SECTION 466141 - DISC 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 disc cloth filters and accessories for use in wastewater treatment facilities.

Typical disc cloth filters consist of several parallel discs and are typically used for tertiary treatment of wastewater, water reuse, and process water treatment. Water flows into center drum or trough and through the disc filters. Solids are captured on the inside surface of the media, where they are backwashed into a discharge trough. Backwashing may be initiated automatically by a level probe in the influent trough; filtration may continue during the backwash cycle.

Disc cloth filters may be used for sludge thickening, tertiary treatment of wastewater, water reuse, and process water treatment.

1. GENERAL
   * + 1. SUMMARY
          1. Section Includes: Disc cloth filters.
          2. Related Requirements:

List other Sections directly related to or affecting Work of this Section. Include Sections specifying information expected to be found in this Section as well as Sections required to describe complete system or assembly requirements.

Section 262923 - Variable-Frequency Motor Controllers: Drive unit for filter shaft.

* + - 1. DEFINITIONS

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

* + - * 1. ABS: Acrylonitrile butadiene styrene.
        2. FRP: Fiberglass-reinforced plastic.
      1. REFERENCE STANDARDS

List reference standards included within text of this Section, with designations, numbers, and complete document titles.

* + - * 1. National Electrical Manufacturers Association:

NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

* + - 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**] <**\_\_\_\_\_\_\_\_**>.

Include separate Paragraphs for additional certifications.

* + - * 1. Manufacturer 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 instructions.
        5. Qualifications Statements:

Coordinate following Subparagraphs with 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 cloth discs for each size filter, including attachment 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.

Include following Paragraph only when cost of acquiring specified standards is justified.

* + - * 1. Maintain <**\_\_\_\_\_\_\_\_**> [**copy**] [**copies**] of each standard affecting Work of this Section on Site.
      1. QUALIFICATIONS

Coordinate following Paragraphs with 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 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 disc cloth filters.

1. PRODUCTS
   * + 1. DISC CLOTH FILTERS
          1. [Manufacturers](http://www.specagent.com/LookUp/?ulid=12090&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:

Number of Discs: [**Two**] [**Four**] [**Six**].

Disc Diameter: [**6**] [**8**] <**\_\_\_\_\_\_\_\_**> feet

Number of Sectors per Disc: [**20**] [**40**] <**\_\_\_\_\_\_\_\_**>.

Disc Rotational Speed: <**\_\_\_\_\_\_\_\_**> rpm.

Feed Tank: [**Stainless steel**] [**FRP**] <**\_\_\_\_\_\_\_\_**>.

Flow Tubes: [**Offset**] [**Staggered**].

Drive:

[**Chain and sprocket**] [**Worm gear**].

Speed: [**Variable**] [**Constant**].

* + - * 1. Discs:

Media:

Material: [**Woven**] polyester.

Type: [**Pleated**] [**Flat**].

Rating: [**10**] <**\_\_\_\_\_\_\_\_**> microns.

Frame: ABS.

* + - * 1. Backwashing:

Furnish manufacturer's standard backwash pump.

In following Subparagraph insert number of spray nozzles required for each disc.

Furnish <**\_\_\_\_\_\_\_\_**> spray nozzles per disc.

* + - * 1. Performance and Design Criteria:

Flow Rate:

Design: <**\_\_\_\_\_\_\_\_**> gpm

Peak: <**\_\_\_\_\_\_\_\_**> gpm

Head Loss at Peak Flow Rate: <**\_\_\_\_\_\_\_\_**> inches

Solids Removal: <**\_\_\_\_\_\_\_\_**> percent.

Filter Yield: <**\_\_\_\_\_\_\_\_**> lb/sq. ft./h

* + - * 1. Operation:

Electrical Characteristics:

As specified in [**Section 262923 - Variable-Frequency Motor Controllers**].

[**<\_\_\_\_\_\_\_\_> hp**] [**<\_\_\_\_\_\_\_\_> RLA**].

Voltage: <**\_\_\_\_\_\_\_\_**> V, [**single**] [**three**] phase, 60 Hz.

Maximum [**Fuse Size**] [**Circuit Breaker Size**] [**Overcurrent Protection**]: <**\_\_\_\_\_\_\_\_**> A.

Minimum Circuit Ampacity: <**\_\_\_\_\_\_\_\_**>.

Minimum Power Factor: <**\_\_\_\_\_\_\_\_**> percent at rated load.

Control Panel:

Factory mounted.

NEMA 250 Type [**4**] [**4X**] <**\_\_\_\_\_\_\_\_**>.

Single-point power connection and grounding lug.

Controls: <**\_\_\_\_\_\_\_\_**>.

Disconnect Switch: Factory mounted [**in control panel**] [**on equipment**].

Control Sequence: [**Automatic**] [**Batch**] [**Manual**].

* + - * 1. Accessories:

Cake wash spray system.

* + - 1. SOURCE QUALITY CONTROL
         1. Provide shop inspection and testing of filter fabrics.

1. EXECUTION
   * + 1. EXAMINATION
          1. Verify that items provided by other Sections of Work are ready to receive Work of this Section.
       2. INSTALLATION
          1. According to manufacturer 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, startup, 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 466141