

CHAPTER 16C

ELECTRICAL HEATING

16C-01 GENERAL

a. Definition

This chapter covers materials, equipment, and good workmanship practices for the installation of electrical heating system.

b. Approvals

Insure that all material, equipment, and shop drawings are approved prior to the Preparatory Inspection meeting and prior to installation of the electrical heating equipment. Obtain any helpful manufacturers installation information.

c. Storage and Handling

(1) Insure that all materials and equipment are handled carefully to prevent damage.

(2) Reject damaged material and equipment. Have it removed from the site.

(3) Check storage facility for adequate weather protection, possible damage, and safety hazard.

(4) When outside storage is necessary, store materials and equipment above ground.

d. Coordination of Work

Continually check for interferences between electrical, mechanical, architectural, and structural features.

e. Layout of Work

(1) The contractor must provide equipment and mechanical room layout drawings, which include location of hot water heater, for review and approval.

(2) Check location of water heater for accessibility for mechanical and electrical, maintenance, and future replacement if necessary.

(3) The contractor must coordinate installation of electric heaters with work of other trades, to avoid obstruction to heating pattern and overheatings of adjacent surfaces. Coordinate changes in heater layout with supervisor.

16C-02 ELECTRIC WATER HEATERS (Project Specifications, Plumbing)

a. Check for the required number of heating elements (Federal Specification).

b. Check to determine that each heating element is controlled by a separate thermostat (Federal Specification).

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c. Check for manual-reset type high-limit cutout. High-limit cutout to open all electrical connects to all heating elements (Federal Specification).

d. Voltage rating of heaters to be in accordance with specification requirements. 240 volt units, if operated on 208V, will only deliver approximately 75% of design heating capacity.

16C-03 ELECTRIC HEATERS

a. Check voltage rating of equipment furnished.

b. Check wattage rating of heater (Project Specification or Design)

c. Check to see whether a high-limit switch is required (Project Specification)

d. Check physical requirements of heater. Embedded elements are usually specified.

e. Heaters for hazardous areas are to bear a tag indicating Underwriters Laboratories approval.

f. A functional test is required on electric heaters.

g. Check thermostats for range of operation, differential, locking facilities, thermometer, and lock-shield requirements (Project Specifications).

16C-04 COORDINATION WITH MECHANICAL WORK FOR ELECTRIC WATER HEATERS

a. Pressure - Temperature Relief Valve

Check to see that relief valve is stamped for the specified pressure and temperature. Check to see that relief valve is correctly positioned and piped to safely discharge. Check to see if relief valve will reset after being manually activated. Relief valves may be separate or combination pressure and relief on equipment used for heating water or storing hot water.

b. Piping and Insulation

See Section 15A for piping and Section 15C for Insulation.