



APPLICATION SPOTLIGHT

Horizontal Gas Well Completions – Chemical Injection



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APPLICATION:

An Oil and Gas Service Provider in West Virginia utilizes AW-Lake Gear Meters during horizontal gas well completion processes to monitor the dosing rate of various chemical additives for well completion. This project involved two different points in the process. The smaller “Dual Pump Injection Skid” is primarily used for injecting lubricant during horizontal well perforation and stimulation (fracturing) processes. This lubricant creates a friction-reducing layer between the wellbore and the perforation tool as it is pumped down to the deepest parts of the horizontal section. This lubricant is essential to eliminate the risk of the tool hanging or sticking in the wellbore.

The larger Chemical Injection flow meters are employed during the well drill-out or work-over process, which occurs after the perforation and stimulation phase of well completions. During this stage, plugs that were set during perforation and fracturing are removed using a drill rig. Various chemical aids are employed to reduce fluid friction and pipe-on-pipe friction, facilitate debris removal, control organic matter, and prevent corrosion. These units have the capacity to pump up to four individual chemicals at different rates simultaneously.

In both of these applications, maintaining the proper chemical concentration is essential and may vary depending on several factors. By utilizing positive displacement meters with local displays, operators are able to precisely adjust the injection pumps to the appropriate rate.

PRODUCT SUPPLIED:

- AW-Lake JV-BB positive displacement flow meters
- RT-10A flow displays





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CHALLENGE:

The need for accurate, easy to operate, and reliable instrumentation with a price point that is reasonable while maintaining the ability for new and old operators to learn a new piece of equipment in an efficient time.

SOLUTION:

The customer designs and builds units specifically for direct chemical injection. While there are other units made for this very application, the simplicity in design and operation allow them to provide a superior service for fractions of what other companies charge. The inclusion of AW-Lake products as part of our design was the best choice for accuracy, operability, and budgetary concerns.

RESULTS:

I have worked with many variations of flow monitoring devices from many different companies. During the design phase, I was in contact with several different companies for quotes for the intended componentry. At the end of the day, your products have performed as good as or better than others.

"No one can expect anything to work without fail in this type of environment but, the few minor incidents we have experienced were handled very efficiently. Product support from AW-Lake is second to none. Offering solutions and repairs when needed that have saved us time and resources."

