

Press Release

Clean Harbors Introduces Small Diameter Ultrasonic Smart Pigs

Advanced inspection for small diameter pipelines and fired heater tubes

NORWELL, MA – September 14, 2010 – Clean Harbors, the leading provider of environmental, energy and industrial services throughout North America, today announced new untethered ultrasonic smart pigs to inspect fired heater tubes and small diameter pipelines. The company has miniaturized and advanced a technology that was previously available only for larger diameter pipelines or had limited data storage capabilities. The new technology supports petroleum, refinery, chemical, paper and other process manufacturing operations.

Detailed Inspections and Reporting

Clean Harbors' smart pig inspects straight lines and navigates short radius one diameter bends in process heaters and plant lines. It inspects up to Schedule 160 pipe in a variety of metallurgies, including but not limited to stainless steel, chromes and standard carbon steel configurations. Vacuum-style fired heaters with multiple pipe diameters can be inspected in addition to hard-to-reach convection sections. The tool operates in several liquid media, but is normally run in water at ambient temperature.

The smart pig samples 360 degrees of up to 12 miles of tube wall (using one battery pack) at a rate of 2,400 samples/second with a travel velocity of one-two feet/second and a travel measurement resolution of ¼ inch. Its custom-designed transducer produces A, B and C scan data, as well as 3-D color-coded representations of wall thickness. It identifies corrosion and erosion for continued monitoring or replacement and takes radial data measurements to prove tube cleanliness. It also records denting, ovality and pipe and tube swelling.

Clean Harbors' smart pig plots wall thicknesses with end-of-life calculations based on either nominal thicknesses or compared to previous inspection data. Powerful software produces preformatted and custom spreadsheet and graphical reports in many formats. All data collected are turned over to the client.

“Clean Harbors' smart pig is a major advance over manual, visual spot checks of a few accessible points,” explained Billy Musgraves, Clean Harbors General Manager Inspection Services. “We now offer comprehensive, real-time inspections for previously inaccessible areas and give our clients the ability to inspect the mechanical integrity of every inch of their small diameter pipes and tubes.”

Complete Bundled Pigging Services

Clean Harbors offers highly efficient and cost-effective bi-directional, closed-loop pig cleaning and inspection services. It is the only single-source, full-service provider to offer comprehensive pigging and smart pig inspection technology for refinery and in-plant process equipment, along with unmatched industrial services and hazardous waste management capabilities.



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The company maintains complete control through in-house manufacturing of pigs built under strict quality control specifications. The Clean Harbors low-temperature, low-pressure pigging process maintains safety while minimizing downtime and capturing all removed deposits for proper disposal at Clean Harbors facilities when applicable.

Clean Harbors' smart pig services are available immediately. For additional information visit www.cleanharbors.com/smartpig.

About Clean Harbors

[Clean Harbors](http://www.cleanharbors.com) is North America's leading provider of environmental, energy and industrial services serving over 50,000 customers, including a majority of the Fortune 500 companies, thousands of smaller private entities and numerous federal, state, provincial and local governmental agencies. Headquartered in Norwell, Massachusetts, Clean Harbors has more than 175 locations, including over 50 waste management facilities throughout North America in 36 U.S. states, seven Canadian provinces, Mexico and Puerto Rico. The Company also operates international locations in Bulgaria, China, Sweden, Singapore, Thailand and the United Kingdom. For more information, visit www.cleanharbors.com.

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