



ROTEX ENERGY SERVICES

...innovation, technology, excellence



CORPORATE PROFILE



OVERVIEW

LEADER STATEMENT

Without a **good team**, it is impossible to reach the heights of what Rotex Energy can achieve, and that is why we believe communication is a key component of effective leadership, upon which we shall focus and carefully listen to feedback and fostering honest communication between our team members. We will lead with integrity and support our team of professional employees as they work toward their professional goals.

This is our commitment

E.V. Enifome
CEO Rotex Energy

About Us

Rotex Energy Service is an indigenous Asset Integrity and Inspection Service provider in the Oil and Gas, refining and Construction Industry in Nigeria.

We are incorporated as a limited liability company in 2022 to carry on the business of Destructive and Non-destructive Testing services, Rope Access Industrial services, General Maintenance, Procurement, General Logistics (Offshore/Onshore)

With a solid team of experienced engineers, technicians, HSE professionals and craftsmen of proven track records, our company has been able to demonstrate our

proficiency in the execution of our projects in the most professional way taking cognisance of the safety & Health of our personnel, client facility and the environment.

Our strong management team of professionals have always demonstrated our proficiency in the execution of our client's project within specification.





WHAT WE DO

We help you ensure the reliability and safety of your products, equipment or plant assets with our world-class services in non-destructive testing (NDT), materials testing and welding quality. We understand the processes involved throughout the entire product cycle – from design and manufacture to operation and maintenance - and the frequent need for rapid turnaround times. Our Total Quality Assurance services can support production processes, quality control, and regulatory compliance as well as new construction, pipelines, plant maintenance and scheduled shutdown inspection.

Our team of rope access experts makes hard to reach areas an advantage in our evolving industry.

Rotex Energy works with a diverse range of industry sectors including oil and gas, refining, petrochemical, rail, general engineering, fabrication and construction. Wherever your company is based and whichever sector, our global reach means we can support you with our comprehensive range of services that include:

- Materials testing
- Specialist NDT services (Advanced/Conventional)
- Welding Services
- Non-destructive consulting
- Hull Surveys for Class Societies
- Man Power Supply Services
- Equipment Supply and Logistics
- Rental Services
- QA/QC Services

Our vast expertise and knowledge in NDT and materials testing means we can select the right techniques and procedures to detect defects and irregularities in your products, equipment,

production facilities or plant assets and provide you with necessary data to assist you in making informed decisions. Fuhren Energy can help you avoid the potential for catastrophic consequences and financial losses with early detection of problems before they cause damage, operating inefficiencies or in-service failure.

In addition to our non-destructive testing and materials testing, we provide a complete welding support service to help you with your welding requirements, comply with international and national codes and standards, and to enter new markets with our welder training and welder qualification.



Our Global Inspection Services

Advanced NDT

- Eddy Current Testing-(ECT)
- Remote Field Eddy Current Testing-(RFET)
- Internal Rotary Inspection System-(IRIS)
- Phased Array Ultrasonic Testing-(PAUT)
- Time of Flight Diffraction-(TOFD)
- Remote Visual Inspection/Boroscopy
- Long Range Ultrasonic Testing-(LRUT)
- Pulse Eddy Current Testing-(PECT)

Third Party Inspections

- Welding Engineer
- QA/QC- Supervisors/ Engineers
- Plant Inspectors

Conventional NDT

- Ultrasonic Flaw Detector
- Ultrasonic Thickness Gauging (Class Hull Surveys)
- Magnetic Particle Testing
- Dye Penetrant Testing
- Hardness Testing
- High Temperature Thickness Measurement
- Coating Thickness Measurement
- Visual Inspection Services

Maintenance and Logistics

- Lifting and Slings Operations
- Fabric maintenance (facility painting and coating)
- Lifting Inspection and Certification of lifting gears and accessories



Third Party Inspection & Advanced NDT Services

PHASED ARRAY ULTRASONIC TESTING (PAUT)

Present day structural assessment, flaw analysis, fitness-for-service assessment and engineering critical assessments require flaw data in a more accurate and precise way with regard to their location, shape and size.

Phased array ultrasonic technology with its associated flaw evaluation software can provide flaw data accurately and precisely for the fracture mechanics based acceptance standard.

This technique is used to detect flaws that cannot be easily found with conventional non-destructive testing methods such as radiography and manual ultrasonic testing.

Rotex Energy specialises in the use of phased array in the oil and gas, power generation and chemical industries, especially for the construction of new piping, pipelines, vessels and structural welded members providing Total Quality Assurance

EDDY CURRENT TESTING (Surface & Near Surface Flaws in Conductive Materials)

This non-destructive testing technique is non-hazardous and commonly used in industries such as aerospace, rail, automotive, marine and manufacturing. One of the major advantages of eddy current testing is that inspection requires minimum preparation as there is no need to remove surface paint or coating. This makes it suitable for inspecting painted structures, parts and components.

Eddy current testing equipment is highly portable, reliable and can detect very small cracks. Results are instant, ideal for on-site testing on-site and plant inspections. Flaws can be reported immediately to site and operation managers, allowing for quicker decision making. In addition, the portability of equipment means that we can inspect equipment or assets that are difficult to access, and test complex shapes and sizes.

PULSED EDDY CURRENT TESTING (PECT)

Pulsed Eddy Current Testing (PECT) is an inspection technique used for corrosion under insulation (CUI) screening on carbon steel structures as pipes, vessels, tanks and spherical tank legs without the need of contact with the steel surface. PECT is a static technique able to measure spot percentage variations in steel thickness through any non-conductive and non-magnetic material between the sensor



and steel surface such as air, insulation material, concrete, plastics, coatings, paint, sea water, marine growth, deposits, oil, etc. PECT is a comparative technique where the percentage variations measured on the specimen are compared with a calibration value which is always assumed to be the full wall thickness.

LONG RANGE ULTRASONIC TESTING (LRUT)

Long range ultrasonic testing (LRUT), also known as guided wave ultrasonic testing, is a fast and cost-effective method for inspecting long lengths of pipe. Intertek specialises in using LRUT at oil and gas refineries and in the downstream processing sector.

Hundreds of metres of pipe can be screened in one day from one single location and the technique can inspect 100% of the pipe wall. LRUT can be performed on piping that is in operation, insulated and buried, and in

areas that are difficult to access such as those at high elevations. The method can therefore save time and money that would otherwise be spent on excavation, insulation removal and scaffolding.

A ring of transducers is fitted around the pipeline and the transducers generate and receive low frequency ultrasonic guided waves along the pipe. The returning echoes indicate defects such as corrosion and other abnormalities.

REMOTE VISUAL INSPECTION (Boroscope/Videoscope)

Boroscope are used for visual inspection work where the area to be inspected is inaccessible by other means. Similar devices for use inside the human body are referred to as endoscopes. Boroscope are mostly used in non-destructive testing techniques for recognizing defects or imperfections



Conventional NDT Services

Ultrasonic Thickness Measurement (UTM)

Ultrasonic thickness measurement (UTM) is a non-destructive testing method used to inspect the metal thickness of ship hulls, piping and structural steel.

Thickness measuring is essential across many industries to monitor corrosion, erosion and damage. Ultrasonic thickness measurement (UTM) is commonly used and the method can be applied to a wide range of structures and components that includes ship hulls, piping, pressure vessels and structural steel.

Detection of metal loss caused by corrosion, erosion or damage is vital to ensure the continued safety and operation of the inspected item/structure. It can also help determine if repair work or replacement is needed or if the item/structure should be retired. Ultrasonic thickness measurement data gives customers the necessary information required to determine if the tested item has the adequate metal thickness for which it was designed.

An ultrasonic thickness gauge works by precisely

generated by a small probe called an ultrasonic transducer to travel through a test piece and reflect back from the inside surface or far wall. From this measurement, the thickness of the test piece is calculated and displayed on a digital screen.

Magnetic Particle Testing (MPT)

Magnetic particle inspection is often carried out to help determine an item's fitness for use or conformity. This quick and relatively easy to apply technique is widely used in all industry sectors including aerospace, automotive, petrochemical, structural steel, and power generation to inspect a variety of products and equipment such as engine, suspension and braking system components, castings, forgings and weldments.



The method can detect surface or near-surface flaws such as cracks, laps, seams and inclusions in ferromagnetic materials such as iron and steel. One of the main advantages of magnetic particle inspection is that it can give an immediate indication of defects and

Dye Penetrant Testing (DPT)

This non-destructive testing technique, also known as liquid penetrant inspection (LPI), is a cost-effective method used to locate surface breaking flaws such as cracks, porosity, laps, seams and other surface discontinuities. Dye penetrant inspection can be applied to both ferrous and non-ferrous materials and all non-porous materials (metals, plastics or ceramics).

It is commonly used to detect defects in castings, forgings and weldment. Rotex works with all industry sectors including aerospace, power generation, petrochemical and oil and gas, and we can provide dye penetrant inspection on-site at our clients.

Pipe and Vessel Inspection Services (API)

We at Rotex Energy possess extensive experience in pipeline inspections, asset integrity and production services, and have been the quality service provider for many of the largest onshore and offshore projects around the world. Our highly qualified crews of inspectors are available in the closest proximity to major pipe mills worldwide to provide cost-effective solutions for all types of pipeline projects.

We provide you with valuable inspection insights during the procurement, manufacturing, construction, commissioning and operation/maintenance phases.



Rope Access Services - Industrial

As the name implies, rope access uses ropes and climbing techniques and is commonly used by industrial clients for inspection and maintenance. It is a cost-effective alternative to scaffolding and mechanical platforms.

There are many advantages to industrial rope access including rapid mobilisation, minimal set-up time and limited disruption to operation or service.

Rotex Energy specialises in providing rope access solutions to the oil and gas (onshore and offshore), refining and construction industries.

Our rope access services include:

- Non-destructive testing
- PAUT/TOFD testing
- Ultrasonic thickness measurement (Hull Surveys in Tanks)
- Magnetic particle inspection
- Eddy current testing
- Dye penetrant inspection
- Lifting and Slings Services (Rigging Operations)
- Painting and Coating

Our personnel are highly experienced and qualified in their fields of technical expertise such as non-destructive testing. After performing rope access inspection or maintenance work, our team will provide written reports documenting the findings and results.

We are currently working to be members of International Rope Access Association (IRATA) and our multi disciplinary rope access team is certified by the organisation and trained in accordance with Safe Practices for Rope Access Work and Certification Requirements for Rope Access Work. The team is also trained to meet offshore and onshore clients' requirements including operator Safety Environmental Management System (SEMS) requirement.

Rotex Energy rope access services support your requirements for ensuring safety and reliability in your operation or service, and we can carry out full service Total Quality Assurance solutions anywhere access is needed. Our efficient, safe and quality rope access service gives you the confidence that you are operating to industry standards and have a cost-effective, flexible solution for inspection and maintenance at higher elevations.



OUR COMMITMENT TO HEALTH AND SAFETY

The management of Rotex Energy are committed to providing a safe and Healthy work place in all our facilities, office and operational work-sites, making every effort towards eliminating or minimizing any environmentally adverse impact during our operations.

We are committed in all our operations and at all locations where work is been carried out, to promote the highest standards in Health, Safety & Environmental Preservation and protection. This is achieved with the use of an established HSE management system that includes such elements as targets and standards for HSE performance, education and programs, motivational incentives, assessment and accountability for achievements of those targets and standards.



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