



## Vestas Project Profile

**CUSTOMER:** Vestas Wind Systems  
**APPLICATION:** Wind turbine manufacturing facility  
**LOCATION:** Pueblo, CO  
**CONTRACTOR:** Olson Plumbing and Heating

### Viega ProPress® stainless system chosen over welding to cut installation/retrofit man-hours at wind turbine plant

*“ Installing stainless pipe with Viega ProPress took a fraction of the time that butt-welding would have taken. ”*

With alternative energy sources in high demand, Vestas Wind Systems made a substantial investment in 2009 by building North America’s largest wind turbine manufacturing facility. The Denmark-based energy company is a world leader in equipment designed to harness the power of the wind.

Located in Pueblo, CO, the plant was built between January and June 2009. Olson Plumbing and Heating of Colorado Springs was selected to install the industrial gas and compressed air piping for the project.

Olson had prior experience with Viega’s pressing technology on copper tubing installations. Because of that success and the volatility of copper prices, it was decided that the Viega ProPress® stainless system would be used for the Vestas installation.

Viega’s ProPress stainless fittings and pipe offer speed, safety and reliability without compromising the quality of the installation. The system uses the patented Smart Connect® feature, which is available only from Viega. It allows installers to easily spot unpressed connections during pressure testing.



#### Tracy Dupree

Olson Plumbing and Heating (Colorado Springs)

John Hill, superintendent of Olson Plumbing and Heating, oversaw the original installation, as well as the continuing retrofit projects at the plant. “We were going to use orbital welding to connect the stainless pipe,” he explained. “We looked at different ways to install but it really came down to man-hours. For welding, we were looking at 40 men on site and 20 in fabrication. That was one of the big concerns.

“By using the Viega ProPress stainless system, we were able to reduce the number to 24 guys on site and 20 in fabrication,” he continued. “Some of that reduction was due to the design and fabrication but most of it was because of Viega ProPress stainless.”

After prefabricating some of the Viega ProPress stainless connections and piping at the Olson shop, the installation teams piped the 500,000-square-foot production area and a 50,000-square-foot internal area at the Vestas facility. Stainless steel pipe and fittings in sizes ranging from 1/2" to 4" were used in the installation.

The teams installed 21 miles of stainless pipe over a five-month period. “Using Viega ProPress instead of welding saved the company a lot of time,” stated Hill. “The Vestas project was completed within budget about three or four weeks ahead of schedule. Installing stainless pipe with Viega ProPress took a fraction of the time that butt-welding would have taken.”



Compared to welding, the time savings of Viega ProPress ranged from about 95 percent for 2" pipe to nearly 93 percent for 4", according to data published by Olson.

Now that the plant is up and running, Olson Plumbing and Heating continues to handle retrofit and maintenance projects as required. "Olson does 95 percent of the retrofit work at Vestas," said Hill. "We've had at least two dozen retrofit projects there. We're still at the facility today doing work such as adding compressed air lines."

"The Vestas plant is basically all Viega ProPress stainless," he added, "and the company wants us to continue using it. They don't want to do anything different because Viega ProPress stainless has worked so well."

"We've had a great history with Viega ProPress for copper," continued Hill. "Olson was probably the first in the area to use Viega ProPress on commercial piping installations. The Vestas project was the first time we used it for stainless steel."

"Our estimate was mainly based on welding hours and costs," said the superintendent. "Our documents show a significant time and cost difference between a 3" orbital weld versus a 3" Viega ProPress connection."

"Vestas likes Viega ProPress because they can easily tie into the current piping with transition fittings," said Hill. "Generally, when we leave a facility, the customer's maintenance personnel buy their own pressing tools and make the Viega ProPress connections themselves. They just love it."

According to Hill, another consideration for using Viega ProPress stainless is the high cost of copper. "When copper rises to a certain price, it makes sense for us to use stainless steel. The price of stainless is more stable, so we can lock in on it more easily. At Vestas, they're trying to push using stainless now. It's good-looking pipe and it's durable. We get a lot of compliments."

"We also love the guarantee that comes with Viega," he summed up. "The company is really great about backing up their products and even have their people travel to the job site to resolve any problems. I give them kudos on that."

**For more information on Viega ProPress stainless, visit [www.TheTorchIsPast.com](http://www.TheTorchIsPast.com) or call toll free: 866.766.7805.**

### Stainless Steel Butt-Weld vs. Viega ProPress for Stainless in Man-Hours

Size	Welded 90	Viega ProPress 90	Difference	Savings
4"	7.46	0.54	6.92	92.77%
3"	6.32	0.40	5.92	93.66%
2-1/2"	5.58	0.34	5.24	93.91%
2"	4.96	0.28	4.68	94.36%

*Note: MCAA labor calculators were utilized in the labor estimate*

