

Visual Inspection Services

Background

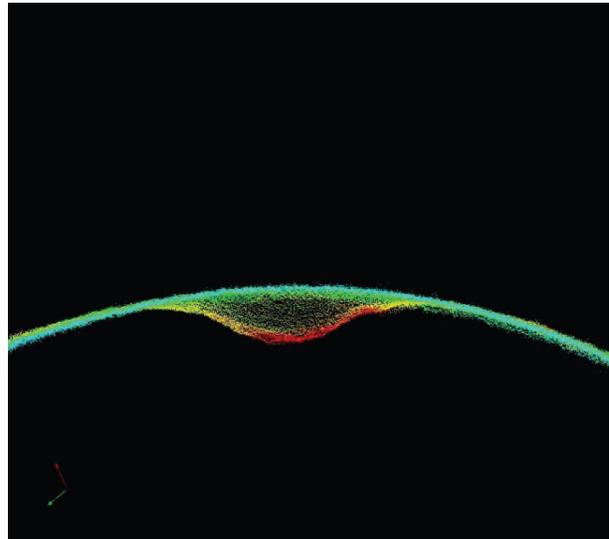
The Nuclear Energy Institute (NEI) guideline, NEI 09-14, Guideline for the Management of Underground Piping and Tank Integrity, specifies that inspections must be performed on buried pipe at nuclear power plants. Based on the number of materials, systems and geometries that are involved in buried pipe applications, a variety of inspection techniques are applicable.

Westinghouse, through its subsidiary WesDyne International, offers a full range of visual techniques that can provide for basic and advanced visual inspection of buried pipe, including 3D modeling.

Description

Visual testing (VT) is one of the more common nondestructive examination (NDE) inspections performed at any nuclear plant. VT can be used to provide a general assessment of the condition of the pipe's inside diameter (ID).

VT testing consists of deploying a camera to perform a general assessment of the pipe condition. Depending on the details of the piping system to be inspected, boroscopes or cameras mounted on a crawler would be used to inspect the ID of the pipe.



Representation of a pit on a pipe using laser technology

In addition to basic VT inspection, lasers are commonly used for providing references in order to size and measure foreign objects and indications. WesDyne has improved on this technology and is able to generate a 3D model of the surface being inspected using these lasers, special cameras and innovative software.

Benefits

The basic visual inspection technique is a flexible, reliable method for screening and assessing the condition of the pipe ID surface. The results of this information can be used to plan additional inspection activities.

Three-dimensional profiling can give precise measurements of the ID surface to map out areas of corrosion.

Experience

This technology has previously been used for boiling water reactor inspections.

WesDyne is the nondestructive inspection branch of Westinghouse and a leading supplier of mechanized nondestructive examination (NDE) products for all inspection needs worldwide. As such providing turnkey and one-off-type solutions with a focus on the nuclear market. WesDyne's expertise spans all aspects of remote and mechanized inspections, from problem analysis and solutions generation to development and manufacturing to field deployment of personnel and equipment. Inspection capabilities cover all key NDE areas such as ultrasonic, visual, eddy current, magnetic particle, dye penetrant and X-ray.

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