



# Stainless is Painless!

## Mud Valves for Corrosive Environments

Tanks and basins are often filled with materials that are too corrosive for standard coatings and iron components to withstand. Since most mud valves are designed to be cemented into the floor to achieve adequate drainage, replacement of corroded or damaged valves can be a huge pain—for your production and your wallet! With this type of valve, basins must be drained completely before repair work or replacement can begin. If the valve manufacturer named in your specification cannot provide a valve that withstands harsh environments, then the cost of repairs will only continue to rise.

Therefore, when specifying mud valves for your system, material choice is the number one factor to consider. Choosing a valve made entirely of stainless steel is a wise choice that will provide long-term performance in even the most corrosive environments.

Additionally, it is very important to consider your mud valve's seating materials, frame design and stem—all of which contribute to its reliability and performance day in and day out.

Face the dirty truth: Can you trust your valve to perform when you need it? Or will it leave you knee deep in mud? Read on to see if your product has what it takes.

# Seating Materials

The type of seating material used on your mud valve and how it is applied are two features you won't want to overlook. Both must be able to withstand exposure to harsh chemicals and temperatures over long periods of time. There are many different options out there, from metal to metal and rubber to rubber to flat seats and angled seats.

Rubber (resilient) seats have long been considered the optimal choice for mud valve plugs, but it's important to select a rubber compound that will fit your application. Buna-N is that compound. Buna-N is a modern material that has all the right characteristics to endure the extreme conditions encountered in most tanks and basins.

Ideally, this rubber seat will mate to a machined 316 stainless steel seat that is angled, which aids in flushing foreign matter away instead of trapping it like a flat seat might. When small debris get caught in the valve, a rubber seat can seal around the material and then simply flush it away when the valve is opened again.

# Frame Design

In order for mud valves to perform as they were designed to and completely drain containment structures, they must be mounted and recessed into the basin floor. For this reason, the frame or flange design is another important element to consider.

Once recessed into the floor and grouted in, most mud valves will still have bolt heads protruding through the floor. These bolt heads can trap material, which of course opens up potential for a variety of issues. Debris can get caught in the seat of your valve, aid in corrosion of the bolts, and even slow or obstruct drainage completely. Luckily, there's an alternative to this design.

Choosing a valve with a 316 stainless steel frame and a grout pocket that both conceals bolt heads and allows the seat to be flush with the floor will allow for complete, unobstructed drainage.



*SS Mud Valve*

# Stems

Perhaps the most critical part of any valve is the stem. Rising or non-rising, the stem does the work that gets results. Stainless steel mud valves are designed to survive the toughest elements, and stainless steel stems are no exception. However, when considering the design of a stainless steel mud valve, simply specifying a stainless steel stem will not suffice.

Stainless steel is notorious for galling. One way to address this issue is to choose a valve that uses dissimilar metals in the stem and related working parts.

Another thing to consider is the method used to create the threaded stem, such as cutting, casting, or rolling. Cast threads can be brittle and rough, and cut threads disturb the grain of the bar stock, which can weaken the stem and increase the likelihood of galling. Rolling threads can actually strengthen your stem, because it compresses the material and creates a smoother surface that lasts.

Finally, consider the type of coating on the stem. Don't be fooled by stems that are said to be permanently coated. No coating is permanent and will eventually wear, leaving your valve susceptible to failure. Standard food grade grease is a better alternative. Your tanks and basins will need periodic maintenance anyway, so applying your grease coating at this time is just as convenient.

## Trust in Troy

The Troy Valve MV-X stainless steel mud valve has an outstanding record of continued reliability and is suitable for use in a wide range of applications, from potable water tanks to corrosive environments.

### 1. No Galling. No Breaking. No Kidding.

Our stainless steel mud valves use two dissimilar metals to repel galling for the life of the valve. Additionally, rolled threads increase stem strength for added confidence and smooth, consistent operation.

### 2. Hydraulic Relief Slots

A critical feature of our mud valves is the hydraulic relief slots, which allow for sludge that has entered the plug to be flushed out instead of trapped, ensuring the valve continues to operate with ease. The plug also has no through holes in the casting, which eliminates any potential leak paths.

### 3. Grout Pocket

A Troy Valve exclusive feature! The grout pocket on our stainless steel mud valves allows grout to be flush with the drain hole, enabling tanks to empty completely with no obstructions.

### 4. Third Party Tested

The MV-X stainless steel mud valve has been 3rd party tested by an ACLASS accredited ISO certified lab. The test results were so convincing, they surpassed even our expectations, and we are comfortable claiming that our valves outperform any on the market today.

When it comes to purchasing a stainless steel mud valve for your application, choose a manufacturer you can trust to deliver time-tested, reliable solutions. Penn-Troy has been the leading American manufacturer of water and wastewater valves for more than 30 years. Over that time, we've refined our valve designs to provide customers with unmatched value in durability and longevity. Because we don't just manufacture valves— we manufacture trust.



*SS Mud Valve*