SECTION 230713

DUCT INSULATION

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**NOTE TO SPECIFIER**

*Use this Specification Section for Mail Processing Facilities.*

***This is a Type 1 Specification with completely editable text; therefore, any portion of the text can be modified by the A/E preparing the Solicitation Package to suit the project.***

*For Design/Build projects, do not delete the Notes to Specifier in this Section so that they may be available to Design/Build entity when preparing the Construction Documents.*

*For the Design/Build entity, this specification is intended as a guide for the Architect/Engineer preparing the Construction Documents.*

*The MPF specifications may also be used for Design/Bid/Build projects. In either case, it is the responsibility of the design professional to edit the Specifications Sections as appropriate for the project.*

*Text shown in brackets must be modified as needed for project specific requirements.* *See the “Using the USPS Guide Specifications” document in Folder C for more information.*

*The last date that USPS revised this standard specification section occurs in two places, at the end of this section and in the Table of Contents. If the date in this section matches the date in the Table of Contents, then you are using the latest version. Do not delete or revise the “last revised” date at the end of the section during the development of the Project Manual.*

*The footer in this section should be edited to replace the text, “USPS MPF SPECIFICATION” with the project name, and the blank date in the center should be replaced with the submission date, for interim design reviews, or the issue date of the completed Project Manual.*

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1. GENERAL
	1. SUMMARY
		1. Piping insulation.
		2. Ductwork insulation.
		3. Duct liner.
		4. Insulation jacket.
		5. Equipment insulation.
	2. SUBMITTALS
		1. Product Data: Required.
		2. Shop Drawings: Required.
	3. QUALITY ASSURANCE
		1. Flame spread/smoke developed rating of 25/50 or less in accordance with ASTM E84, NFPA 255 and UL 723.
		2. Insulation for duct, pipe and equipment located above grade exposed to weather outside building shall be certified as being self-extinguishing for 1 inch thickness less than 53 seconds.
		3. Mechanical insulation shall be as per ASHRAE-90.1.
2. products
	1. MANUFACTURERS/PRODUCTS
		1. Ductwork Insulation:
			1. Flexible Glass Fiber: Flexible, noncombustible blanket with vapor barrier jacket.
			2. Rigid Glass Fiber board with vapor barrier jacket.
			3. Duct Liner: Flexible, noncombustible blanket, with facing on air side, 1-inch thick. Unfaced insulation material shall not be used.
			4. Manufacturers: Certainteed, Owens-Corning, Manville, Knauf.
		2. Equipment Insulation:
			1. Rigid Glass Fiber board with resin binder for hot equipment.
			2. Foamglas insulation for cold equipment.
			3. Manufacturers: Certainteed, Owens-Corning, Manville, Knauf.
			4. Insulation removable to provide maintenance access to equipment.
3. INSTALLATION
	1. Ductwork Insulation:
		1. For ductwork conveying air below ambient temperature provide vapor barrier jacket.
		2. For ductwork exposed and below 10 feet above finished floor, provide aluminum jacket.
		3. Provide insulation for concealed ductwork in non-return air ceiling spaces.
	2. Duct Liner:
		* 1. Install per SMACNA standards and NAIMA Duct Liner Installation Standard.
			2. All transverse edges to be coated with adhesives to protect against airstream erosion.
			3. Duct dimensions indicated are net inside dimensions: increase duct size to allow for insulation thickness.
	3. Equipment Insulation:
		1. All hot surfaces to maintain maximum surface temperature of 100°F or more shall be insulated to 7 feet above horizontal passage ways and to 4 feet from stairs or ladders.
		2. Finish with lagging cement with open mesh glass fabric.
	4. SCHEDULES
		1. Ductwork Insulation
			1. Flexible Glass Fiber Duct Wrap Insulation

 THICKNESS FINISH

Supply Ducts, concealed 1-1/2 inches Aluminized Film

Return Ducts, concealed 1-1/2 inches Aluminized Film

Outdoor Air Intake Ducts, concealed 1-1/2 inches Aluminized Film

* + - 1. Rigid Glass Fiber Board Insulation

 THICKNESS FINISH

Supply Ducts, exposed non-conditioned space 1-1/2 inches Fabric

Return Ducts, exposed non-conditioned space 1 inch Fabric

* + - 1. Flexible Glass Fiber Duct Liner Insulation

 THICKNESS FINISH

Plenums (Cooling System) 1 inch Black Pigmented, UL

Supply Ducts 1 inch Black Pigmented, UL

Return Ducts 1 inch Black Pigmented, UL

Outdoor Air Intake Ducts 1 inch Black Pigmented, UL

Ducts Exposed to Outdoors 2 inches Black Pigmented, UL

* + 1. Equipment Insulation
			1. Similar to piping insulation.
			2. Follow manufacturer’s installation instructions.

END OF SECTION

USPS MPF Specification Last Revised: 10/1/2022