

## Electromagnetic Technology

### Background

The Nuclear Energy Institute (NEI) guideline, NEI 09-14, Guideline for the Management of Underground Piping and Tank Integrity, specifies that inspections must be performed on buried pipe at nuclear power plants.

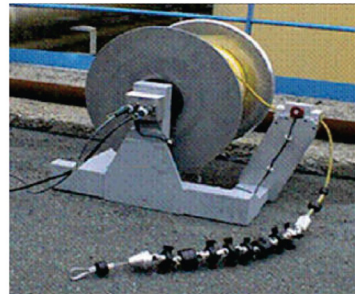
Based on the number of materials, systems and geometries that are involved in buried pipe applications, a variety of inspection techniques are applicable.

Westinghouse, through its subsidiary WesDyne International, offers electromagnetic technology (EM) as a solution for inspecting buried ferrous pipes with typically no excavation needed. The inspection method is performed from the inside of the pipe, which requires minimal or no cleaning of the pipe inside diameter (ID).

### Description

Dependent on the application, remote field eddy current, pulsed eddy current or magnetic saturation eddy current are the primary techniques used for EM technology. These techniques have been widely used in other industries such as oil, gas and water distribution.

As with all types of EM technology, it is not necessary to clean the pipe before inspection. Magnetic fields generated by WesDyne's systems allow for this non-contact technique to be used on many different types of ferrous pipes. Because of this non-contact method, inspections can typically be performed through liners with minimal or no cleaning of the pipe.



Remote field eddy current probe with brushes used for centering

## Benefits

- Does not require direct contact with the pipe
- Not necessary to clean pipe in most applications
- No excavation required
- Able to provide volumetric inspections of coated or lined ferrous pipes

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