

HEAT TRACING

1. GENERAL

1.1 Scope

- .1 Heat Tape/Trace components, accessories and installation material for a complete operating system.
- .2 Provide heat tape where indicated on Mechanical Drawings and specified herein to prevent frost build-up on bird and insect screens.

1.2 General Requirements

- .1 FM Approved constant wattage cable.
- .2 Heat tracing shall be applied to the following wall louvres :
 - .1 Generator Building: O/A intake of AHU-H222A
 - .2 Generator Building: O/A intake for Generator Building general ventilation located South side of building between grid lines five (5) and six (6).
 - .3 Clearwell Inlet Building: E/A louvre on west side of building.
 - .4 Clearwell Air Shaft: A total of two (2) located inside the Inlet Building.
 - .5 Clearwell Emergency Egress Huts: One (1) located at each side of the Clearwell roof for a total of four (4).
- .3 Heat tracing shall be applied to the following gravity intake/exhaust hoods:
 - .1 Generator Building: GRH-H232A
 - .2 Clearwell Inlet Building: O/A intake of AHU-H242A (GRH-1)

1.3 Submittals

- .1 Submit Shop Drawing which shall include the following minimum information. Shop Drawings submitted without this information shall be automatically rejected.
 - .1 Manufacturer's data sheets on each product to be used including:
 - .1 Preparation instructions and recommendations.
 - .2 Storage and handling requirements and recommendations.
 - .3 Installation methods.

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- .2 Materials of construction: indicate material and wire gauge.
- .3 Power consumption and required power supply.

2. PRODUCTS

2.1 Heat Tracing/Tape

- .1 Parallel zone system, two conductor stranded copper bus wires covered with FEP Teflon or fluoropolymer inner insulation. Resistance heating cable connection to alternate bus wires covered with extruded FEP Teflon insulating jacket and a stainless steel braided overjacket.
- .2 Heating capacity: 20 W/m (6 W/Ft)
- .3 For use with 120 V power supply.
- .4 Standard of Acceptance:
 - .1 Delta-Therm PF Series Catalog No. PF-6-SB
 - .2 Contact Information:

Delta-Therm Corporation
398 W. Liberty St. P. O. Box 345, Wauconda, IL 60084. ASD.
Toll Free Tel: (800) 526-7887.
Tel: (847) 526-2407.
Fax: (847) 526-4456.
Email: heat@delta-therm.com.
Web: <http://www.delta-therm.com>.

2.2 Controls

- .1 System shall be controlled via the building main controller.
 - .1 Controller for AHU-H222A shall control heat tape located or associated with the electrical room.
 - .2 Controller LCP-H238 shall control heat tape located or associated with the Generator Building main room.
 - .3 Controller for AHU-H242A shall control all heat tape associated with the Clearwell.
- .2 Heat tape will turn “on” when the O/A temperature sensor reads an air temperature between -5 to 5°C and turned “off” otherwise.

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3. EXECUTION

3.1 Installation

- .1 Follow Manufacturer's installation instructions and guidelines for :
 - .1 General installation, set-up, and preparation of the heat tape and associated components
 - .2 Proper end termination of cable with proper termination kits
 - .3 Proper power and control connections
- .2 Louvres:
 - .1 Heat tape shall be installed directly on the bird screen of the louver.
 - .2 Install access door located inside the building for servicing of the heat tape.
 - .3 Heat tape and access door shall be installed between louver and motorized dampers.
 - .4 Install one continuous run of tape in a serpentine configuration with 300mm spacing for each louver.
 - .5 Secure tape using stainless steel clamps every 75 mm.
- .3 Louvres (Inlet Building Air Shafts and Emergency Egress Huts only)
 - .1 Heat tape shall be accessible from the inside of the air shaft or the emergency egress huts.
 - .2 Install one continuous run of tape in a serpentine configuration with 300mm spacing for each louver.
 - .3 Secure tape using stainless steel clamps every 75 mm.
- .4 Gravity Hoods
 - .1 Heat tape shall be installed directly on the bird screen of the intake gravity hood.
 - .2 Heat tape may be installed above (preferred) or below the screen with stainless steel clamps every 75 mm for the entire perimeter of the gravity hood.
 - .3 Centre tape on screen for best heat distribution. Refer to Drawing WT-M0004 detail 3.

3.2 Quality Control

- .1 Test continuity of heating cable.
- .2 Perform insulation resistance (megger) test on each heater section before, during, and after pavement placement. Minimum acceptable megger reading shall be 10 megohms.

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- .3 Measure voltage and current at each unit after installation is complete.
- .4 Submit written test report showing values measured on each test for each cable.

END OF SECTION