

BUREAU OF INDIAN STANDARDS

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DRAFT AMENDMENT NO. 1

TO

IS 17773 : 2022

**CLOSED-CIRCUIT AMMONIA REFRIGERATION SYSTEM — CODE OF PRACTICE
FOR DESIGN AND INSTALLATION**

ICS 71.060; 13.300; 27.200

Refrigeration and Air Conditioning
Sectional Committee, MED 03

Last date for comments
is **19 October 2024**

(Page 2, clause 3, first para) — Substitute ‘IS 3615’ for ‘IS 3315’.

(Page 2, clause 3.8) — Substitute the following for the existing:

‘3.8 Air Duct — A tube or conduit either fabricated or rigid for conveying air.’

(Page 3, clause 3.10) — Add the following after the existing clause and renumber the subsequent clauses:

‘3.11 Acute Exposure Guideline Levels (AEGLs) — AEGL set levels of ammonia concentration that pose a defined level of risk to humans (the general population, including susceptible individuals). The AEGL values are determined for varying times of exposure, such as ten minutes, thirty minutes, one hour, four hours and eight hours.’

(Page 4, clause 3.47) — Substitute the following for the existing:

‘3.47 Downstream Pressure Regulator — A control valve which regulates the flow of oil or refrigerant gas or liquid through the device which is actuated towards open position by a pressure falling below or rising towards set point, downstream of the valve.’

(Page 5, clause 3.71) — Substitute the following for the existing:

‘3.71 Indirect Systems — A system in which a secondary coolant that is cooled or heated by the refrigeration system and through it heat is exchanged to the air or other substance to be cooled or heated.’

(Page 5, clause 3.75) — Substitute the following for the existing:

‘3.75 Inside Dimension — Inside diameter, width, height or cross-sectional diagonal and length.’

(Page 6, clause **3.94**) — Substitute the following for the existing:

‘3.94 Over Feed Systems (Pumps Excess Liquid in the Evaporators) — It is the quantity of refrigerant supplied to evaporators greater than the minimum amount required to meet the cooling loads. The mixture of low temperature liquid and vapour leaves the evaporator and returns to a vessel designed to separate the liquid from vapour prior to vapour being compressed and the excess unevaporated liquid again returns to evaporators.’

(Page 6, clause **3.102**) — Substitute the following for the existing:

‘3.102 Design Pressure — Pressure chosen for the strength calculation of each component. It is applied for the selection of the necessary materials, thickness and construction for components with regard to their ability to withstand pressure.’

(Page 6, clause **3.109**) — Substitute ‘decreasing’ for ‘decrease’.

(Page 8, clause **3.147**) — Delete.

(Page 11, clause **5.2.6, first para**) — Substitute the following for the existing:

‘Refrigeration equipment shall be designed for a vacuum of at least 98 kPa (737 mm of mercury).’

(Page 13, clause **5.3.2.2, first sentence**) — Substitute the following for the existing:

‘Other metallic materials, such as stainless steel, aluminum, aluminum alloys, lead, tin, and lead-tin alloys may be used if they conform to **5.3.1**.’

(Page 21, clause **6.7.1, NOTES 1**) — Substitute the following for the existing:

‘Additional eyewash and body showers may be needed in a machinery room to ensure that no equipment which contains ammonia inside that machinery room is more than 16.8 m to an eyewash/safety shower unit.’

(Page 21, clause **6.10.3**) — Substitute the following for the existing:

‘6.10.3 The machinery room shall have minimum two doors those are diagonally opposite that opens directly to the outside, or to a vestibule that leads directly to the outside. The door(s) shall be self-closing, tight-fitting. Minimum size of each door shall be 1.8 m width × 2.1 m height.’

(Page 28, clause **8.5.7, first and second line**) — Substitute ‘When a variable frequency drive (VFD) is provided for the compressor’ for ‘When a variable frequency drive (VFD) is installed on a compressor’.

(Page 28, clause **8.5.11**) — Add the following note at the end of the existing:

‘NOTE — Additional safety requirements may be provided by the manufacturer in addition to the above, (a) to (d).’