

Professor Zinc says, “Follow ASTM 385 on overlapping surfaces to avoid ugly, dangerous outcomes.”

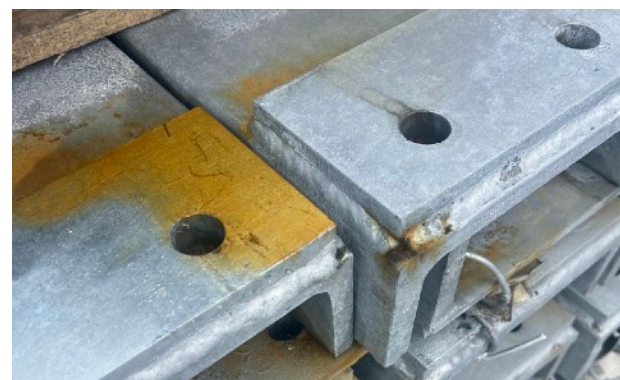
Q. We had rust-colored stains on some galvanized fabrications around holes drilled into plate that was welded onto steel channel. The zinc coating meets spec for thickness in the stained areas, so no problem there, but it looks bad. See photo. What caused this?

A. This photo shows the need to carefully follow **ASTM A385/385M Standard Practice for Providing High-Quality Zinc Coatings (Hot-Dip)**, also known as the Design Spec, when fabricating steel for galvanizing.

When the plate, with holes drilled through it was attached to the channel, the outside edges of the plate were seal-welded, but the edges inside the holes were not. When the fabrication was dipped during the cleaning process, fluids entered through the holes in the plate and were trapped between the plate and the channel. In the galvanizing kettle, immersion in the 850°F molten zinc vaporized the trapped fluids, pushing them back out through the holes, leaving the iron oxide stains behind.

Where surfaces overlap, and the overlapped area is less than 16 sq. in., there are a couple of welding options that meet **ASTM A385** that **would eliminate this problem.**

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One is to provide a gap of at least 3/32-inch (2.5 mm) between the overlapped pieces using an intermittent fillet weld on all sides so that a pocket is not formed. This will ensure that all fluids drain out before galvanizing and that the area will be wetted by the molten zinc in the kettle. However, this type of welding may not be suitable for load-bearing members. In situations where the gap must be less than 3/32-inch, **all** edges should be completely sealed by welding.

Scan the QR code above or visit <https://galvanize.com/knowledge-base/professor-zinc/> to read the complete answer.



Galvan Industries, Inc. Hot Dip News

Read more inside:

- *Meet Kristin Zandrowicz, Human Resources Generalist*
- *AGA Launches New Infrastructure Web Site*
- *A Firm Foundation for Utility Poles*



GALVAN RUST-PROOFS I-95 PROJECT IN LUMBERTON, NC

The NC Department of Transportation is widening I-95 in eastern North Carolina for about eight miles between I-74 (Exit 13) and US 301 (Exit 22) in Lumberton, adding two additional travel lanes in each direction. The project also includes modernizing interchanges, replacing bridges and culverts and elevating sections to prevent flooding.

Galvan Industries was selected to rust-proof pipe piles and other steel components for the new bridges and interchanges. The NCDOT chose Galvan to galvanize the pipe piles for longer, maintenance-free service life and to protect the steel as it is driven into the ground. The \$432 million project is scheduled to be completed by the late summer of 2026. **See more on next page.**



Galvan protects major highway improvement project in Eastern NC

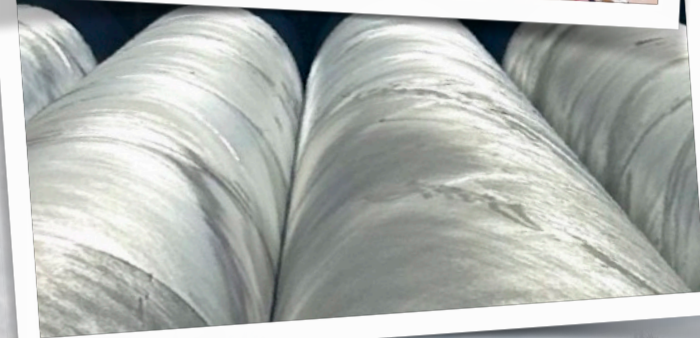
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The purpose of the project is to relieve congestion, improve mobility and enhance the resiliency of East Coast's primary north-south motor route. Hot-dip galvanized steel prevents costly and damaging corrosion and extends the life of infrastructure for decades to come, protecting these important investments.

Galvan's storage capability is also important to the project. With 35 acres of open storage, Galvan can hold the raw steel at the plant and galvanize it as needed to keep the project moving forward efficiently. Galvan also assists in transportation of the finished steel to NCDOT construction sites.

"This modernization is long overdue," said Grady Hunt, a state Transportation Board member who lives in Robeson County. "This vital corridor needs to be widened, but also upgraded to be more resilient against future hurricanes."

For galvanizing service that makes your project more efficient and resilient, call Galvan Industries today.



A firm foundation can last a lifetime

These custom engineered anchor cages will secure electrical transmission poles to concrete foundations and reinforce the foundations at the same time. Steel transmission poles can range from 40' to 120' tall. Foundation depth is usually 1/6th the height of the pole, so different size anchor cages are needed for different applications. Galvan hot-dipped the exposed portions of the cages to ensure a safe, rust-free, lifetime connection between the foundation and the pole. BTW, we galvanize transmission poles, too. Contact Galvan today to add safety and long life to the steel in your project or product.



NEW EMPLOYEE SPOTLIGHT:

Kristin Zandrowicz, Human Resource Generalist

Kristin Zandrowicz, Galvan's Human Resource Generalist, works to make sure every Galvan employee is taken care of, from orientation to payroll and benefits. Her past experience in this capacity at manufacturing and industrial maintenance companies makes her a perfect fit at Galvan.

Kristin was previously Payroll and HR Administrator at Superior Industrial Maintenance and, earlier, Human Resources Generalist at Wilbert Plastic Services. Her duties at those companies were wide-ranging, including involvement in interviewing and hiring, payroll coordination and insurance administration, reviewing adherence to safety and training policies, and helping manage retirement plans.

Kristin maintains in-depth knowledge of Galvan's insurance and benefits programs and shares that knowledge with Galvan employees. Galvan's goal – and Kristin's – is to provide a support system that helps employees concentrate on work: doing things the right way and taking advantage of growth opportunities.

Prospective employees are often drawn to Galvan by the company's stability and long history of growth. Kristin adds depth to the HR department that translates to a motivated team focused on customer satisfaction.

"At Galvan, our focus is always on the customer," says Laurens Willard, President of Galvan Industries. "Kristin's strengths will help enhance our ability to meet our customer's needs."



Visit AGA's New BIL Infrastructure Web Site

Build to Last: Galvanize Our Infrastructure

Hot-dip galvanized (HDG) steel is long-lasting, durable, versatile, and sustainable. HDG steel can protect our infrastructure into the next century.

The American Galvanizers Association (AGA) recently launched a new infrastructure-focused website to support the use of Hot-Dip Galvanized (HDG) steel to extend the life of infrastructure projects funded by the Bipartisan Infrastructure Law (BIL) passed in 2021.

The new Web site, markets.galvanizeit.org, highlights the use of galvanized steel in roads & bridges, power & broadband, passenger/freight rail, public transit, airports, ports & waterways, and water/wastewater facilities.



The site also includes additional resources, such as KnowledgeBase Articles, and listings of other products commonly galvanized within each sub-market to help specifiers locate pertinent technical information and answer frequently asked questions.

HDG steel can help maximize the value of the BIL investment in virtually every sector. Contact Ben Kelly at Galvan, 704-455-5102 to discuss maximizing the value of your next infrastructure project.

