SIEMENS

Take the guesswork out of managing your sand stock with weighing technology

Process Instrumentation

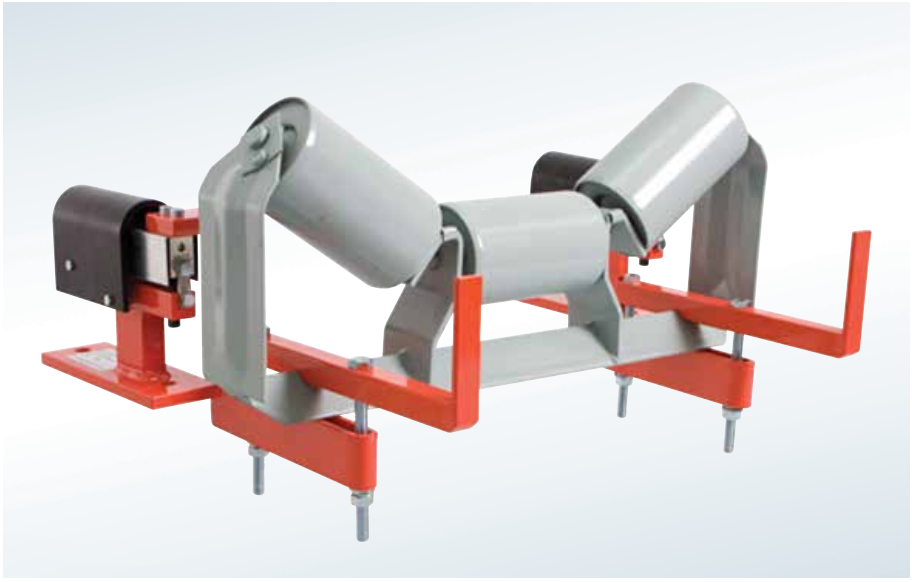
In the world of hydraulic fracturing, your inventory is the key component of your operation. Whether at the mine, distribution center or well site, if you run out of sand you'll jeopardize the entire process. On the other hand, careful management of your inventory can result in major cost savings. Keeping accurate tabs on sand quantity at a well site, for example, is a great way to significantly reduce demurrage fees. Therefore, being able to measure how much sand you have is essential for ensuring that there is always an adequate supply on-site.

How is sand currently being measured?

Today, sand is measured either by rough estimation or by using a level device. While these techniques can provide you with enough information to order additional sand, they can't paint you a precise picture of exactly how much is currently available. Furthermore, a level device has the potential to falter or break as a result of the harsh environment and/or coarseness of the sand. So let's consider a belt scale instead. Belt scales are built for difficult operating conditions and are still able to maintain accuracies up to 0.125%.

How does weighing technology help mines?

At the mine, after the sand is extracted from the ground, it's mixed with water and sent through the hydroclassifier, which then sorts the sand based on size. After the hydroclassifier, water is separated from the sand and the sand is transferred to stock piles. It is stored there until being moved to the dry processing side of the mine. To accurately track inventory levels of each sand grade, two Milltronics MUS belt scales from Siemens are used to measure



The Milltronics MUS belt scale features a universal design for ease of installation on non-standard conveyor designs.

The Milltronics BW500/L is a stand-alone integrator for use with belt scale applications to monitor material movement on a conveyor.

how much sand is put into the stock pile and another is used to measure the sand as it is removed. Siemens' weighing technology takes the guesswork out of tracking and managing sand stock.

The Milltronics MUS belt scale features a modular design, which allows for mounting on any conveyor type with the load cells positioned high off the conveyor frame for protection and to avoid the adverse effects of material buildup. The MUS features corrosion-resistant nickel-plated alloy steel parallelogram load cells, built-in overload protection and dual load cell covers for optimum protection. The Milltronics RBSS speed sensor is a robust belt-driven device with a rugged 60-tooth sprocket detected by a magnetic switch. The MUS and RBSS are combined and connected to a Milltronics BW500/L, which has onboard Modbus ASCII, RTU, 2 relays and 1 mA output as well as multiple choices for digital communication including Profibus DP, ProfiNet, DeviceNet, Modbus TCP/IP and Ethernet/IP. The extensive options offered by the BW500/L make it ideal for direct integration into any plant system.

These intelligent and reliable devices from Siemens support plant operators in monitoring inventory levels as precisely as possible, helping to optimize production and avoid delays. As fracking evolves and becomes more automated, Siemens can offer a complete portfolio of weighing, level, flow, pressure and temperature instrumentation complemented by motors, drives, HMIs, PLCs and control systems.

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