

Public Page

Mechanical Damage Inspection Using MFL Technology Agreement DTRS56-02-T-0002 7th Quarterly Status Report Period April 1 to June 30, 2004 Contractor: Battelle

The goal of this project is to design an improved magnetic flux leakage (MFL) inspection tool, commonly referred to as a MFL pig, for mechanical damage. We have completed fabrication on the magnetizer and sensor designs for the simplified multiple magnetization tool. The unique design presented may be worthy of a patent. Battelle has begun the process and plan to complete the filing in September. After the filing, the details will be released in the next public page.

The technology developed under this project that may be worthy of a patent involves the magnetizer design. This design will produce the high and low magnetic field that are useful in detecting and assessing mechanical damage defects in pipes cause by third party excavation equipment. The design features a significantly shorter length without reducing the inspection capability. This will enable the pig to fit in standard launchers and receivers available on pipelines. Another feature of this design is the ability to pass tight bends. This will enable this mechanical damage inspection technology to be applied on pipelines that are difficult to pig. Also in this design, the sensors that measure the high and low field are physically connected. This reduces the complexity of signal process associated with the rotation of the pig as it travels through the pipeline. In summary, this technology will provide pipeline companies with additional inspection tools without requiring changes to the pipeline system.

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