

SECTION 14220

FAÇADE CLEANING DEVICE

PART 1 - GENERAL

1.1 DESCRIPTION

- A The work under this section consists of furnishing and installation of electrically driven cleaning device as shown on the drawings and as specified herein.
- B Cleaning device shall be as manufactured by AESA or approved equal.

1.2 QUALITY ASSURANCE

- A. Installer Qualifications: Engage the cleaning device manufacturer or an experienced installer approved by the cleaning device manufacturer who has completed cleaning device installations not less than 5 years successful experience similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
- B. Regulatory Requirements: To comply with the local governing regulations and the applicable provisions for the cleaning device system as recommended by the manufacturer.

1.3 SUBMITTALS

- A Product Data: Submit manufacturer's technical product data and installation instruction for each principal component or product, including certified test report on required testing. List and describe features of control systems, performances and operating characteristics.
- C. Shop Drawings for cleaning device showing plans, elevations, sections, and large-scale details indicating system features and components such as rail track, trolley, turret, jibs, lifting mechanism, electrical circuit, wire ropes, cradle, traversing system, etc. as required to complete the system.
- D Samples: submit samplers of Exposed finishes of car enclosures, hoistway entrances and signal equipment, 300mm squares of materials and 300mm length of running trim members.
- E Maintenance Manuals: Submit bound manual for cleaning device with operating and maintenance instruction, parts listing, recommended

parts inventory listing, purchase source listing for major and critical components, emergency instructions and similar information.

- F Certificates and Permits: Provide Employer's Representative with copies of all inspection / acceptance certificates and operating permits as required by governing authorities to allow normal, unrestricted use of cleaning device.

1.4 INITIAL MAINTENANCE AND WARRANTY

- A Maintenance: For a period of 12 months following date of substantial completion, a full maintenance of cleaning device works shall be provided on a daily surveillance basis. Operational faults shall be corrected, and defective or deteriorated components and finishes shall be restored or replaced. Operational units shall be lubricated and expandable materials shall be supplied as required for proper operations and maintenance.
- B Warranty: A special project warranty, signed by the Contractor, Installer and Manufacturer, shall be provided agreeing to replace, repair and/or restore defective materials and workmanship of cleaning device work during warranty period.

The term "Defective" is hereby defined to include, but not by way of limitation, operation or control system failures, performances below required minimum, extensive wear, unusual deterioration or aging of materials or finishes, unsafe conditions, the need for excessive maintenance, abnormal noise or vibration, and similar unusual, unexpected and unsatisfactory conditions.

The warranty period shall be 12 months starting on date of final acceptance of cleaning device work by the Engineer.

PART 2 - PRODUCTS

2.1 ELECTRIC CLEANING DEVICE

- A General: Provide manufacturer's standard from the Country of Origin pre-engineered electric cleaning device that shall fulfill and comply with the requirements as specified herein. Where components are not indicated, standard components published by the manufacturer as included in standard pre-engineered cleaning device systems, and as required for a complete system shall be provided.
- B Cleaning device Machines and Equipments shall be recommended with full coordination with the manufacturer and shall be approved by the Engineer.

- C Control system: Except as otherwise indicated or required by Special Conditions of the Project, provide manufacturer's standard control system for cleaning device to provide full operations.

2.2 CLEANING DEVICE SCHEDULE

- A Basic Specifications shall be as minimum. Unless otherwise shown on drawings or as instructed by the Engineer.

Type	: Service for facade cleaning
Capacity	: 200 kg or 2 No. of persons
Power Supply	: 3PH 220/127 Volts-60 Hz
Machine Location	: as shown on the drawings

PART 3 - EXECUTION

3.1 INSPECTION

- A Prior to commencing cleaning device installation, inspect and examine supporting structures and all other conditions under which cleaning device work is to be installed. Notify the Contractor, in writing, of any discrepancies or other conditions detrimental to the proper installation or performance of cleaning device work. Cleaning device installation shall not proceed until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

3.2 INSTALLATION INSTRUCTIONS

- A General: Comply with manufacturer's shop drawings, instructions and recommendations for work required during installation.
- B Installation and the first operation of the machine should be carried out under the supervision of a manufacturers representative or a qualified technician recommended by the manufacturer and approved by the Engineer.
- C Check that the track is in good condition. Particularly check the anchor points, the fixing points and the continuity of the guide bracket.
- D For "open" tracks, ensure that the end stops have been installed.
- E Where the track has a crossing, check that the angle brackets or guides are well fixed.
- F Check the installation and at the appropriate number of power points along the track.
- G Handle the machine as instructed and recommended by the manufacturer.

- H Check the machine is lowered onto the track in the correct direction; generally the powered roller frames should be on the façade side and the reeler for the power supply cable towards the roof side.
- I Ensure that the guide wheels are correctly mounted on the rails or guide brackets on the track.
- J Ensure that all the counterweights are correctly fitted to the machine
- K Ensure that counterweights are secured and the covers fitted.
- L Make sure that the anchor sleeve is fitted to the power supply cable.
- M Fit the wire ropes to the cradle if they have been dismantled for transport.
- N In the presence of the manufacturer's representative or a qualified technician recommended by the manufacturer and approved by the Engineer check that the installation is in accordance with the current standards or as per manufacturers' instructions.
- O Check the correct operation of all the safety devices in accordance with the system standards as recommended by the manufacturer.
- P Carry out a complete work cycle (lower the cradle to the ground, lift the cradle to the upper position, traverse along the whole of the track, parking, etc...).

3.3 FIELD QUALITY CONTROL

- A Acceptance testing: Upon nominal completion of cleaning device installation, and before permitting use of cleaning device (either temporary or permanent), acceptance tests shall be performed in accordance with the applicable requirements and governing regulations or agencies.
- B Operating Tests: Cleaning device shall be loaded to its rated capacity and shall be operated continuously or as recommended by the Engineer over its full travel distance, stopping and proceeding accordingly.
- C Installer shall advise the Engineer's representative, Contractor and inspection authority of governing agencies in advance of dates of tests to be performed on the cleaning device.

3.4 PROTECTION

- A At time of substantial completion of each cleaning device work, suitable protective coverings, barriers, devices, signs or such other methods or procedures shall be provided to protect cleaning device

work from damage or deterioration. Maintain protective measures throughout remainder of construction period.

3.5 INSTRUCTION AND MAINTENANCE

- A Employer's personnel shall be instructed in the proper use, operations and maintenance of cleaning device system.
- B A final check of cleaning device shall be made with the presence of the Engineer, just prior to date of completion. Determine that control systems and operating devices are functioning properly.
- C Installer shall provide a continuing maintenance proposal to Employer, in the form of a standard yearly (or other period) maintenance agreement, starting on date construction contract maintenance, conditions and terms of agreement period, and for renewal options.

END OF SECTION