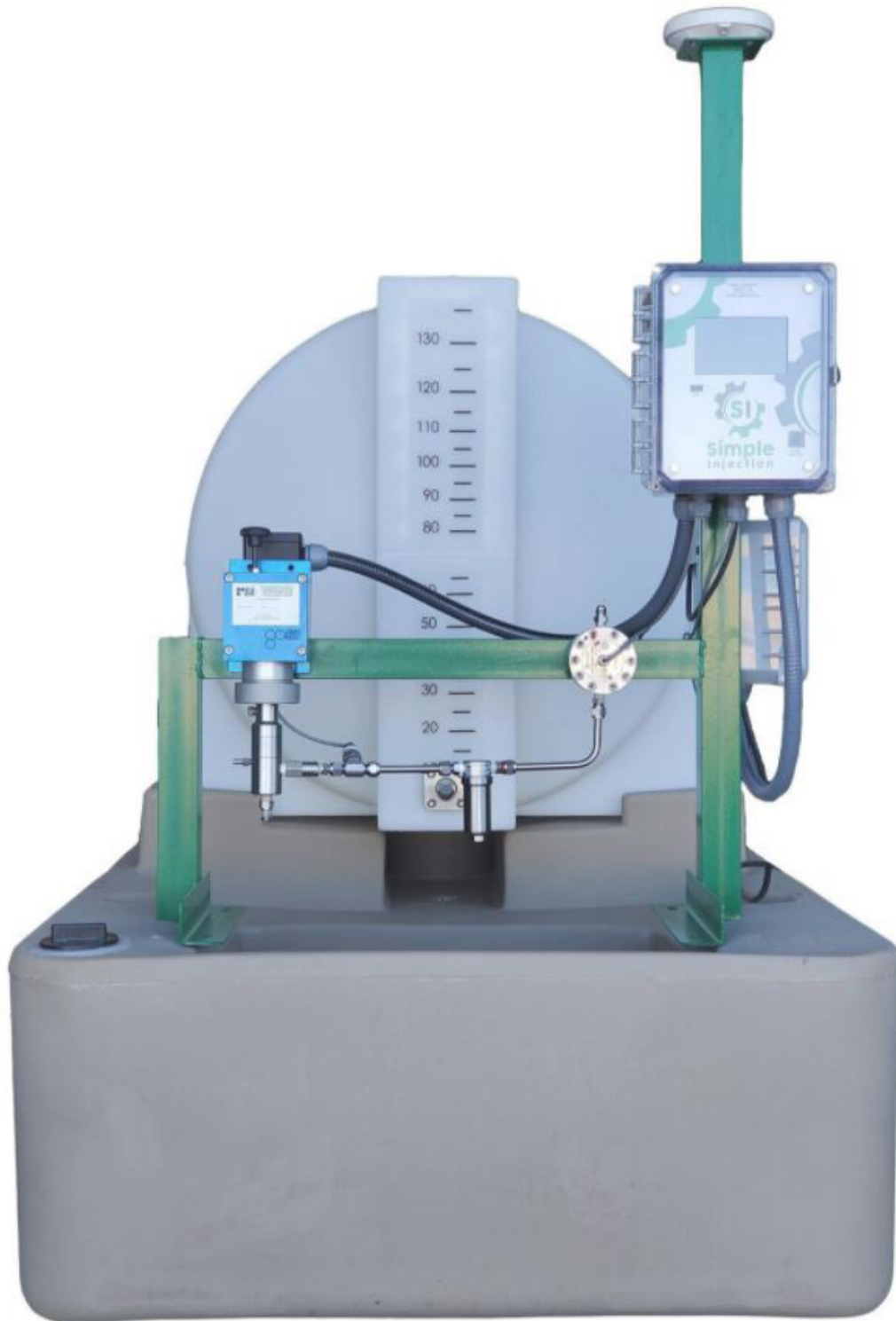




AW-LAKE
PROCESS FLOW MEASUREMENT



APPLICATION SPOTLIGHT

Onshore Stand-Alone Chemical Injection System



Onshore Stand-Alone Chemical Injection System



APPLICATION:

An automated pump controller offers a stand-alone solution for the remote control of chemicals injected into new and existing oil and gas wells. Specialized chemicals are injected into well to help reduce corrosion, separate oil/gas/water, and inhibit unwanted materials for increased oil recovery and production. The controller required a flow meter that could continually and accurately measure the rate of chemicals injected into the well or reservoir.

PRODUCT SUPPLIED:

- AW-Lake Nject-05-2500 PD Flow Meters

CHALLENGE:

Chemical injection has different obstacles with low and pulsing flow rates, changing pressures, varying chemical viscosities, and inconsistent injection rates due to common pump performance issues. Often, operators question whether the pump injects chemicals to set parameters. Frequently, the answer is 'no' as it is common for injection rates to be 15-25% off. The challenge is accurately and consistently measuring the amount of injected chemicals to avoid over-treatment and waste of expensive chemicals.

SOLUTION:

Coupling an AW-Lake Nject-05-2500 Flow Meter with the automated pump controller ensures a consistent and accurate measurement of the

true amount of injected chemical. Specifically designed for chemical injection applications in onshore oil fields, the Nject gear meter produces high resolution and accuracy (+0.5% of reading) at low flow rates. Affordable and rugged, the gear meter provides superior corrosion resistance with longer service life. The flow meter also can handle short pump shot times (<1 sec) and remain accurate. With the addition of the Nject Gear Meter to the controller, operators can precisely control injection rates.

Placing the Nject Gear Meter after the chemical pump enables the immediate detection of any potential pump issues. Receiving alarms on a dashboard or mobile app, the operator can immediately diagnose the problem, turn the pump on/off or change injection rates.

RESULTS:

The AW-Lake Nject Gear Meter plays a role in fully automating the pump controller. The flow meter's consistency and accuracy provide confidence that the injection rates meet operating parameters. Customers now observe injection rates within 3% over a wide range of pressures. Chemical injection accuracy, coupled with the ability to detect potential pump issues, means substantial cost savings in chemicals, labor, and equipment.