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## SECTION 15471 - WATER FILTRATION EQUIPMENT

### 1.1 SUMMARY

- A. Water filtration equipment for water systems in buildings.

### 1.2 QUALITY ASSURANCE

- A. Welding: ASME Boiler and Pressure Vessel Code: Section IX.
- B. Electrical Components, Devices, and Accessories: NFPA 70, Article 100.
- C. Components with Potable Water: NSF 61.
- D. Circulating Pumps: UL 778, HI 1.1-1.2, and HI 1.3.

### 1.3 PRODUCTS

- A. Bag-Type Filters: [**Single**] [**Multiple**] bag.
1. Filtration Efficiency: [**98**] <Insert number> percent for particles [**10**] [**20**] <Insert size> micrometers and larger.
  2. Pressure Drop: Not to exceed [**2 psig (14 kPa)**] <Insert value> when clean[, and <Insert value> when dirty].
  3. Housing: [**Carbon steel**] [**Plastic**] [**Stainless steel**].
  4. Bag Media: [**Cotton**] [**Polyester**] [**PP**] <Insert material>; [**felt, filament, or mesh**] [**felt**] [**filament**] [**mesh**] construction.
- B. Cartridge Filters:
1. Freestanding Cartridge Filters:
    - a. Filtration Efficiency: [**98**] <Insert number> percent for particles [**1**] [**10**] [**20**] <Insert size> micrometer(s) and larger.
    - b. Pressure Drop: Not to exceed [**2 psig (14 kPa)**] <Insert value> when clean[, and <Insert value> when dirty].
    - c. Housing: [**Plastic**] [**Stainless steel**] <Insert material>.
    - d. Media: [**Activated charcoal**] [**Activated or ground charcoal**] [**Ground charcoal**] [**Pleated polyester**] [**Pleated polyester or PP**] [**Pleated PP**] [**Wound polyester**] [**Wound polyester or PP**] [**Wound PP**] <Insert material>.
  2. Off-Floor Cartridge Filters:
    - a. Mounting: [**In-line**] [**Wall**].

- b. Filtration Efficiency: [98] <Insert number> percent for particles [1] [10] [20] <Insert size> micrometer(s) and larger.
- c. Pressure Drop: Not to exceed [2 psig (14 kPa)] <Insert value> when clean[, and <Insert value> when dirty].
- d. Housing: [PE or PP] [Plastic] [Stainless steel] <Insert material>.
- e. Media: [Activated charcoal] [Activated or ground charcoal] [Ground charcoal] [Pleated polyester] [Pleated polyester or PP] [Pleated PP] [Wound polyester] [Wound polyester or PP] [Wound PP] <Insert material>.

C. Carbon Filters:

- 1. Backwash Initiation Device: [Differential pressure gages] [Electric time clock] [Water meter].
- 2. Filtration Efficiency: [98] <Insert number> percent for particles [20] [40] <Insert size> micrometers and larger.
- 3. Pressure Drop: Not to exceed [2 psig (14 kPa)] <Insert value> when clean[, and <Insert value> when dirty].
- 4. Media Tank:
  - a. Construction: [ASME code] [Non-code].
  - b. Material: [Carbon steel] [FRP] [Stainless steel].
  - c. Media: [Activated charcoal] [Ground charcoal] <Insert material>.
  - d. Media Quantity: <Insert cu. ft. (cu. m).>

D. Sand Filters:

- 1. Circulating Sand Filters:
  - a. Construction: [ASME code] [Non-code]; [carbon steel] [FRP].
  - b. Piping: [Galvanized steel pipe, galvanized cast-iron fittings] [Stainless-steel pipe, stainless-steel fittings] [Copper water tube and copper-alloy fittings].
  - c. Filtration Efficiency: [98] <Insert number> percent for [1.8] <Insert number> minimum, specific-gravity suspended particles [5] [10] [20] [45] <Insert size> micrometers and larger.
  - d. Filter Media: [Graded silica sand] <Insert media>.
- 2. Multimedia Sand Filters:
  - a. Description: [Simplex] [Duplex] [Triplex].
  - b. Tank Construction: [ASME code] [Non-code]; [carbon steel] [FRP] <Insert material>.
  - c. Piping: [Galvanized steel pipe, galvanized cast-iron fittings] [Stainless-steel pipe, stainless-steel fittings] [Copper water tube and copper-alloy fittings] [ABS or PVC pipe and fittings].
  - d. Filtration Efficiency: [98] <Insert number> percent for particles [10] [20] [40] <Insert size> micrometers and larger.
  - e. Filter Media: [Graded silica sand] <Insert media>.
- 3. Greensand Filters:
  - a. Description: For removing [iron] [iron and manganese] [manganese].

- b. Tank Construction: [ASME code] [Non-code]; [carbon steel] [FRP] <Insert material>.
- c. Piping: [Galvanized steel pipe, galvanized cast-iron fittings] [Stainless-steel pipe, stainless-steel fittings] [Copper water tube and copper-alloy fittings] [ABS or PVC pipe and fittings].
- d. Media Tanks: [One] [Two] [Three].
- e. Filtration Efficiency: [98] <Insert number> percent for particles [10] [20] [40] <Insert size> micrometers and larger.
- f. Filter Media: [Graded silica sand] <Insert media>.

E. Separators:

1. Description: Separator housing.

- a. Construction: [ASME code] [Non-code].
- b. Separator Efficiency: [98] <Insert number> percent for [1.8] <Insert number> minimum, specific-gravity suspended particles [5] [10] [20] [45] <Insert size> micrometers and larger.

Retain subparagraph and associated subparagraphs above or below.

2. Description: Separator system of housing with strainer, circulating pump, piping, and controls.

- a. Construction: [ASME code] [Non-code].
- b. Piping: [Galvanized steel pipe, galvanized cast-iron fittings] [Stainless-steel pipe, stainless-steel fittings] [Copper water tube, copper-alloy fittings].
- c. Separator Efficiency: [98] <Insert number> percent for [1.8] <Insert number> minimum, specific-gravity suspended particles [5] [10] [20] [45] <Insert size> micrometers and larger.

END OF SECTION 15471