MILLARD MANUFACTURING

# CASE STUDY

(402) 331-8010 • (800) OMAHA NE • millardmfg.com

INDUSTRIAL

# MILLARD *PassPRO*™ – "In-House" Passivation

## Background:


At Millard Manufacturing, we offer MILLARD *PassPRO*™ passivation for our stainless steel fabricated equipment, machinery, and parts. The passivation process enhances the naturally occurring oxidation that makes stainless steel so corrosion resistant in the first place. In order for stainless steel to offer its full corrosion resistance after fabrication, it must be passivated. Passivation is an acid based process that changes stainless steel from an "active" state, in which it actively corrodes, to a "passive" state, in which corrosion is resisted. In addition, iron contaminates that become embedded in the surface of the stainless steel during handling and fabrication are dissolved, greatly reducing the potential of surface rust on your stainless materials and equipment, something that confuses and frustrates many.

## Problem:

As stainless steel is fabricated, it comes in contact with various iron, tool steel, or carbon tooling that deposit, smear, or imbeds micro particles of free iron, oxide scale, rust, iron particles, metal chips or other deposits onto the surface. If not treated or removed, these particles will rust and degrade the original corrosion resistance stainless steel is known and used for, resulting in unsanitary surfaces not suitable for food processing or sanitary environments.

Welding stainless steel creates an affected heat zone causing discoloration and reducing the natural corrosion resistance within that zone. What you end up with in the weld and heat zone is an area that can corrode if not treated (passivated).

## Solution:

Millard's solution to creating a sanitary product is using the MILLARD *PassPRO*™ System to passivate your products where it is manufactured before shipping. This "In-House" capability is a great advantage if your equipment will be put into service immediately after fabrication and will not be coming in contact with iron or steel. This process provides a long, corrosion and rust free life for your product.

Millard reacted early on in our involvement with the food industries by installing this large "In-House" passivation process that is used on most of our customers' products. Outside operations can be costly in the processing, shipping and handling charges, and timing. By keeping the product in our shop we can control the passivation process and reduce our customer associated costs.

## Results:

- *Sanitary durability unmatched by mechanical surface preparations*
- *Maximum stainless steel corrosion protection without plating*
- *No rust discoloration*
- *Eliminates iron contamination reactions with other materials*
- *Retention of smooth surface finish for easy cleaning and sanitation processes*
- *Complete submersion ensures all surfaces are treated*
- *Complete control and possession (in-house) of your products ensures post-passivation activities will not contaminate or jeopardize surface treatment*
- *By making this process readily available to our customers, the majority now insist on having their equipment, machinery, products and piping systems passivated using MILLARD PassPRO*™
- *ASTM A967 Certified*

***NOTE: Millard reserves the "In-house" Passivation process for our customers only.***

**Millard Manufacturing is ready to help you make your project a success. Give us a call today!**