

How did Vaetrix get involved with Gas Distribution pressure monitoring for Dominion?

Polyethylene (PE) pipe and fittings are used to carry natural gas to many residential and commercial locations throughout the United States and World. It is very durable, flexible, and does not break down over time due to corrosion. Heat fusion is used to joint the pipes in most scenarios. In short, heat fusion is the process of preparing two surfaces to a designated temperature using sufficient force. The heat and force causes the material to melt and mix resulting in a permanent fusion that is permanent. The process must be performed by certified technicians, typically with a fusion machine to both local and national standards such as ASTM F2620. Once the pipe is fused, the pipe is pressure tested for leaks typically with air for twenty minutes at a designated pressure depending on volume and other requirements for that particular installation. The standard practice for sometime has been to use a cheap analog gauge, typically at 100 PSI, and watch the needle to make sure things did not drop. The readings and time were written down by hand every five minutes using a company form by a designated approved contractor.





Dominion was looking to automate the process and upload the results so that every joint performed on a section of pipe in the field could be totally verified as successful moving forward with instant access to the results based on the location. We were made aware of the application by working with RCP and Flint Hill Group. A special mobile application was developed that focused on the Vaetrix hardware and Bluetooth capability so that every test in the field would be automatically logged and rated good based on the application requirements. The pressure, time, temperature, and GPS coordinates are automatically loaded to the secure Dominion servers for processing and linking. This is all done automatically to a documented procedure which eliminates the guess work if the test was performed properly. The engineer or quality personnel reviews the records and approves it with a click of the button. There are no papers to submit or any other means of extracting data, therefore saving time and preventing any transcribing mistakes. A special case was developed to house the gauge for IP67 rating, portability, and cold weather testing below 32°F.

Vaetrix Hardware

A 300 PSI Vaetrix gauge panel mounted in an enclosure with Bluetooth, exterior battery access, and backup USB for calibration, power, and data extraction. A viewing window was added as well so that any technician could see the gauge to verify readings should their phone lose power.

This is just another example how Vaetrix is willing to work with companies to produce custom products to solve problems. There are not too many manufacturers willing to do this unless there is huge volume! Be sure to check out RCP and [TestApp](#) for further information

