**SECTION \_\_\_\_\_\_\_\_\_\_\_ STAINLESS STEEL MUD VALVES**

 GENERAL

1. The mud valves for this project shall be provided as specified and as shown in the Contract Documents.

SUBMITTALS

1. Submittals shall include, at a minimum, detailed custom drawings of the mud valve assembly with dimensional and mounting information and a listing of the materials of construction. General arrangement drawings and cut sheets are not considered acceptable drawings.

QUALITY ASSURANCE

1. The basis for the design of the mud valves is the Model RW7200-S as manufactured by RW Gate Company of Troy, New York.
2. All valves shall be shop inspected for proper operation prior to shipment.
3. Welds shall be performed by welders with ASME Section IX certification.
4. The valve manufacturer shall be ISO 9001:2015 certified.

MATERIALS OF CONSTRUCTION

1. All stainless steel referenced in this specification shall be Type (304)(316) or Type (304L)(316L), ASTM A240 or ASTM A276 unless otherwise indicated herein.
	1. All welded stainless steel components shall be constructed of minimum ¼-inch Type (304L)(316L) stainless steel.
	2. All non-welded stainless steel components, excluding anchor bolts and assembly bolts, shall be Type (304)(316) or Type (304L)(316L) stainless steel.
	3. Anchor bolts and assembly bolts shall be Type 316 stainless steel.

ASSEMBLY

1. The mud valve shall be a one-piece assembly with a non-rising stem, a movable cover and a fixed, integral frame.
2. The frame will be provided with a bolt pattern to mount to a pipe flange or to a concrete floor.
3. The mud valve cover shall be designed to lower into place over the opening for tight shut-off.
	1. The cover and frame shall be constructed of stainless steel plate.
	2. A resilient seal shall be mounted to the bottom of the cover. Mud valves with metallic seats are not acceptable.

OPERATING STEM

1. The operating stem shall be of stainless steel and shall be designed to transmit in compression at least 2 times the rated output of the manual operating mechanism with an 80 lbs effort.
2. The stem shall have a slenderness ratio (L/r) less than 200.
3. The threaded portion of the stem shall have a minimum diameter of 1-1/2 inches.
	1. The threads shall have machine rolled, full depth ACME threads.
	2. Stub threads are not acceptable.
4. Stems provided in multiple pieces shall be provided with couplings.
	1. Couplings shall be bronze or stainless steel and shall be internally threaded and keyed or bolted.
5. Stem guides shall be constructed of stainless steel with UHMWPE bushings.

OPERATING MECHANISM

1. Operating mechanisms shall be provided by the valve manufacturer.
2. Manual operators shall be a 2-inch square operating nut unless otherwise shown on the Contract Documents.
	1. The operating nut shall be mounted on a stainless steel wall bracket unless otherwise shown on the Contract Drawings.

ANCHORAGE

1. Anchor bolts shall be 316 stainless steel, fully threaded and shall have a minimum diameter of 1/2-inch.
	1. Anchor bolts shall be of the epoxy type.

FINISH

1. All heat tint and slag from the welding process shall be passivated in accordance with ASTM A380.

INSTALLATION

1. Installation shall be performed in accordance with the valve manufacturer’s installation instructions and the approved installation drawings.
2. Installation instructions and installation drawings shall be found in the O&M manual.
3. A resilient gasket and/or mastic shall be applied, by the Contractor, between the frame and the pipe flange or wall to ensure that there is no leakage around the valve.