SECTION 466143 - ROTARY DRUM CLOTH FILTERS

Note that this section has only been edited for NYSOGS standardization and has not been technically edited. The designer shall make all technical edits specific to the project for this section.

This Section includes cloth filters and accessories for rotary drum vacuum filters used in wastewater treatment facilities.

Filter materials included in this Section represent a wide range of possible options. Consult with filter cloth manufacturer to select appropriate material based on Project conditions and characteristics of wastewater being filtered.

Typically, the filter cloth is wound around the rotary drum and only half of the drum is submerged in the wastewater. As the drum rotates, the cloth absorbs wastewater. The vacuum pressure applied to the exposed drum section dries the cake that is then discharged as the drum continues to rotate.

1. GENERAL
   * + 1. SUMMARY
          1. Section Includes: Rotary drum cloth filters.
       2. DEFINITIONS

Limit list of definitions to terms unique to this Section and not provided elsewhere.

* + - * 1. Calendering: The process of smoothing the filter cloth surface by pressing it between cylinders or rollers at the end of the fabrication process.
      1. COORDINATION
         1. Coordinate Work of this Section with Work of other Sections.
      2. SUBMITTALS

Only request submittals needed to verify compliance with Project requirements.

* + - * 1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
        2. Manufacturer’s installation instructions shall be provided along with product data.
        3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
        4. Product Data: Submit manufacturer's product information for materials, closure devices, and accessories.
        5. Manufacturer's Certificate: Certify that [**products**] <**\_\_\_\_\_\_\_\_**> meet or exceed [**specified requirements**] <**\_\_\_\_\_\_\_\_**>.

Certify that installation is completed according to manufacturer's instructions.

Include separate Paragraphs for additional certifications.

* + - * 1. Manufacturer's Instructions: Submit detailed instructions on installation requirements, including storage and handling procedures.
        2. Source Quality-Control Submittals: Indicate results of [**shop**] [**factory**] tests and inspections.
        3. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
        4. Manufacturer Reports: Certify that equipment has been installed according to manufacturer's instructions.
        5. Qualifications Statements:

Coordinate following Subparagraphs with the requirements specified in QUALIFICATIONS Article.

Submit qualifications for manufacturer and installer.

Submit manufacturer's approval of installer.

* + - 1. MAINTENANCE MATERIAL SUBMITTALS
         1. Extra Stock Materials:

Furnish [**one set**] [**two sets**] of fabric for each size rotary drum filter, including closure devices.

* + - * 1. Tools: Furnish special tools and other devices required for Director’s Representative to maintain equipment.
      1. QUALITY ASSURANCE

Include this Article to specify compliance with overall reference standards affecting products and installation included in this Section.

In following Paragraph insert "State of New York Department of Transportation," "Municipality of \_\_\_\_\_\_\_\_ Department of Public Works," or other agency as appropriate.

* + - * 1. Perform Work according to <**\_\_\_\_\_\_\_\_**> standards.
      1. QUALIFICATIONS

Coordinate following Paragraphs with the requirements specified in SUBMITTALS Article.

* + - * 1. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum [**three**] <**\_\_\_\_\_\_\_\_**> years' [**documented**] experience.
        2. Installer: Company specializing in performing Work of this Section with minimum [**three**] <**\_\_\_\_\_\_\_\_**> years' [**documented**] experience [**and approved by manufacturer**].
      1. DELIVERY, STORAGE, AND HANDLING
         1. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
         2. Store and protect materials according to manufacturer's instructions.
      2. EXISTING CONDITIONS
         1. Field Measurements:

Verify field measurements prior to fabrication.

Indicate field measurements on Shop Drawings.

* + - 1. WARRANTY

This Article extends warranty period beyond one year. Extended warranties may increase construction costs and Owner enforcement responsibilities. Specify warranties with caution.

* + - * 1. Furnish [**five**] <**\_\_\_\_\_\_\_\_**>-year manufacturer's warranty for rotary drum cloth filters.

1. PRODUCTS
   * + 1. ROTARY DRUM CLOTH FILTERS
          1. [Manufacturers](http://www.specagent.com/LookUp/?ulid=11981&mf=04&src=wd):

DESIGNER TO PROVIDE TWO MANUFACTURERS AND APPROVED EQUIVALENT FOR ALL LISTED PRODUCTS.

\*\*\*\*\*\* [OR] \*\*\*\*\*\*

In following Subparagraph insert "State of New York Department of Transportation," "Municipality of \_\_\_\_\_\_\_\_ Department of Public Works," or other agency as appropriate.

Furnish materials according to <**\_\_\_\_\_\_\_\_**> standards.

Insert descriptive specifications below to identify Project requirements and to eliminate conflicts with products specified above.

* + - * 1. Description: Rolls or sheets of filter cloth suitable for wastewater applications.
        2. Materials:

Although cotton fabric will swell in a filter to create a better seal during the process, its use has declined in favor of synthetics such as polypropylene (PP) and polyester.

Cotton:

Porosity: [**5 to 10**] <**\_\_\_\_\_\_\_\_**> to <**\_\_\_\_\_\_\_\_**> cfm

Weave: [**Plain**] [**Twill**] [**Chain**] <**\_\_\_\_\_\_\_\_**>.

Maximum Operating Temperature: [**190**] <**\_\_\_\_\_\_\_\_**> degrees F

\*\*\*\*\*\* [OR] \*\*\*\*\*\*

PP filter cloth is a woven fiber that is light, strong, and has excellent resistance to most acids and alkalis. The sleekness of this fiber enhances cake release. Moisture absorption is very low.

Polypropylene (PP):

Porosity: [**5 to 10**] <**\_\_\_\_\_\_\_\_**> to <**\_\_\_\_\_\_\_\_**> cfm

Weave: [**Plain**] [**Twill**] [**Oxford**] [**Basket**] <**\_\_\_\_\_\_\_\_**>.

Maximum Operating Temperature: [**190**] <**\_\_\_\_\_\_\_\_**> degrees F

Accessories: Latex border for improved gasketing and sealing.

\*\*\*\*\*\* [OR] \*\*\*\*\*\*

PP felt filter cloth is non-woven and calendered and has the same attributes as PP filter cloth. Additional benefits are improved cake release due to its calendered surface and better sealing due to its greater thickness.

PP Felt:

Porosity: [**5 to 10**] <**\_\_\_\_\_\_\_\_**> to <**\_\_\_\_\_\_\_\_**> cfm

Finish: [**Glazed, one side**] [**Glazed, both sides**] <**\_\_\_\_\_\_\_\_**>.

Maximum Operating Temperature: [**190**] <**\_\_\_\_\_\_\_\_**> degrees F

Accessories: Latex border for improved gasketing and sealing.

\*\*\*\*\*\* [OR] \*\*\*\*\*\*

Polyester filter fabric has good resistance to chemicals, abrasion, and heat.

Polyester:

Porosity: [**5**] <**\_\_\_\_\_\_\_\_**> cfm

Weave: [**Plain**] [**Twill**] [**Satin**] <**\_\_\_\_\_\_\_\_**>.

Yarn: [**Spun staple**] [**Multifilament**] <**\_\_\_\_\_\_\_\_**>.

Maximum Operating Temperature: [**275**] <**\_\_\_\_\_\_\_\_**> degrees F

* + - * 1. Closure: [**Manual sewing**] [**Velcro**] [**Lacing**] [**Zipper**] <**\_\_\_\_\_\_\_\_**>.
      1. SOURCE QUALITY CONTROL
         1. Provide shop inspection and testing of filter fabrics.

1. EXECUTION
   * + 1. EXAMINATION
          1. Verify that rotary drum filters are ready to receive cloth filters.
       2. INSTALLATION
          1. Installation: According to manufacturer's instructions.

\*\*\*\*\*\* [OR] \*\*\*\*\*\*

In following Paragraph insert "State of New York Department of Transportation," "Municipality of \_\_\_\_\_\_\_\_ Department of Public Works," or other agency as appropriate.

* + - * 1. Installation Standards: Install Work according to <**\_\_\_\_\_\_\_\_**> standards.
      1. FIELD QUALITY CONTROL
         1. Manufacturer Services: Furnish services of manufacturer's representative experienced in installation of products furnished under this Section for not less than <**\_\_\_\_\_\_\_\_**> days on Site for installation, inspection, field testing, and instructing Director’s Representative in maintenance of equipment.
         2. Equipment Acceptance:

Adjust, repair, modify, or replace components failing to perform as specified and rerun tests.

Make final adjustments to equipment under direction of manufacturer's representative.

* + - * 1. Furnish installation certificate from equipment manufacturer's representative attesting that equipment has been properly installed and is ready for startup and testing.
      1. DEMONSTRATION
         1. Demonstrate equipment startup, shutdown, routine maintenance, and emergency repair procedures to Director’s Representative

END OF SECTION 466143