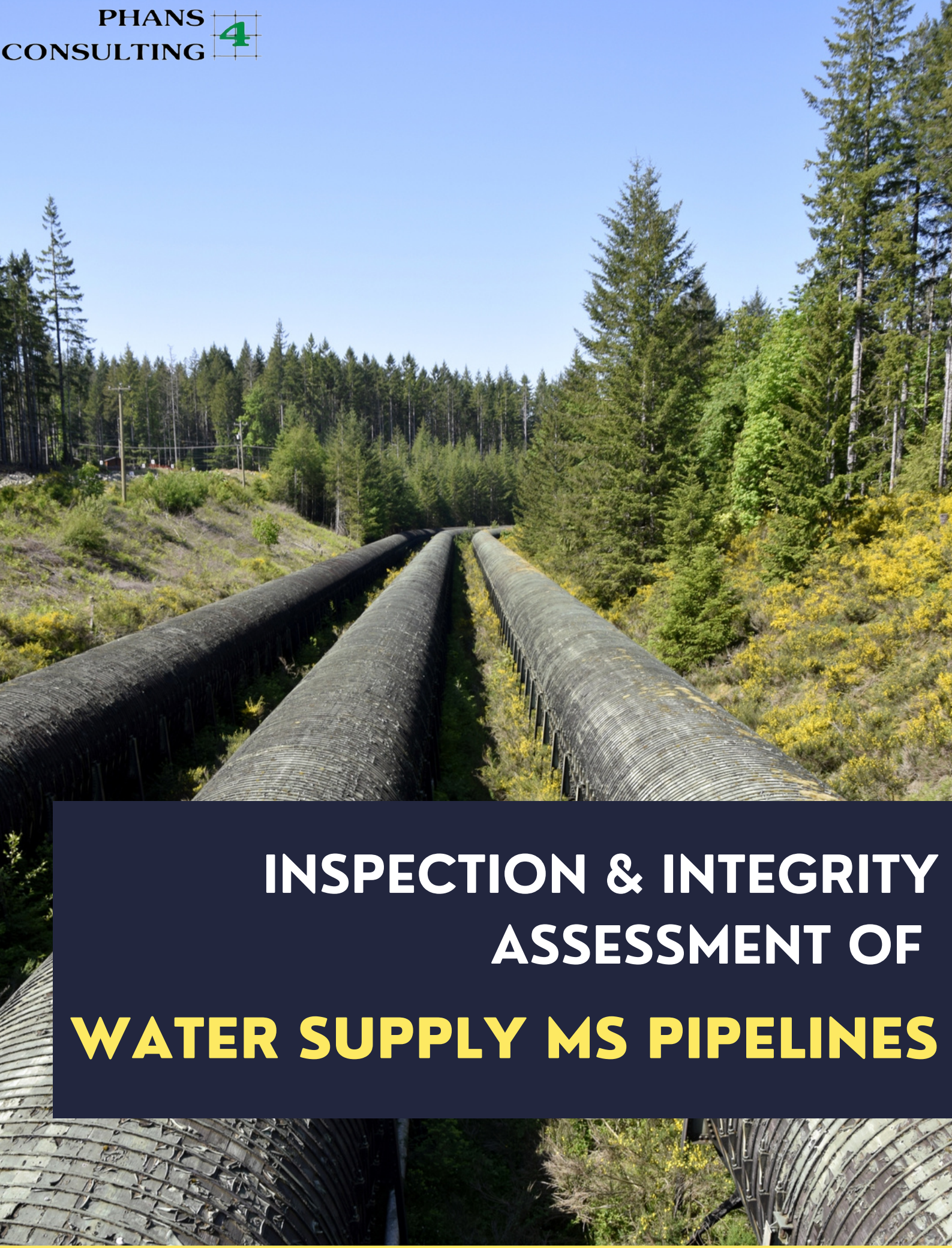
PHANS CONSULTING 4



INSPECTION & INTEGRITY ASSESSMENT OF

WATER SUPPLY MS PIPELINES

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About Phans4:

Phans4 consulting is an inspection and testing agency employs qualified personnel who specialize in inspecting and testing mechanical equipment, Our experts are well qualified in relevant fields with international approved certifications to perform tests and inspections. They undergo continuous training to stay updated on the latest inspection techniques, testing methods, and regulatory requirements, Familiarity with Regulations and Codes. They all have experience working in relevant industries such as manufacturing, oil and gas, petrochemicals, power generation, or any other field involving mechanical equipment.

INSPECTION & INTEGRITY ASSESSMENT OF WATER SUPPLY MS PIPELINES

Our Approach to the project:

PREPARATION:

- Gather all necessary equipment for inspection, such as ultrasonic testing (UT) equipment, magnetic particle testing (MPT) equipment, dye penetrant testing (DPT) equipment, etc.
- Ensure that the pipeline is clean and free from any external contaminants or obstructions.
- Obtain all necessary permits and clearances for conducting the inspection.

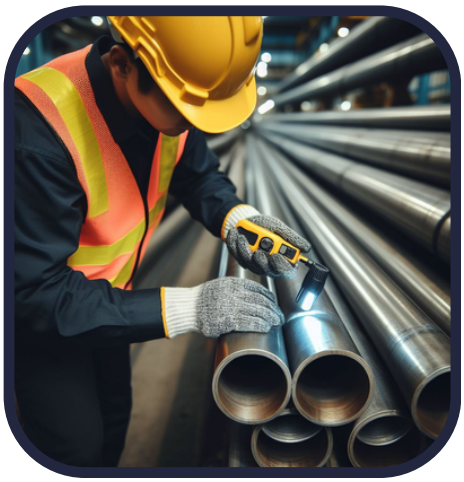
VISUAL INSPECTION:

- Conduct a visual inspection of the pipeline to identify any visible signs of damage, corrosion, leaks, or other defects.
- Look for any signs of external corrosion, such as rust, pitting, or flaking of the pipe surface.
- Check for any signs of leakage or seepage at joints, valves, or other connection points.

ULTRASONIC TESTING (UT):

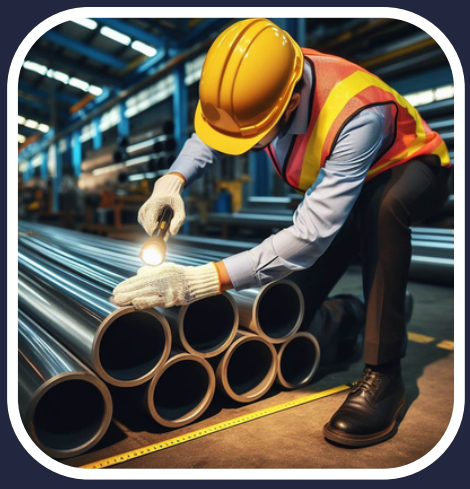
- Use ultrasonic testing equipment to detect and measure any internal defects or wall thickness variations in the pipeline.
- Select appropriate UT techniques, such as thickness measurement, shear wave inspection, or corrosion mapping, based on the specific requirements and condition of the pipeline.
- Scan the pipeline using the UT equipment, ensuring complete coverage of the pipe surface.
- Interpret the UT results to identify any indications of corrosion, wall thinning, cracking, or other defects.

MAGNETIC PARTICLE TESTING (MPT):



- Conduct magnetic particle testing to detect any surface or near-surface defects in the pipeline.
- Clean the pipeline surface thoroughly to remove any dirt, grease, or foreign materials.
- Apply magnetic particles on the surface and use a magnetic field to induce any defects to become detectable.
- Inspect the surface using appropriate lighting, and check for any indications of cracks, surface irregularities, or other defects.

DYE PENETRANT TESTING (DPT):

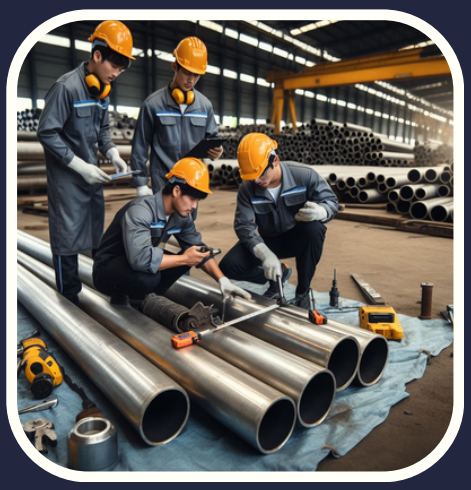


- Perform dye penetrant testing to detect any surface cracks or defects that may not be easily visible.
- Clean the pipeline surface and apply a penetrant solution.
- Allow the penetrant solution to soak into any defects or cracks.
- Remove the excess penetrant and apply a developer that will highlight any indications of defects.
- Inspect the surface under appropriate lighting conditions to identify any indications of defects

INTERPRETATION & REPORTING:

- Collect and analyze all the inspection data obtained from the visual, UT, MPT, and DPT tests.
- Evaluate the results against established acceptance criteria and standards for MS pipeline integrity.
- Identify and prioritize any issues, defects, or areas of concern.
- Prepare a comprehensive inspection report detailing the findings, including photographs, measurements, and any recommendations for repairs or further investigations.

MAINTENANCE & REPAIRS:



- Based on the inspection findings, develop a maintenance and repair plan for addressing any identified defects or issues.
- Carry out necessary repairs, such as patching, welding, or replacement of damaged sections.
- Implement a regular maintenance program to prevent further deterioration and ensure the long-term integrity of the water supply pipeline.

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