Innovative Pipeline Evaluation and Repair

Dan Hunt, Environmental Management, Tinker AFB, Oklahoma City, OK
Wayne C. Smith, Tetra Tech, Inc., Midwest City, OK
Sid B. Nice, Baker Atlas, Houston, TX

Abstract

Effects of time and corrosion take their toll on the aging pipeline infrastructure across our nation and serve to increase the likelihood of pipeline failures according to industry reports. The consequences of such failures include worker and public safety, environmental clean-up, and the like. Unscheduled repair and maintenance costs have also become an area of major concern among pipeline operators. To combat this on-going problem, pipeline operators rely on proactive mechanical integrity surveys to limit failure and associated risk exposure. However, this effort is usually limited to the long, large-diameter transmission lines that have launcher and receiver facilities.

Operators now recognize that a high number of their failures occur in the shorter and/or small-diameter pipelines, many of which were considered "un-piggable" by the industry. As the frequency and cost of failures in this category are realized, it becomes apparent to operators that all failures, regardless of pipeline size and length, can create significant risk exposure and expense to their companies.

Most pipeline operators are unaware of the tethered, magnetic flux leakage inspection system specifically designed by Baker Atlas for the shorter, small-diameter pipelines. Typical application for this service includes oil and gas production flowlines, product lines, river crossings, refineries, and industrial and municipal piping. Since most these types of pipelines are not equipped with launchers or receivers, the tethered inspection system is ideally suited.