

Tech Talk Q&A

**Holes in hollow fabrications
are solid galvanizing design**

By Professor Zinc

Q: "What are the basic requirements for drain and vent holes in hollow fabrications?"

A. In the hot dip galvanizing process, steel fabrications are lowered into a bath of molten zinc at a temperature around 860 degrees F. The high temperature will rapidly raise the internal pressure inside hollow structures (up to 3600 psi) causing them to rupture or explode.

Therefore, all hollow fabrications being galvanized must allow for the venting and draining of air, moisture, and molten zinc for safety reasons.

Venting and drainage also affect lifetime performance of the galvanized structure, ensuring that all interior and exterior surfaces are properly cleaned and galvanized to protect them from corrosion, inside and out.

The size and location of the holes vary depending on the product, but they are critical to achieving successful and safe galvanizing. Because items being galvanized are immersed in and withdrawn at an angle from cleaning solutions, flux solutions and molten zinc, vent holes should be located at the highest point and drain holes at the lowest point as mounted during the galvanizing process.

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The size of holes also has an impact. Larger holes allow faster flow of zinc in and out of the article, making immersion and withdrawal easier. This will result in a better quality finish.

A variety of fabricated steel products require vent and drain holes. Galvan has produced a **Design Guide for Hot Dip Galvanizing** with examples of good venting and draining from the American Galvanizing Association. It is available as a download from our Web site at <http://www.galvan-ize.com/galvanizing.asp>. You can also request a printed copy by email from sales@galvan-ize.com.

Thanks for the question. We hope you find the answer helpful.

**Do you have a question for the Professor?
Submit it online at www.galvan-ize.com/mrzinc.asp.**

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Galvan Industries, Inc. Hot Dip News

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GALVAN PROTECTS AND BEAUTIFIES 300 SOUTH TRYON

300 South Tryon is a 634,000 sq. ft. high-rise office building under construction in Charlotte, North Carolina. With a planned height of around 463 feet, it will be among the tallest buildings in Charlotte by the time of its expected completion in 2017.

Adjacent to the Romare Bearden Park and the BB&T Ballpark, 300 South Tryon the first new high-rise office tower to be constructed in Charlotte in more than seven years. The building is owned and developed by Spectrum Properties.

Galvan is providing corrosion protection for the distinctive roof structure of the building. The fabricator is painting the galvanized steel with a white macropoxy, creating a long-lasting and beautiful duplex coating system.



RUST-PROOFED FROM SUN TO SEA

Galvan has a long, successful history protecting a wide variety of manufactured products from corrosion, from support beams for solar panels (upper left) to clam cages for Northeast fisheries (lower right).

Solar panels are continually exposed to harsh weather conditions. Rust prevention that can withstand constant exposure to the sun's unforgiving heat and UV rays without maintenance is an important consideration.

Many paints are sensitive to UV light and begin degrading as soon as exposed. Blistering and peeling paint causes underfilm corrosion of the steel, leaving it inadequately protected and open to corrosion. The zinc in Galvan's hot-dip galvanized coating is unaffected by UV light. Zinc oxide, one of the corrosion products created by the coating's zinc patina, effectively blocks UVA and UVB rays.

Hot-dip galvanizing's protective coating is also unaffected by continuous exposure to temperatures between -40 F and 392 F, meaning it will perform in virtually any environment without degradation.

Moisture is highly corrosive to most metals, but galvanized coatings provide considerable protection to steel exposed to sea water and salt spray. Hot-dip galvanizing is one of the best ways to prevent rust in such applications because of its complete, uniform coverage.

OEM Customer Shoutout

We know that consistent quality, finish and on-time delivery are critical to manufacturers. So when product requirements call for a lifetime of maintenance-free rust prevention, Accu-Fab, Inc. a high-quality contract manufacturer in Raleigh, N.C. calls Galvan. In fact, they recently gave us this shout-out on LinkedIn: **"Looking for a hot dip galvanizing supplier in the southeast? Galvan Industries has got you covered, providing years of rust-free life for exposed steel."**



Contact Ben Kelly at Galvan (bkelly@galvan-ize.com) to find out how we can add value to your product. And be sure to visit us on LinkedIn.



Galvan Honored With Street Name Change

Galvan Industries, Inc. has been located on Millbrook Road in Harrisburg, N.C. for more than 50 years. We're still there in the same place, but recently the Town of Harrisburg renamed the street due to the closure of a railroad crossing on Millbrook. The new name is Galvan Way.

We are honored, but also just a little concerned that in the short term, before the new street name shows up on GPS systems or maps, there could be some confusion.

If you have visited our plant or office in the past few years, nothing has changed except the street name. If you are making your first trip to Galvan and can't find Galvan Way on your map or GPS, look for Millbrook Road instead.

Search Galvan Industries on Google and you'll find us at "7320 Galvan Way (formerly Millbrook Road)" with directions that will take you right to our door. If you are making a delivery, our receiving entrance is located at 12000 University City Blvd.

EMPLOYEE SPOTLIGHT:

RAY YOW, GENERAL FOREMAN



Ray Yow, the general foreman for Galvan Industries, is one of the company's longest-serving employees. He has been with the company since 1988.

As general foreman, Ray is responsible for overseeing all aspects of the plant, including quality control, receiving and shipping, production scheduling and day-to-day operations.

Working with Stephanie Klicpera in customer service, Ray helps prepare the plant's weekly schedule.

"Planning and implementing the production schedule is a major part of the job," says Ray. "It's a part I enjoy, too. There is a lot that goes to it. Certain things have to be done at certain times, customers have different delivery requirements, so it's kind of like working a puzzle. You have to make it all fit so that everybody gets what they need."

Ray's job also involves working with staff in the hot-dip plant to directly oversee quality and determine areas for potential improvement.

"I started out on the production line years ago and I've done just about every job in the shop along the way. Having that kind of experience makes it easier to give direction or make adjustments when we need to," Ray said. "I also make sure our plant employees follow our safety policies, and any other mandatory rules."

"Ray has strong leadership skills," says Galvan's president, Laurens Willard. "That gives him the ability to provide guidance and support out in the plant as necessary. He also has a great understanding of our processes which helps us maximize our capabilities so we can take care of our customers in a timely manner."

"At Galvan, our focus is always on the customer," he added. "We count on Ray's experience every day to meet our customers' needs."

Away from work, Ray likes to spend time with his family, traveling and just being outdoors. He has been married to wife Toni since 1988. They have four children: two sons and two daughters.