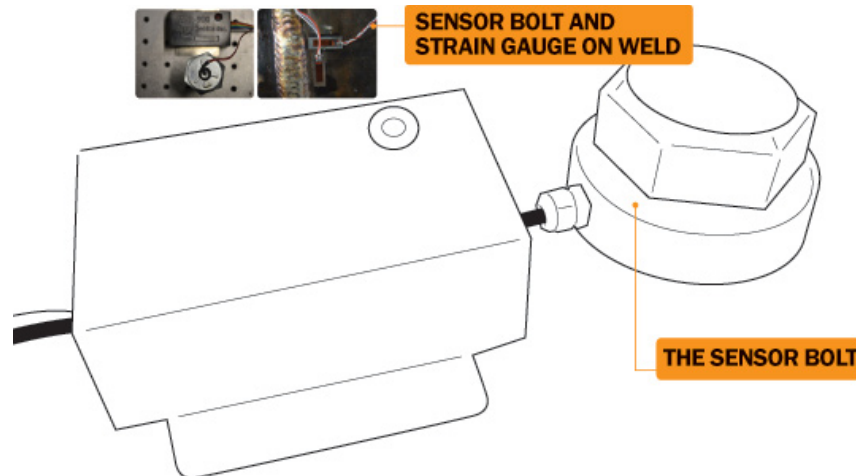


Tension Trouble

Scanimetrix Inc. says its strain-gauge devices can save oil sands producers billions of dollars annually in lost revenues.



The Edmonton-based company manufactures wireless strain gauges that attach to oil sands equipment to measure metal fatigue. “They monitor when metal is going to fail,” says president and CEO Steve Slupsky. “You predict when metal is going to fail and then you schedule your maintenance at the optimal time.” The devices minimize production downtime and, the company says, reduce repair costs.

Slupsky says unscheduled maintenance contributes to companies like Suncor Energy Inc. missing their annual production targets. “Something breaks down in the middle of nowhere and they’ve got to send a crew out to deal with that problem,” he says. “The biggest impact of unscheduled maintenance is to reduce production capacity.”

In Suncor’s 2010 fourth quarter report, the oil sands giant listed “unplanned mine equipment and extraction plant maintenance” as factors that “could impact production targets.”

“They’re very rugged,” Slupsky says of the strain gauges, which fit inside a rectangular box small enough for the palm of his hand. “You could probably throw these out of an airplane.” The devices can measure the metal density of pipelines, the metal strain in heavy hauling equipment and even the tightness of bolts.

Right now, the strain gauges are being tested in exciter machines at oil sands upgraders. Scanimetrix products are in place to measure the tightness of the bolts holding the machine together. When a bolt needs additional torque, a separate software platform alerts an operator which loose bolt should be tightened.

Scanimetrix’s vice-president of sales and marketing, Christopher Sellathamby, demonstrates the software systems at the company’s Edmonton office using a remote control dump truck. The truck is connected to a strain gauge, which wirelessly signals a nearby computer. “As [the truck] bounces, you can see [the effect] on my computer screen there,” he says. “As soon as you go over a bump or something, it leaps.”

“If you look at the raw data, it doesn’t really mean much to the operator,” Sellathamby says. “But if you switch to the real-time analysis mode, it automatically gives you the strain vector so you can see right away how big it is.” He says the technology will let managers monitor equipment strength from Edmonton and Calgary as operations teams use the equipment in the field.