

## PART 1 - GENERAL

### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Elastomeric isolation pads and mounts.
  - 2. Restrained elastomeric isolation mounts.
  - 3. Spring isolators.
  - 4. Housed spring mounts.
  - 5. Elastomeric hangers.
  - 6. Spring hangers.
  - 7. Spring hangers with vertical-limit stops.
  - 8. Pipe riser resilient supports.
  - 9. Resilient pipe guides.
  - 10. Seismic snubbers.
  - 11. Restraining cables.

### 1.2 PERFORMANCE REQUIREMENTS

- A. Wind-Restraint Loading: Refer to structural plans for actual design conditions.
- B. Seismic-Restraint Loading: Refer to structural plans for actual design conditions.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Mason Industries, Inc., Amber/Booth Company, Inc., B-Line Systems, Inc, or approved equal

### 2.2 VIBRATION ISOLATORS

- A. Elastomeric Isolator Pads EIP: 5/16-inch thick ribbed or waffled neoprene, arranged in single or multiple layers, molded with a nonslip pattern and galvanized steel base plates of sufficient stiffness for uniform loading over pad area, and factory cut to sizes that match requirements of supported equipment.
- B. Elastomeric Mounts EM: Neoprene-in-shear type with steel reinforced top and base. All metal surfaces shall be covered with neoprene. The top and bottom surfaces shall be ribbed. Bolt holes shall be provided in the base and the top shall have a threaded fastener. The mounts shall include leveling bolts that may be rigidly connected to the equipment.
- C. Spring Isolators SI: Freestanding, laterally stable, open-spring isolators. Support 200 percent of rated load, fully compressed, without deformation or failure.
- D. Restrained Spring Isolators RSI: Freestanding, steel, open-spring isolators with seismic restraint. Support 200 percent of rated load, fully compressed, without deformation or failure.

- E. Spring Hangers SH: Combination coil-spring and elastomeric-insert hanger with spring and insert in compression. Support 200 percent of rated load, fully compressed, without deformation or failure.
- F. Spring Hangers with Vertical-Limit Stop SHVLS: Combination coil-spring and elastomeric-insert hanger with spring and insert in compression and with a vertical-limit stop. Support 200 percent of rated load, fully compressed, without deformation or failure.
- G. Thrust Limits TL: Combination coil spring and elastomeric insert with spring and insert in compression and with a load stop. Include rod and angle-iron brackets for attaching to equipment. Support 200 percent of rated load, fully compressed, without deformation or failure.
- H. Flexible Pipe Connections FPC: Flexible pipe connectors shall be fabricated of Kevlar or nylon cord, fabric, and neoprene. Mason Industries' Type SFDEJ twin-sphere connectors, or equal (no known equal).
- I. Flexible Duct Connections FDC: Flexible duct connections shall be supplied in accordance with industry standards. Material width shall be 150 percent of clear dimension in addition to width required for attachment.

## 2.3 SEISMIC-RESTRAINT DEVICES

- A. Resilient Isolation Washers and Bushings: 1-piece, molded, bridge-bearing neoprene complying with AASHTO M 251 and having a durometer of 50, plus or minus 5, with a flat washer face.
- B. Seismic Snubbers: Factory fabricated using welded structural-steel shapes and plates, anchor bolts, and replaceable resilient isolation washers and bushings.
- C. Restraining Cables: Galvanized steel aircraft cables with OSHPD Pre-Approved end connections made of steel assemblies that swivel to final installation angle and utilize two clamping bolts with break off nuts for visual inspection for cable engagement.
- E. Anchor Bolts: Seismic-rated, drill in, and stud wedge or female-wedge type. Select anchor bolts with strength required per ICC acceptance criteria in accordance with AC193.

## 2.4 VIBRATION ISOLATION EQUIPMENT BASES

- A. Steel Base SB: Factory-fabricated, welded, structural-steel bases and rails.
- B. Inertia Base IB: Factory-fabricated, welded, structural-steel bases and rails ready for field-applied, cast-in-place concrete.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. As required by Engineer and code.
- B. Manufacturer to provide inspection of installation and letter of acceptance.

END OF SECTION