

CHAPTER XIX
REFRIGERATION
SECTION 1901—SCOPE AND PURPOSE

1901.1—SCOPE

The application of this Chapter of the Code is intended to assure the safe design, construction, installation, operation, and inspection of every REFRIGERATING SYSTEM employing a fluid which normally is vaporized and liquefied in its refrigerating cycle, when employed under the occupancy classifications listed in Section 1903. The provisions of this Chapter of the Code are not intended to apply to the use of water or air as a REFRIGERANT, nor to gas bulk storage tanks that are not permanently connected to a REFRIGERATION SYSTEM, nor to REFRIGERATING SYSTEMS installed on railroad cars, motor vehicles, motor drawn vehicles or on shipboard. (For shipboard installations see ANSI-B59.1)

1901.2—PURPOSE

This Chapter of the Code is intended to establish reasonable safeguards to life, limb, health, and property; to define certain practices which are inconsistent with safety; and to prescribe standards of safety which will properly influence future progress and developments in REFRIGERATING SYSTEMS.

1901.3—APPLICATION

This chapter of the Code SHALL apply to REFRIGERATING SYSTEMS installed subsequent to its adoption and to parts replaced or added to systems installed prior to or subsequent to its adoption. In cases of practical difficulty or unnecessary hardship, the authority having jurisdiction may grant exceptions from the literal requirements of this Code or permit the use of other devices or methods, but only when it is clearly evident that equivalent protection is thereby secured.

Equipment listed by AN APPROVED NATIONALLY RECOGNIZED TESTING LABORATORY is deemed to meet the design, manufacture, and factory test requirements of this Chapter of the Code or equivalent, for the REFRIGERANT or REFRIGERANTS for which such equipment is designed. Listed REFRIGERATING SYSTEMS are not required to be field tested to comply with this Code.

SECTION 1902—DEFINITIONS

1902.1

ABSORBER (ADSORBER) is that part of the LOW SIDE of an ABSORPTION SYSTEM used for absorbing (adsorbing) vapor REFRIGERANT.

1902.2

ABSORPTION (ADSORPTION) SYSTEM is a REFRIGERATING SYSTEM in which the gas evolved in the EVAPORATOR is taken up by an ABSORBER (ADSORBER).

1902.6

BRINE is any liquid, used for the transmission of heat without a change in its state, having no flash point or a flash point above 150 F. determined by American Society for Testing and Materials method D93.

1902.7

COMPANION OR BLOCK VALVES are pairs of mating stop valves, valving off sections of systems and arranged so that these sections may be joined before opening these valves or separated after closing them.

Section 1902

1902.8

COMPRESSOR is a specific machine, with or without accessories, for compressing a given REFRIGERANT vapor.

1902.9

COMPRESSOR UNIT is a CONDENSING UNIT less the CONDENSER and LIQUID RECEIVER.

1902.10

CONDENSER is that part of the system designed to liquefy REFRIGERANT vapor by removal of heat.

1902.11

CONDENSER COIL is a CONDENSER constructed of pipe or tubing other than a shell and tube or shell and coil type.

1902.12

CONDENSING UNIT is a specific refrigerating machine combination for a given REFRIGERANT, consisting of one or more power-driven COMPRESSORS, CONDENSERS, LIQUID RECEIVERS (when required), and the regularly furnished accessories.

1902.13

CONTAINER is a cylinder for the transportation of REFRIGERANT

1902.14

CRITICAL PRESSURE, CRITICAL TEMPERATURE and CRITICAL VOLUME are the terms given to the state points of a substance at which liquid and vapor have identical properties. Above the CRITICAL PRESSURE or CRITICAL TEMPERATURE there is no line of demarcation between liquid and gaseous phases.

1902.16

DESIGN PRESSURE is the maximum allowable working pressure, psig, for which a specific part of a system is designed.

1902.17

DIRECT SYSTEM—See 1904.2

1902.18

DOUBLE DIRECT SYSTEM —see 1904.3

1902.19

DOUBLE INDIRECT VENTED OPEN-SPRAY SYSTEM —See 1904.4.4

1902.20

DUCT is a tube or conduit used for conveying or encasing purposes as specifically defined below:

- a) AIR DUCT is a tube or conduit used for conveying air. (The air passages of SELF-CONTAINED SYSTEMS are not to be construed as AIR DUCTS.)
- b) PIPE DUCT is a tube or conduit used for encasing pipe.
- c) WIRE DUCT is a tube or conduit used for encasing either moving or stationary wire, rope, etc.

1902.22

EVAPORATOR is that part of the system designed to vaporize liquid REFRIGERANT to produce refrigeration.

1902.23

EVAPORATOR COIL is an EVAPORATOR constructed of pipe or tubing other than a shell and tube or shell and coil type.

1902.25

FIELD TEST is a test performed in the field to prove system tightness.