

PART 1 - GENERAL

- 1.1 REFERENCES .1 ASTM International Inc.
.1 ASTM A 53/A 53M-07, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
.2 ASTM A 105/A 105M-05, Standard Specification for Carbon Steel Forgings, for Piping Applications.
- .2 Canada Green Building Council (CaGBC)
.1 LEED Canada-NC-2009, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations.
- 1.2 ACTION AND INFORMATIONAL SUBMITTALS .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
.1 Provide manufacturer's printed product literature and datasheets for fixtures, and include product characteristics, performance criteria, physical size, finish and limitations.
.1 Manufacturer, model number, line contents, pressure and temperature rating.
.2 Movement handled, axial, lateral, angular and the amounts of each.
.3 Nominal size and dimensions including details of construction and assembly.
- .3 Sustainable Design Submittals:
.1 LEED Submittals: in accordance with Section 01 35 21 - LEED Requirements.
- 1.3 CLOSEOUT SUBMITTALS .1 Provide maintenance and operation data in accordance with Section 01 78 00 - Closeout Submittals.
.1 Data to include:
.1 Servicing requirements, including special requirements, stuffing box
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- 1.3 CLOSEOUT SUBMITTALS (Cont'd)
- .1 (Cont'd)
 - .1 Data to include: (Cont'd)
 - .1 (Cont'd) packing, lubrication and recommended procedures.
- 1.4 DELIVERY, STORAGE AND HANDLING
- .1 Deliver, store and handle in accordance with Section 01 61 00 - Common Product Requirements.
 - .2 Deliver materials to site in original factory packaging, labelled with manufacturer's name, address.
 - .3 Packaging Waste Management: remove for reuse or return of pallets, crates, padding, banding, and packaging materials as specified in Construction Waste Management Plan in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal and Section 01 35 21 - LEED Requirements.

PART 2 - PRODUCTS

- 2.1 SUSTAINABLE REQUIREMENTS
- .1 Materials and products in accordance with Section 01 35 21 LEED Requirements.
- 2.2 SLIP TYPE EXPANSION JOINTS
- .1 Application: for axial pipe movement.
 - .2 Repacking: under full line pressure.
 - .3 Body and packing housings: Class 150, 1MPa carbon steel pipe to ASTM A 53/A 53M, Grade B. Wall thickness to match pipe with ends for welding.
 - .4 Slip or traverse sleeves: carbon steel pipe to ASTM A 53/A 53M, Grade B, hard chrome plated.
 - .5 Anchor base: construction steel, welded to body.
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2.4 FLEXIBLE
CONNECTION

- .1 Application: to suit motion.
- .2 Minimum length in accordance with manufacturer's recommendations to suit offset.
- .3 Inner hose: stainless steel corrugated.
- .4 Braided wire mesh stainless steel outer jacket.
- .5 Diameter and type of end connection: as indicated.
- .6 Operating conditions:
 - .1 Working pressure: 1034 kPa.
 - .2 To match system requirements.
- .7 Three flexible grooved couplings placed in close proximity to vibration source for vibration attenuation and stress relief.

2.5 ANCHORS AND
GUIDES

- .1 Anchors:
 - .1 Provide as indicated.
 - .2 Concrete: to Section 03 30 00 - Cast-in-Place Concrete.
 - .3 Reinforcement: to Section 03 20 00 - Concrete Reinforcing.
 - .2 Alignment guides:
 - .1 By conduit manufacturer.
 - .2 To accommodate specified thickness of insulation.
 - .3 Vapour barriers, jackets to remain uninterrupted.
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PART 3 - EXECUTION

- 3.1 APPLICATION .1 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.
- 3.2 INSTALLATION .1 Install expansion joints with cold setting. Make record of cold settings.
- .2 Install expansion joints and flexible connections in accordance with manufacturer's instructions.
- .3 Install pipe anchors and guides as indicated. Anchors to withstand 150% of axial thrust.
- 3.3 PERFORMANCE VERIFICATION .1 In accordance with Section 23 08 01 - Performance Verification: Mechanical Piping Systems.
- 3.4 CLEANING .1 Clean in accordance with Section 01 74 11 - Cleaning.
- .2 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal and Section 01 35 21 - LEED Requirements.