Teamwork



## **COMPANY PROFILE**



Certificate Number 11066 ISO 9001

### **Company Background**

Oilfield Technical Inspection Sdn Bhd (OTI) has been in operation since 2005. OTI provides expertise and equipment in third party engineering inspection, non - destructive testing (NDT) and quality assurance/ quality control (QA/QC).

OTI's niche market is specialization in inspection during pipeline installation and related facilities; inclusive of onshore & ofshore inspection. OTI applies advanced NDT techniques such as Automated Ultrasonic Testing (AUT), manual encoded Phased Array Ultrasonic Testing (PAUT), customized internal crawlers (x-ray & video) in addition to conventional NDT methods.

OTI is managed by a team of professionals who have been in the inspection business (both onshore and ofshore projects) in energy sector for the last sixteen years. In terms of accumulated experience, its management team has more than a hundred (100) years of experience and has worked on more than two hundreds projects worldwide (from Russian waters to Nigerian waters). The cumulative experience of OTI workforce exceeds 1000 man-years in Inspection and related activities.

To ensure competitiveness, OTI has developed and manufactured its own series of Pipeline Crawler equipment for the radiographic inspection of these pipelines. OTI has also embarked on the process of design, manufacture and maintenance of all hardware related to AUT and components like the umbilical.

"OTI offers experience, expertise and equipment in third party engineering, inspection, non-destructive testing and quality assurance / quality control" Focus on "Pipeline Radiography", AUT and Specialized NDT Services

Design and Manufacturer of Crawler System

Specialist professionals with qualification, experience & expertise

Internationally recognized and respected service provider





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## **SERVICES PROVIDED**



### Automated UT (AUT) Girth Weld Inspection

GE Weldstar AUT, which our company utilizes, is the latest generation pipeline girth weld inspection system. This is an automated ultrasonic testing (AUT) solution that provides all functionalities required for the job, from setup to data archiving. Combining conventional and Phased Array ultrasonic, this advanced inspection tool provides the benefits of both techniques without compromise.

GE Weldstar's unique modular design with ultrasonic electronics located on the scanner head and the simple umbilical that can be changed quickly provides huge benefits in terms of almost negligible interruption to work.

OTI AUT systems ofer Inspection Integrity and Rapid Defect Detection through;

- Hybrid ultrasonic flexibility
- Highly versatile scanner design
- Industry-best resistant to electromagnetic interference
- Ultimate availability because of great reliability and ease of serviceability
- Reporting functions include statistical analysis, including trending, apart from regular reporting formats

### Phased Array UT (PAUT)

The OmniScan family includes the innovative phased array and eddy current array test units, as well as the eddy current and conventional ultrasound modules.

The OmniScan MX ofers a high acquisition rate and powerful software features in a portable, modular mainframe to efciently perform manual and automated inspections.

Typical Applications;

- Girth Weld Inspection
- Pressure Vessel Weld Inspection
- Scribe Marks Inspection with No Paint Removal
- Aircraft Fuselage Inspection



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### CONVENTIONAL NDT

Radiographic Testing (RT)

Most weldments of steel pipes in energy sector require some method of testing to determine the quality of the welding. A common method of testing is by radiographic examination. Radiographic testing aims to record images of flaws introduced into the welds. These could be process defects (e.g. porosity, lack of fusion) or service-related conditions (e.g. corrosion-cracks).

Radiographic inspection is carried out utilizing radioactive sources such as Ir-192, Se-75 or Co-60 and also with X-ray irradiating apparatus. Our technicians are highly experienced not only in the use of these radioactive sources and X-Ray equipment but also take pride in holding a clean safety record on all projects undertaken.

### Dye Penetrant Inspection (DPI)

This method of testing is suitable for detecting defects open to the surface only and on any material that is essentially nonporous. A bright colored penetrant or a fluorescent ink is sprayed on the surface of the component to be inspected. The penetrant will be drawn into any surface imperfections or cracks. After the excess penetrant is removed, a thin layer of developer is then applied. The penetrant will then be drawn out of the defects and made visible with use of visible light or ultraviolet light, as appropriate.

### Magnetic Particle Inspection (MPI)

This technique of inspection is suitable for detecting surface and sub-surface defects. Only ferromagnetic materials can be tested with this technique. An energized yoke is used to create a magnetic field by temporarily magnetizing the component to be tested. While magnetization is going on, a magnetic medium is applied. Any imperfections or defects will create a disturbance to the magnetic field flow and a distinctive pattern will be formed at the defect location which will make it visible.

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### Ultrasonic Testing (UT)

UT inspection is carried out on configurations of welds. whereby due to geometry and restricted access to either side of the area to be inspected, radiographic examination cannot be done, or where UT is known to exhibit better detection capability. An ultrasonic wave is sent into the material and the reflected wave is then analyzed. Flaws can be recognized by trained personnel on the instrument screen. Features of the flaw (like location, orientation, length, depth and height of the flaw) can then be identified and assessed.

This method of inspection holds advantages of detecting defects such as lamination and fusion-related defects for which radiographic examination is known to have lower probability of detection.



### OTHER SERVICES

Our company also provides other methods of inspection such as UT Thickness Gauging, Hardness Testing and Holiday Detection.

Besides testing services, we also ofer third party engineering inspection, quality assurance, quality control and certification services.

Our range of services will in future include the supply of specialist manpower ranging from engineers to multidiscipline inspectors and comprehensive programs for heat exchanger maintenance & inspection.



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