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Electrical Systems Integrator/Designer Project Profile

CUSTOMER: Lectrus®

APPLICATION: Electrical enclosures

LOCATION: Houston, TX

CONTRACTOR: Raymond Nelson Plumbing

Viega ProPress® system for stainless simplifies installation of drainage system on large electrical enclosures

Lectrus is a leading electrical systems integrator and designer/manufacturer of large metal enclosures. Headquartered in Chattanooga, TN, the company offers its custom engineering and project management services worldwide.

Its product line includes walk-in, modular electrical equipment and operator centers, generator enclosures and custom metal enclosures that safeguard electrical and control systems. The company's products are engineered to order, giving end users flexibility, mobility and protection of their electrical power distribution and generation equipment.

Raymond Nelson, Owner/Plumber
Raymond Nelson Plumbing, Houston, Texas

Lectrus is currently manufacturing 11 modular enclosures for Australia's Gorgon Project. The massive natural gas project involves the development of the Greater Gorgon gas fields, subsea gas-gathering infrastructure and a liquefied natural gas plant.

Inside the 11 enclosures are motor control centers and variable-frequency drives (VFDs). To keep that equipment cool, each unit contains a chiller system, along with a special drain. The drain exists solely to allow the safe removal of cooled liquid in case the chiller system develops a leak. That's where Raymond Nelson Plumbing comes in.

The Houston-based contractor is installing the piping for the drains. The one-man operation has been headed by Raymond Nelson since 1985. According to Nelson, the customer wanted the drains to protect the sensitive environment in Australia.

"The liquid that keeps the air cool inside the buildings is not allowed to spill on the ground," Nelson explained. "If the chiller system springs a leak, the liquid will be safely drained and collected."

All 11 modular enclosures will be piped using Viega ProPress stainless. "Up on top, there are two pipes that run to a fan unit to chill the liquid," Nelson said. "The liquid then circulates and cools the air inside the enclosure. Inside each drive, there are 10 cabinets, and at the bottom of each cabinet, there's a pan connected to the pipes that go out the side of the building. The drain is only there in the event of a coolant leak."

The engineering firm for the project had originally specified butt-weld fittings for the Gorgon modular enclosures but Nelson was able to convince Lectrus and the parties involved to use Viega ProPress stainless fittings. "With the original specs, I would have to weld flanges on every fitting," he pointed out. "I showed Lectrus the

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Viega ProPress brochures and they and their customers approved pressing with stainless.

“I told them I could save them a lot of man-hours because there is no need for a welder,” he continued. “It took two-and-a-half days to do just one building with Viega’s ProPress system for stainless. I probably saved the customer seven to 10 working days.

“The pressing work was all done right next to the building,” Nelson added. “None of the piping was prefabbed. Viega sent me the stainless pipe and I used my chop saw to cut it. Then I deburred it, made my measurements and pressed it right there.”

The Gorgon Project was the first time Nelson used the Viega ProPress system for stainless. “Once I saw how easy it was, I wanted to try it,” Nelson said. “You just have to make sure the pipe is properly aligned with the fitting before it’s pressed.

> *“It took two and a half days to do just one building with Viega ProPress stainless. I probably saved the customer seven to 10 working days.”*

“When the work was complete, I air tested the piping to make sure the connection was tight,” he continued. “I was extremely pleased with the results. It’s also very professional looking.”

Nelson said that with pressing, he can make a connection even if there is water in the pipe. “It used to be if I had a leak on a water main, I’d have to drain the water completely out before I could solder it,” he said. “I couldn’t get the pipe hot enough if there was water in it. With the Viega ProPress system, I can just place a fitting and press it, even while the pipe is draining water.

“With sweating, the solder drips down,” he added. “It’s that much more to clean up. Customers really like the fact that everything is so clean when I do a job with Viega’s ProPress system.”

Nelson also likes the way that pipe connected with Viega ProPress stainless stands up to vibration. “I’ve seen threaded pipe that has failed because of excessive vibration,” he explained. “In one case, I used regular 304 threaded stainless and it passed the 150-psi test. The delivery truck must have hit every bump in the road because the pipe leaked all over the place. There is no vibration failure with pressed pipe. I have never had a leak problem with the Viega ProPress system for stainless.”

The contractor recently finished the second modular electrical enclosure for the Gorgon Project. Once the electrical equipment is installed in the third building, he will connect the drain piping. “The work is spread out, so it will take me into next year to finish all 11 buildings,” Nelson said.

“Because I was using Viega ProPress, I was able to pipe the Gorgon buildings all by myself,” he said. “That’s how easy it is. All it takes is just one person to do the job. Viega has really made joining pipe simple and I just love it.”

For more information on Viega ProPress stainless, visit www.TheTorchIsPast.com or call toll free: 866.766.7805.