

Chapter ILHR 45

MECHANICAL REFRIGERATION

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Note: Chapter Ind 45 as it existed on September 30, 1983 was repealed and a new chapter ILHR 45 was created effective October 1, 1983.

**ILHR 45.01 Scope.** The provisions of this chapter are intended to provide for 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 s. ILHR 45.15. The provisions of this chapter do not apply to the use of water or air as a refrigerant, nor to gas bulk storage tanks that are not permanently connected to a refrigerating system, nor to refrigerating systems installed on railroad cars, motor vehicles, motor drawn vehicles or on shipboard.

History: Cr. Register, September, 1983, No. 333, eff. 10-1-83.

**ILHR 45.02 Purpose.** This chapter establishes minimum safeguards to life, health and property; defines certain practices which are inconsistent with safety; and prescribes standards of safety which will properly influence future progress and developments in refrigerating systems.

History: Cr. Register, September, 1983, No. 333, eff. 10-1-83.

**ILHR 45.03 Application.** (1) **SYSTEMS COVERED.** This chapter shall apply to refrigerating systems installed after its effective date and to modifications to existing systems.

(2) **LISTED EQUIPMENT.** Equipment listed by an approved nationally recognized testing laboratory is deemed to meet the design, manufacture and factory test requirements of this chapter, for the refrigerant or refrigerants for which such equipment is designed. Listed refrigerating systems are not required to be field tested to comply with s. ILHR 45.24.

History: Cr. Register, September, 1983, No. 333, eff. 10-1-83.

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**ILHR 45.04 Saving and severable clauses.** If, for any reason, any one or more sections, sentences, clauses or parts of this chapter are held invalid, such invalidity shall not affect, impair or invalidate the remaining provisions.

History: Cr. Register, September, 1983, No. 333, eff. 10-1-83.

**ILHR 45.05 Definitions.** For the purpose of this chapter, the following definitions shall apply.

(1) "Absorber or adsorber" means that part of the low side of an absorption system used for absorbing or adsorbing vapor refrigerant.

(2) "Absorption or adsorption system" means a refrigerating system in which the gas evolved in the evaporator is taken up by an absorber or adsorber.

(3) "Approved" means acceptable to the department.

(4) "Approved nationally recognized testing laboratory" means one acceptable to the department, that provides uniform testing and examination procedures and standards for meeting the design, manufacture and factory test requirements of this chapter, is properly organized, equipped and qualified for testing, and has a follow-up inspection service of the current production of the listed products.

(5) "Brazed joint" means a gas-tight joint obtained by the joining of metal parts with alloys which melt at temperatures higher than 800° F., but less than the melting temperatures of the joined parts.

(6) "Brine" means 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.

(7) "Companion or block valves" means 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.

(8) "Compressor" means a specific machine, with or without accessories, for compressing a given refrigerant vapor.

(9) "Compressor unit" means a compressor with its prime mover.

(10) "Condenser" means that part of the system designed to liquefy refrigerant vapor by removal of heat.

(11) "Condenser coil" means a condenser constructed of pipe or tubing other than a shell and tube or shell and coil type.

(12) "Condensing unit" means a specific refrigerating machine combination for a given refrigerant, consisting of one or more power-driven compressors, condensers, liquid receivers, and the regularly furnished accessories.

(13) "Container" means a cylinder for the transportation of refrigerant.

(14) "Critical pressure, critical temperature and critical volume" means the terms given to the state points of a substance at which liquid and vapor have identical properties. Above the critical pressure or criti-

(b) Any system or unit system using a Group 2 or Group 3 refrigerant and having a capacity rated at or greater than 10 horsepower, 10 tons or 10,000 volt-amperes.

(2) FORMS. Registration information shall be submitted on form DILHR SB-34 obtainable from the department.

Note: See Appendix for further information.

(3) SUBMITTAL. The registration form shall be submitted to the department before the system is placed in operation.

Note: The purpose of the registration is so that inspections can be made as specified in s. ILHR 45.08 (2).

(4) CERTIFICATE OF OPERATION. (a) The owner or user of a mechanical refrigeration system which requires periodic inspections under s. ILHR 45.08 (3) shall be responsible to obtain and maintain a valid certificate of operation.

(b) After each periodic inspection a certificate of operation shall be issued by the department upon determination that the system meets the applicable requirements of this chapter.

(c) The certificate of operation shall indicate the maximum allowable working pressure permitted under the requirements of this chapter.

(d) The certificate of operation shall be valid until the next required periodic inspection as specified in s. ILHR 45.08 (3).

(5) REACTIVATION. The owner or user shall notify the department before reactivating a mechanical refrigeration system at any time after the certificate of operation has expired.

History: Cr. Register, September, 1983, No. 333, eff. 10-1-83.

**ILHR 45.08 Inspections.** (1) GENERAL REQUIREMENTS. The authorized inspectors of the department, upon presenting appropriate credentials to the owner, operator or agent in charge, may:

(a) Enter without delay and at reasonable times any factory, plant, establishment, construction site or other area, workplace or environment where work is performed by an employe of an employer; and

(b) Inspect and investigate during regular working hours and at other reasonable times, and within reasonable limits and in a reasonable manner, any place of employment and all pertinent conditions, structures, machines, apparatus, devices, equipment and materials therein, and to question privately any employer, owner, operator, agent or employe.

Note: The department policy is not to give advance notice, but in the scheduling and in the act of inspecting it may not always be possible to avoid advance notice, but otherwise these rules will be diligently observed.

(2) INSTALLATION INSPECTION. (a) Mechanical refrigeration systems which require registration under s. ILHR 45.07 (1) shall be inspected by the department before the system is placed in operation.

(b) Refrigerant piping and welded joints erected on the premises for systems using a Group 2 or Group 3 refrigerant shall be inspected by the department prior to being covered or enclosed.

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(3) **PERIODIC INSPECTIONS.** Any mechanical refrigeration system or unit system using a Group 2 or Group 3 refrigerant and having a capacity rated at or greater than 10 horsepower, 10 tons or 10,000 volt-amperes shall be subject to inspection by the department at least once every 12 months.

History: Cr. Register, September, 1983, No. 333, eff. 10-1-83.

**ILHR 45.09 Implementation of rules.** Failure on the part of a superintendent, foreman, boss, or other person having control of any place of employment, employe or operation, to carry out any rule prescribed in this chapter is violation of the rule by the employer.

History: Cr. Register, September, 1983, No. 333, eff. 10-1-83.

**ILHR 45.10 Fees.** Fees for the registration of mechanical refrigeration systems, certificate of operation, inspections and petitions for modification shall be submitted as specified in ch. Ind 69.

History: Cr. Register, September, 1983, No. 333, eff. 10-1-83.

**ILHR 45.11 Enforcement.** The provisions of this chapter shall be enforced by the department.

History: Cr. Register, September, 1983, No. 333, eff. 10-1-83.

**ILHR 45.12 Appeals.** Any person affected by any local order which is in conflict with a rule of the department may petition the department for a hearing on the grounds that the local order is unreasonable or in conflict with the rule of the department or both.

Note: Section 101.01 (1) (g), Stats., defines "local order" as any ordinance, order, rule or determination of any common council, board of aldermen, board of trustees or the village board, of any village or city, or the board of health of any municipality, or an order or direction of any official of such municipality, upon any matter over which the department has jurisdiction.

History: Cr. Register, September, 1983, No. 333, eff. 10-1-83.

**ILHR 45.13 Petition for variance.** The department shall consider and may grant a variance to an administrative rule upon receipt of a fee and a completed petition for variance form from the owner, provided an equivalency is established in the petition for variance which meets the intent of the rule being petitioned. The department may impose specific conditions in a petition for variance to promote the protection of the health, safety or welfare of the employes or the public. Violation of those conditions under which the petition is granted constitutes a violation of this chapter.

Note: Copies of the petition for variance (form SB-8) are available from the Division of Safety and Buildings, P.O. Box 7969, Madison, Wisconsin 53707.

History: Cr. Register, September, 1983, No. 333, eff. 10-1-83; am. Register, September, 1984, No. 345, eff. 10-1-84.

**ILHR 45.14 Penalties.** Penalties for violation shall be assessed in accordance with s. 101.02, Stats.

Note #1: Section 101.02 (13) (a), Stats., indicates penalties will be assessed against any employer, employe, owner or other person who fails or refuses to perform any duty lawfully enjoined, within the time prescribed by the department, for which no penalty has been specifically provided, or who fails, neglects or refuses to comply with any lawful order made by the department, or any judgment or decree made by any court in connection with ss. 101.01 to 101.25, Stats. For each such violation, failure or refusal, such employe, owner or other person

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