup>(10)</sup>
  - ii. Crude Oil Washing Lines <sup>(10)</sup>
  - iii. Vent Lines <sup>(10)</sup>
- b. Inert Gas**
  - i. Water Seal Effluent Line <sup>(1)</sup>
  - ii. Scrubber Effluent Line <sup>(1)</sup>
- c. Flammable Liquids (Flash Point > 60°C)**
  - i. Cargo Lines <sup>(10)</sup>
  - ii. Fuel Oil
  - iii. Hydraulic Oil
- d. Seawater (See Note 1)**
  - i. Bilge Main and Branches
  - ii. Fire Main and Water Spray
  - iii. Sprinkler System
  - iv. Ballast

- v. Cooling Water, Essential Services
- vi. Tank Cleaning Services, Fixed Machines
- vii. Non-essential Systems
- e. Freshwater**
  - i. Cooling Water, Essential Services
  - ii. Non-essential Systems
- f. Sanitary/Drains/Scuppers**
  - i. Deck Drains (Internal)
  - ii. Sanitary Drains (Internal)
  - iii. Scuppers and Discharges (Overboard)
- g. Vents/Sounding**
  - i. Water tanks/Dry Spaces
  - ii. Oil Tanks (Flashpoint > 60°C) <sup>(10)</sup>
- h. Miscellaneous**
  - i. Control Air
  - ii. Service Air (Non-essential)
  - iii. Auxiliary Low Pressure Steam (Pressure ≤ 7Bar)
- I. Cofferdams, Void Spaces, Pipe Tunnels and Ducts**
  - a. Cargo (Flammable Cargoes With Flash Point ≤ 60°C)**
    - i. Cargo Lines
    - ii. Crude Oil Washing Lines
    - iii. Vent Lines
  - b. Inert Gas**
    - i. Water Seal Effluent Line <sup>(1)</sup>
    - ii. Scrubber Effluent Line <sup>(1)</sup>
    - iii. Main Line
    - iv. Distribution Lines
  - c. Flammable Liquids (Flash Point > 60°C)**
    - i. Cargo Lines
    - ii. Fuel Oil
    - iii. Lubricating Oil
    - iv. Hydraulic Oil
  - d. Seawater (See Note 1)**
    - i. Bilge Main and Branches
    - ii. Fire Main and Water Spray
    - iii. Foam System
    - iv. Sprinkler System
    - v. Ballast
    - vi. Cooling Water, Essential Services
    - vii. Tank Cleaning Services, Fixed Machines
    - viii. Non-essential Systems
  - e. Freshwater**
    - i. Cooling Water, Essential Services
    - ii. Condensate Return
    - iii. Non-essential Systems
  - f. Sanitary/Drains/Scuppers**

- i. Deck Drains (Internal)
- ii. Sanitary Drains (Internal)
- iii. Scuppers and Discharges (Overboard)

**g. Vents/Sounding**

- i. Water tanks/Dry Spaces
- ii. Oil Tanks (Flashpoint > 60°C)

**h. Miscellaneous**

- i. Control Air
- ii. Service Air (Non-essential)
- iii. Brine
- iv. Auxiliary Low Pressure Steam (Pressure  $\leq$  7Bar)

**J. Accommodation, Service and Control Spaces**

**a. Seawater (See Note 1)**

- i. Non-essential Systems

**b. Freshwater**

- i. Condensate Return
- ii. Non-essential Systems

**c. Sanitary/Drains/Scuppers**

- i. Deck Drains (Internal)
- ii. Sanitary Drains (Internal)
- iii. Scuppers and Discharges (Overboard) <sup>(1,8)</sup>

**d. Vents/Sounding**

- i. Water tanks/Dry Spaces

**e. Miscellaneous**

- i. Service Air (Non-essential)
- ii. Brine
- iii. Auxiliary Low Pressure Steam (Pressure  $\leq$  7Bar) <sup>(9)</sup>

**K. Open Decks**

**a. Inert Gas**

- i. Water Seal Effluent Line <sup>(1)</sup>
- ii. Scrubber Effluent Line <sup>(1)</sup>

**b. Seawater (See Note 1)**

- i. Non-essential Systems

**c. Freshwater**

- i. Condensate Return
- ii. Non-essential Systems

**d. Sanitary/Drains/Scuppers**

- i. Deck Drains (Internal)
- ii. Sanitary Drains (Internal)
- iii. Scuppers and Discharges (Overboard)

**e. Vents/Sounding**

- i. Water tanks/Dry Spaces

**f. Miscellaneous**

- i. Service Air (Non-essential)
- ii. Brine
- iii. Auxiliary Low Pressure Steam (Pressure  $\leq$  7Bar)

## Abbreviations

X Metallic materials having a melting point greater than 925°C.

## Notes

- 1) Where non-metallic piping is used, remotely controlled valves are to be provided at the vessel's side. These valves are to be controlled from outside the space.
- 8) Scuppers serving open decks in positions 1 and 2, as defined in Regulation 13 of the International Convention on Load Lines, 1966, are to be "X" throughout unless fitted at the upper end with the means of closing capable of being operated from a position above the freeboard deck in order to prevent downflooding.
- 9) For essential services, such as fuel oil tank heating and ship's whistle, only metallic material having a melting point greater than 925°C are to be used.
- 10) For tankers where compliance with paragraph 3(f) of Regulation 13F of Annex I of MARPOL 73/78 is required, the material is NA.