

Tech Talk Q&A

Professor Zinc Says

**"When the box gets smaller,
the vent percent gets bigger."**

Q: "We are fabricating a piece with a 6" x 2" x 39" long capped rectangular tube welded to a steel beam. What is the correct size and placement of vent holes on the tube section?"

A. The size of vent openings for a rectangular tube or box section depends the size of the tube. The smaller the area of the tube, the larger percentage of that area must be allowed for venting.

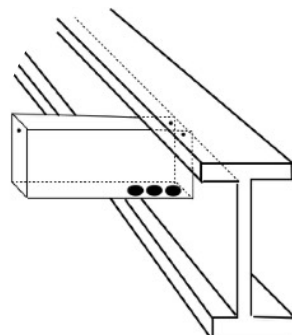
According to **ASTM 385/A385M – Standard Practice for Providing High-Quality Zinc Coatings (Hot-Dip)**, the following formulas apply to venting box sections.

- Box Sections— $H + W = 24$ in. [610 mm] or larger—Area of hole plus clips shall be at least equal 25 % of the area of the box ($H \times W$).
- Box Sections— $H + W$ less than 24 in. to and including 16 in. [384 mm]—use 30 %.
- Box Sections— $H + W$ less than 16 in. to and including 8 in. [192 mm]—use 40 %.
- Box Sections— $H + W$ under 8 in. leave completely open; no end plates or internal gussets.

In your case, the area is 12 sq. in., which means

the vent openings must equal a minimum of 4.8 sq. in. (40%).

The best arrangement of the vent holes would be three equal size holes with a total area of 4.8 inches on the bottom side of the tube. These holes will allow the molten zinc to fill and drain from the tube. Two additional ½-inch diameter holes are needed at the top corners of the tube where the flanged end connects with the beam, to prevent air pocketing in that area during the hot dip galvanizing process. Another ½-inch diameter hole is needed at the top center of the tube cap, also to allow air to escape during dipping.



Thank you for your question! We're always happy to provide advice to help you get the best galvanizing possible.

Contact Galvan Industries, Inc.
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Hot Dip News Spring 2021



Galvan Industries, Inc. Hot Dip News

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- *Meet Production Manager Nharu Wright*



INDUSTRIAL PLANTS AND DATA CENTERS GO BIG WITH GALVAN

Galvan has the size and experience to rust-proof your longest fabrications. Our large kettle and expertise in "progressive dipping" allow us to galvanize materials 80 feet or more in length! The work shown here is more than 70 feet long.

Industrial crane rails and long structural steel spans for data centers, like those shown above are a **perfect fit for Galvan**, but they are **too much for some of our competitors!** Galvan is your galvanizer for every need. **Contact Ben Kelly at Galvan for your BIG jobs.**



New Video Highlights Galvan's Rail Services and Value-Added Capabilities

Galvan is one of the only galvanizers in the Southeast offering railcar loading and unloading capabilities. The option for rail transportation gives our customers the opportunity for big savings. Our rail capabilities reduce shipping costs substantially on pieces 60 feet or more in length or traveling more than 300 miles. Steel distributors can ship steel straight from the mill by rail to our facilities to save on transportation. Customers can also take advantage of our 35 acres of open storage, blast cleaning, cutting and drilling to meet specific order requirements, to add value and boost your profits.

Of course, we'll galvanize your steel and guarantee it to meet ASTM specs and our own high quality standards. After galvanizing, we can handle the shipping of your finished materials to one job site or multiple locations by truck or rail, local or long distance.

Our rail and storage capabilities combine with our value-added services to create opportunities for our customers to reduce costs and improve profitability. We're more than just a galvanizer. We're a value-added partner in your steel business. Watch our video at <https://galvan-ize.com/services/#RAILCAPABILITIES> /



OEM PRODUCTS:

Careful Handling is Part of Every Job

Galvan not only protects OEM parts from rust, we make sure they get to your plant looking good! Galvan uses protective palletizing, non-metallic straps, shrink wrap and careful handling so that our finish will enhance your product. **Call Galvan today. We sweat the details.**

EMPLOYEE SPOTLIGHT:

Nharu Wright, Production Manager

Nharu Wright, production manager for Galvan Industries, has led the company's hot dip galvanizing operations since 2019.

At Galvan, Nharu directs and manages plant operations for production, quality control, shipping and receiving. He develops production schedules to meet internal goals and customer expectations, while motivating and leading plant employees to put out good quality work as efficiently and safely as possible. All this adds up to one thing.



"I spend all day ensuring the customer is happy," Nharu says.

Prior to joining Galvan, Nharu built an impressive resume of more than 20 years production experience, including stints as Production Manager at Saertex in Charlotte, NC, and Mannington Mill in Conyers, GA, overseeing and providing professional development for scores of indirect reports, shift supervisors and team leaders in large multi-shift operations.

"Most of my career has been in a production environment," he added, "which I enjoy because every day is different and another day to be better than yesterday." Working to make every day better than the day before is one reason Galvan customers come back again and again.

"Galvan is a growing company. Nharu's focus on improving how we meet all our customers' needs will help us keep growing into the future," says company president Laurens Willard. "His years of experience and capabilities make him a major asset for our customers."

Nharu is a graduate of John T. Hoggard High School in Wilmington, NC and holds certificates in leadership, training and business software applications.

Away from work, Nharu enjoys small home improvement projects and spending time with family and friends. "Cooking is my thing," he says. "I love bringing family and friends together over a good meal with fun and laughter."

AUGUST 2020





 **GALVAN INDUSTRIES, INC.**