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PROJECT DTPH56-07-T-000008

Girth welds in new pipeline construction have stringent inspection requirements to insure pipeline safety. Current automated ultrasonic inspection testing systems are complex and are limited to post process application. Laser ultrasonics is a noncontact technique that can perform ultrasonic measurements on hot, moving surfaces. The goal of this project is to apply laser ultrasonics for monitoring the integrity of girth welds in real time, using a measurement sensor that is mounted in tandem with the weld head. This project is consolidated with a parallel project on the development of hybrid laser arc welding for girth weld production. In the seventh quarter, we have the design of the measurement head to be used on the weld machine. Machined parts have been received and assembly and test will begin shortly, in preparation for a demonstration on May 28, 2009.

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