

SECTION 264115

GENERATOR LIGHTNING PROTECTION SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Air terminals and interconnecting conductors.
- B. Grounding and bonding for lightning protection.

1.2 RELATED SECTIONS

- A. Section 26 32 13: Packaged Engine Generator Systems.

1.3 REFERENCES

- A. LPI-175 - Lightning Protection Installation Standard.
- B. LPI-176 - Lightning Protection System Material and Components Standard.
- C. NFPA 780 - Lightning Protection Code.
- D. UL 96 - Lightning Protection Components.
- E. UL 96A - Installation Requirements for Lightning Protection Systems.

1.4 SYSTEM DESCRIPTION

- A. Lightning Protection System: Conductor system protecting generator and tank structure, consisting of air terminals, bonding of structure and other metal objects; grounding electrodes; and interconnecting conductors.

1.5 SUBMITTALS FOR REVIEW

- A. Division 01 - Submittals: Procedures for submittals.
- B. Shop Drawings: Indicate layout of air terminals, grounding electrodes, and bonding connections to structure and other metal objects. Include terminal, electrode, and conductor sizes, and connection and termination details.
- C. Product Data: Provide dimensions and materials of each component and include indication of listing in accordance with UL 96.

1.6 SUBMITTALS FOR INFORMATION

- A. Division 01 - Submittals: Submittals for information.
- B. Manufacturer's Certificate: Certify that Products meet or exceed specified requirements.
- C. Submit installers listing number from Underwriter's Laboratories indicating approval of lightning protection systems design.

1.7 PROJECT CLOSEOUT SUBMITTALS

- A. Record actual locations of air terminals, grounding electrodes, bonding connections, and routing of system conductors in project record documents.
- B. Provide certification letter from UL Listed installer.

1.8 QUALITY ASSURANCE

- A. Perform Work in accordance with NFPA 780.
- B. Perform Work in accordance with UL 96A.
- C. Maintain one copy of each document on site.
- D. Class I materials required for structures 75 feet and less in height. Class II materials for above 75 feet. All connections shall be of bolted cast connection.
- E. Aluminum materials are not embedded in concrete or masonry or installed on copper surfaces. Bare copper materials are not to be installed on aluminum surfaces.

1.9 QUALIFICATIONS

- A. Manufacturer: Company specializing in lightning protection equipment with a minimum of three (3) years' documented experience.
- B. Installer: Authorized UL Listed installer of products with a minimum of three (3) years' documented experience.
- C. Materials shall be listed and labeled in accordance with Underwriter's Laboratories requirements.

1.10 REGULATORY REQUIREMENTS

- A. Product Listing: UL 96.

1.11 FIELD MEASUREMENTS

- A. Verify that field measurements are as indicated on shop drawings.

1.12 COORDINATION

- A. Division 01 - Coordination and Meetings.
- B. Coordinate work with generator installation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. A-C Lightning Security or approved equal.

2.2 COMPONENTS

- A. Air Terminals: Copper, with adhesive bases for roof installations.

- B. Grounding Rods: Solid copper or stainless steel.
- C. Ground Plate: Copper.
- D. Conductors: Copper.
- E. Connectors and Splicers: Bronze.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install in accordance with NFPA 780, UL 96A, and LPI-175.
- B. Connect conductors using mechanical connectors or exothermic welding process. Protect adjacent construction elements and finishes from damage. Provide fasteners at three feet on the center and as necessary to maintain position and hold permanently in place on concealed runs of conductor.
- C. Bond exterior metal bodies on generator housing to lightning protection system. Provide a minimum of one grounding electrode and connect to the electrical system electrodes.

3.2 FIELD QUALITY CONTROL

- A. Obtain the services of a UL Listed lightning protection service to provide inspection of the lightning protection system in accordance with UL 96A.

END OF SECTION