Chase Associates, Inc.

MANWAY SPECIFICATIONS

MODEL CM-2 HINGED WATERTIGHT DOORS

ACCESS MANWAYS

WATERTIGHT MANWAYS

STAINLESS STEEL MANWAYS

PART 1 GENERAL

1.01 SCOPE OF WORK

A. Furnish all materials and incidentals required to install circular watertight access doors/manways to the steel tanks as shown on the drawings and specified herein.

B. Access manways shall be provided complete with all accessories, spare

parts, and other appurtenances as specified and as may be required for a complete

and operating installation.

1.02 SUBMITALS

A. Information to be submitted shall include, but not be limited to:

1. Shop drawings including dimensioned plans, elevations showing

methods of assembly, anchorage and connection to other members.

2. Manufacturer’s installation and maintenance instruction manual.

3. Parts lists, including list of manufacturer’s recommended spare parts.

4. ASME Code Section VIII Division 1 Pressure Calculations

1.03 REFERENCE STANDARDS

A. American Welding Society (AWS)

1. AWS Structural Welding Code D1.1

B. American Society of Mechanical Engineers (ASME)

1. ASME Boiler and Pressure Vessel Code Section IX

C. Rubber Manufacturer’s Association (RMA)

1.04 QUALITY ASSURANCE

A. The manufacturer of the watertight doors shall present evidence attesting to at least 5 years of successful experience in the design and fabrication of doors of the type specified.

PART 2 PRODUCTS

2.01 ACCESS DOORS/MANWAYS

A. Watertight manways shall be Quick-Opening Manway Model CM-2 as manufactured by Chase Associates, Inc., Edgecomb, ME or approved equal.

B. Watertight manways shall be hinged and provide a \_\_\_\_inch clear opening.

2.02 MATERIALS

A. Structural Steel Plate and Shapes: Type \_\_\_\_\_\_ Steel

B. Finish: Hot-rolled, annealed and pickled stainless steel

C. Door Gaskets: \_\_\_\_\_\_ Ring gaskets extruded in accordance with RMA C1

GR1 tolerances and cured to \_\_\_\_\_\_durometer. The gasket shall be 100% bonded into rings with cyanoacrylate and tested to a tensile strength of 2000psi, based on

the manufacturer’s standard durometer tolerances.

D. Door Hardware

1. Non-wetted hinges and fastening hardware shall be \_\_\_\_ stainless steel

2.03 DESIGN OF WATERTIGHT ACCESS DOORS

A. Watertight access doors shall be designed with applicable safety factors in accordance with AISC, AISI, ASME, and AWS specifications, and shall provide an effective seal against the design pressure of \_\_\_\_ feet of hydrostatic head at the bottom of the door with no visible leakage.

B. The design of the door shall allow the pressure on the door to be transmitted to

the welded sleeve without load being transferred to the hinges.

C. Manway shall include suitable sleeve (weld neck) for welding into steel tank.

D. The length of each manway sleeve shall be a minimum of 8” in length, including any additional length that may be required to accommodate the tank radius if not for a straight wall installation.

E. Manways shall conform with OSHA permit required confined space rules.

F. Stainless Steel nameplates shall be permanently attached to each of the access

manways indicating the manufacturer, model number and serial number.

G. Manways shall be provided with lock-out protection.

2.04 FABRICATION OF WATERTIGHT DOORS

A. Welding shall be performed by welders certified in accordance with the requirements of AWS D1.1 or ASME Section IX.

B. All materials shall be new and both workmanship and materials shall be of the very best quality, entirely suitable for the service to which they are to be subjected.

C. All work shall be performed in accordance with the best modern practice for the manufacture of quality machinery. All parts shall have accurate mounting and bearing surfaces so that they can be assembled without re-machining. All parts shall conform accurately to the design dimensions and shall be free of all defects in workmanship or material that would impair their service.

* 1. INSPECTION AND TEST OF WATERTIGHT MANWAYS

1. All welds in the potential “leak path” shall be liquid penetrant tested in

accordance with ASME Code Section VIII, Div. 1, Appendix VIII.

1. Manways shall be shop operated to assure proper assembly and operation.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install all manways in exact accordance with the manufacturer’s latest written instructions, requirements, specifications, details and shop drawings.

B. Adjust watertight manways as required and as recommended by the manufacturer to provide a leakproof assembly.