528 CMR 2.00: PURPOSE, SCOPE AND DEFINITIONS

Section

2.01: Purpose and Scope

(1) 528 CMR 2.00 is promulgated pursuant to M.G.L. c. 146, § 82, for the examining and licensing of fire sprinkler contractors, pipefitters, refrigeration technicians and sprinkler fitters.

2.02: Definitions

Pursuant to M.G.L. c. 146, § 81, the following words and terms, when used in 528 CMR shall have the following meanings:

ANSI. American National Standards Institute.

Apprentice Pipefitter. A person who is registered with the Department of Labor Standards and Workforce Development and is learning or working at the business of pipefitting under the direct supervision of a master or journeyman pipefitter.

Apprentice Sprinkler Fitter. Any person other than a fire sprinkler system contractor or a sprinkler fitter who is presently engaged in both learning and assisting in the work being performed on any sprinkler system, and who must be employed by a licensed fire sprinkler contractor and must work under the direct supervision of a fire protection sprinkler contractor or journeyman sprinkler fitter.

Approved School. A refrigeration, pipefitter, or sprinkler fitter course that has been reviewed and approved by the Division to supply requisite classroom course or shop hours to an applicant prior to being admitted for a license examination.

ASHRAE. American Society of Heating, Refrigerating and Air Conditioning Engineers.

ASME. American Society of Mechanical Engineers.

ASTM. American Society for Testing and Materials.

Boiler External Piping (BEP). The terminal points and piping external to power boilers as defined and illustrated in *ANSI/ASME B 31.1 Pressure Piping*. The installation, replacement, or repair of BEP shall be performed by a licensed pipefitter and it shall be the responsibility of the contractor to adhere to and maintain the proper ASME and National Board Code integrity while performing BEP pipefitting work.

Boiler, Heating. A steam boiler for operation at pressures not exceeding 15 psi or a hot water heating boiler or hot water supply boiler for operating at pressures not exceeding 160 psi and/or temperatures not exceeding 250°F at or near the boiler outlet.

Boiler, Power. A boiler in which steam or other vapor is generated at a pressure of more than 15 psig for use external to itself or a high-temperature water boiler intended for operation at pressures exceeding 160 psig and/or temperatures exceeding 250°F.

Bureau. Bureau of Pipefitters, Refrigeration Technicians and Sprinkler Fitters.

Category D Fluid Service. A Fluid Service for Process Piping in which all of the following apply:

(a) the fluid handled is nonflammable, nontoxic, and not damaging to human tissues as defined in *ANSI/ASME B 31.3 Process Piping*;
(b) the design gage pressure does not exceed 150 psi; and
(c) the design temperature is from -20°F through 366°F.

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Category M Fluid Service. A Fluid Service for Process Piping in which the potential for personnel exposure is judged to be significant and in which a single exposure to a very small quantity of a toxic fluid, caused by leakage, can produce serious irreversible harm to persons on breathing or bodily contact, even when prompt restorative measures are taken.

Chief. The Chief of the Office of Public Safety and Inspections within the Division of Occupational Licensure.

Commissioner. The Commissioner of the Division of Occupational Licensure.

DAS. The Division of Apprentice Standards.

Data Report. An ASME report form that documents that all ASME Code requirements have been met.

Department. Department of Public Safety.

Division. Division of Occupational Licensure.

Fabrication. The joining of Piping components into integral pieces ready for assembly, which shall include bending, forming, threading, welding, or other operations upon these components, if not part of assembly. The work defined under 528 CMR 2.00 shall only apply to on-site field production.

Fire Protection Sprinkler System. A fire sprinkler system, for fire protection purposes, the work of the sprinkler fitter and apprentice shall consist of the installation, service, testing, maintenance and inspection of all fire protection and fire control systems, including both overhead and underground water mains, fire hydrants and hydrant mains, standpipes and hose connections to sprinkler systems, sprinkler tank heaters, air lines and thermal systems, hot water fire protection systems, standpipes connected to sprinkler systems and pumps dedicated for fire protection.

Fire Protection Sprinkler System Contractor's License. The license issued by the Division to a fire protection sprinkler system contractor upon his or her application being approved, the fee being paid, and the satisfactory completion of the requirements of 528 CMR 11.04: Sprinkler System Licensing. The license shall be issued in the name of the fire protection sprinkler system contractor and the name of the license holder noted thereon.

Fire Protection Sprinkler Systems Contractor. A person, firm, or organization that offers to undertake the execution of contracts, the preparation of technical drawings, sale, installation, alteration, modification, service, testing, inspection, maintenance, removal and repairing of any such system or any part of such system.

Fluid Service. The combination of fluid properties, operating conditions, and other factors that establish the basis for design of the piping system and requirements for a specific classification of pipefitter license to perform Pipefitting work.

High Pressure Fluid Service. A Fluid Service for which the owner specifies that the design of the Piping systems are per the rules for High Pressure Piping per *ANSI/ASME B 31.3 Process Piping, Chapter IX.*

Installation. The handling, moving or locating of any apparatus, device, equipment or material referring to the pipefitting, refrigeration, or sprinkler fitter industry. This does not mean to refer to the final placement for hook up, but refers to any stage of the handling of said above equipment or material to where the final location may be for the piping of the equipment.

Journeyman Refrigeration Technician. Any person who has completed an apprenticeship training program satisfactory to the Bureau, and who has successfully passed a Refrigeration Technician's examination, and who, by himself or herself, or with other Journeymen Refrigeration Technicians, or with Refrigeration Apprentices does any work in Refrigeration.

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License Holder. An individual who has satisfactorily met the qualifications and has received a license from the Office.

Master Refrigeration Technician/Refrigeration Contractor. A person having a regular place of business, or who by himself or herself, or with other Master Refrigeration Technicians, Journeymen Refrigeration Technicians, or Refrigeration Apprentices in his or her employ, performs Refrigeration work.

NFPA. National Fire Protection Association.

Non-boiler External Piping. Piping covered by *ANSI/ASME B 31.1 Pressure* Piping except for that portion defined as boiler external piping (BEP).

Normal Fluid Service. A fluid service pertaining to most process piping covered by ANSI/ASME B 31.3 not subject to the rules for Category D, Category M, or High Pressure Fluid Service.

Office. The Office of Public Safety and Inspections within the Division of Occupational Licensure.

Pipefitting. The installation, repair, replacement, maintenance or alteration of any apparatus for piping appliances, devices or accessories for heating systems having a rating greater than seven hundred thousand British Thermal Units including apparatus and piping for the general use of conveyance of steam and associated pumping equipment, vacuum and pneumatic systems, oil and petroleum products, ice making machinery, air conditioning equipment, piping systems used for the conveyance and storage of Category M liquids, as defined in *ANSI/ASME B 31.3 Process Piping* and high pressure systems over 150 pound-force per square inch gauge or hazardous industrial type gasses used in processes, biopharma or semi-conductor manufacturing. Pipefitting shall not include sheet metal work, refrigeration systems, and boilers and plumbing as defined under 248 CMR: *Board of State Examiners of Plumbers and Gas Fitters* promulgated under M.G.L. c. 142, §§ 4 and 13.

Pipefitting Welding. Any Pipefitting work performed using any welding or brazing process and which may be done in a shop or in the field. To perform this work, a person must be certified under *ASME Boiler and Pressure Vessel, Section IX.*

Piping. Assemblies of piping components used to convey, distribute, mix, separate, discharge, meter, control, or snub fluid flows. Piping also includes pipe-supporting elements such as hangers, supports, and structural attachments.

Piping Components. Mechanical elements suitable for joining or assembly into pressure-tight fluid-containing piping systems. Components shall include but not be limited to pipe, tubing, fittings, flanges, gaskets, bolting, valves, and devices such as expansion joints, flexible joints, pressure hoses, traps, strainers, inline portions of instruments, and separators.

Power, Heating and Cooling Piping Pipefitting. Steam, condensate or hot water piping, including apparatus, appliances, devices or accessories for piping, when the rated input capacity of the primary or secondary loop of the heating system is greater than 700,000 Btu's per hour within the scope of *ANSI/ASME Pressure Piping, B 31.1 Power Piping, B 31.3 Process Piping, or B 31.9 Building Services*; or secondary coolant piping loops in air conditioning and refrigeration systems having a capacity of ten tons or greater for use in industrial, institutional, commercial and public buildings.

Process Piping. Fluid service piping typically found in petroleum refineries; chemical, pharmaceutical, textile, paper, semiconductor, and cryogenic plants; and related processing plants and terminals. Process piping fluids include raw, intermediate, and finished chemicals; petroleum products; gas, air and water; fluidized solids; and cryogenic fluids.

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Process Piping Pipefitting. Pipefitting as enumerated in M.G.L. c. 146, § 81, including Category M fluid service, High Pressure Fluid Service, Normal Fluid Service, and Category D Fluid Service.

Refrigerant. The fluid used for heat transfer in a refrigerating system.

Refrigeration. The installation, repair, replacement, and/or maintenance of any refrigerant-containing part of any refrigerant system of a ten ton capacity or greater.

Refrigeration Apprentice. Any registered person who is working at the business of refrigeration under the supervision of a master refrigeration technician or journeyman refrigeration technician. Refrigeration Apprentice shall have the same meaning as refrigeration trainee referenced in M.G.L. c. 146, §§ 86 and 88.

Refrigeration System. A combination of interconnected parts forming a closed circuit in which refrigerant is circulated for the purpose of extracting, then rejecting heat.

Registered. A person registered with DAS according to the provisions of St. 1941, c. 707.

Secondary Coolant. Any liquid used for the transmission of heat without a change of state in air conditioning and refrigeration systems, and having no flash point or a flash point above 150°F as determined by ASTM D 93.

Sprinkler Fitter/Journeyman Sprinkler Fitter. Any person who has completed an apprenticeship training program satisfactory to the Bureau and who, by himself or herself, or with other Sprinkler Fitters, performs any work in sprinkler fitting subject to inspection under any law, ordinance, by-law, rule or regulation, but does not employ other Sprinkler Fitters.

Sprinkler Fitting. The, installation, alteration, modification, inspection, testing, maintenance, removal and repairing of any Fire Protection Sprinkler System or any part of such system, excluding visual observation where it does not impair the system.

Ton of Refrigeration. In a refrigeration system, the absorption of heat at a rate of 12,000 BTU per hour.

Verification of Course Hours Documentation. A form completed by the director of an approved refrigeration, pipefitting, or sprinkler fitter school detailing and attesting to an applicant's completion of the requisite classroom course and shop hours.

Work on a Fire Protection Sprinkler System. The on-site layout, on-site fabrication, work and practice concerning the construction, installation, alteration or extension of a fire protection sprinkler system, including the modification, repair, removal and initial acceptance testing and inspection, testing, maintenance and service of a fire protection sprinkler system.

REGULATORY AUTHORITY

528 CMR 2.00: M.G.L. c. 146, §§ 81 and 82.