“Precision beyond the Expectations”

شركة خيرات الخليج للفحوصات الهندسية ذ.م.م
Khirat Khaleej Engineering Testing Company L.T.D

Basra - Al Jazaer area, Ben Gazwan St.
Building No.6. **Iraq**
Tel. +964 78 222 688 08

Amman - Khalda Abdullah, Azzam St.
Building No.8 1st Floor. **Jordan**
Tel. +962 78 75 11115

Email. info@kkhaleej.com
Website. https://kkhaleej.com

KKETCO

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COMPANY PROFILE

Khairat Khaleej Engineering Testing Co. Ltd.

We are dedicated to exceeding expectations through our unwavering commitment to quality, reliability, and customer satisfaction.

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ABOUT
COMPANY

Khairat Khaleej Engineering Testing Co. Ltd.
is a reputable Iraqi Joint-stock company that was established in 2013 with the aim of providing proficient non-destructive testing (NDT), and welding services to various industries throughout the Middle East; it cooperates on a large scale with a Jordanian partner, that is the Gulf Engineering testing est Company.

Over the years, **K.KETCo.** has built a proven track record of remarkable accomplishments in the field of non-destructive testing, thanks to its founders relevant expertise and due to utilizing the most cutting-edge NDT technologies.

In 2020, **K.KETCo.** established a special purchasing department to provide all necessary supplies for projects, from Iraq and all over the world.

We're Professional Quality Leaders

In addition, **K.KETCo** obtained several certificates for quality, safety **(ISO 17020, ISO 17025, ISO 45001, ISO 14001, ISO 9001)** and the highest Iraqi accreditation certificate, Iraqi Accreditation System **(IQAS) TYPE A .**

"**Where** Quality Meets **Integrity**"

ISO

(IQAS) is the national accreditation body in Iraq, responsible for accrediting organizations involved in testing, calibration, certification and inspection services. NO NDT COMPANY CAN OPERATE WITHOUT THIS CERTIFICATION.

OUR CREATIVE TEAM

K.KETCo's employees are endorsed for their long-term expertise and professionalism in handling sensitive technical duties, in addition to higher qualification and international certification and accreditation. They're continually subjected to extensive training courses and seminars to keep them updated with state-of-the-art technologies.

Our team members are equipped to perform their duties under the pressure of strict deadlines and difficult environmental situations, catering to the needs and requirements of our clients' projects with over 20 years of experience

TEAM MISSION

To provide a high level of innovation and quality in projects implementation, and to take part in the industrial advancement that we all seek.

MISSION

Applying strict and high standards of industry and service performance while mobilizing extraordinary efforts to ensure maximum client satisfaction. Together with our clients, we operate as partners to meet deadlines, maximize the quality of our work, and achieve targets. Our eagerness to meet our clients' expectations is a key factor to our success.

VISION

We seek to well-establish our company as one of the biggest reputable testing companies in the whole world, that provides the highest possible level of quality and accuracy.

Q: Is the testing worth the investment?
A: Definitely, YES!

CHAIRMAN STATEMENT

Izzat Khalifa

I would like to take this opportunity to reflect on our achievements, challenges, and future direction in the ever-evolving field of NDT.

Our commitment to safety, quality, and integrity remains unwavering as we strive to provide exceptional services to our clients across various industries.

Our commitment to excellence is evident in the breadth of services we offer, ensuring superior quality and cost-effective solutions for our valued clients. We take pride in delivering exceptional service and top-notch products, tailored to meet the diverse needs of our clientele.

OUR VALUES

Professionalism:
this value is the base value that our company is built on, and so are all of our relationships, whether with clients or with employees.

Integrity:
we adopt the highest moral standards which urge us to be transparent and neutral, which in turn guarantees the overall work integrity.

Sustainability:
this value is a practical application for the quote that says "reaching the top is hard, yet keeping it is even harder".

Innovation:
we create suitable environment for our individuals to encourage them to innovate and motivate them to keep going, develop themselves, and build excellent confident personality.

Teamwork:
this is our source of power; it increases both size and quality of our works

OUR SERVICES

Khairat Khaleej Engineering Testing Co. Ltd.
provide our clients with one of the most comprehensive inspection services available in the region.
From general and conventional inspection techniques to advanced inspection technologies, we are uniquely positioned to provide a robust inspection service.
With over **12 years** of experience in providing reliable, high-quality inspection solutions across multiple industries, we have the tools and expertise needed to solve the toughest NDT inspection challenges to help the client get the most value out of NDT solutions, allowing him to achieve the efficiency, accuracy, and safety.

Creat Creative Work To Grow Your Business

We Offer A Wide Spectrum Of NDT Solutions To Many Industries

- Oil Refineries and Oil Plants
- Oil Pipeline
- Natural Gas Pipeline
- Natural Gas Plants
- Water Plants
- Compressor Stations
- Oil, Gas and Water Tanks
- Petrochemical Industries
- Power Generation Facilities
- Steel Structure Factories
- Aircrafts and Components
- Building and Bridges

NON-DESTRUCTIVE TESTING

Many of modern construction projects and industrial facilities involve more complicated structures and severe working conditions than ever, therefore, any deficiencies or defects, no matter how small they seem to be, can lead to catastrophic accidents. So, engineering testing was a must, but, for economic considerations, it needs to be done on-site and with as limited damages as possible; here comes the need for non-destructive testing procedures.

As the name implies, non-destructive testing means conducting engineering examinations in order to detect any discontinuities within metallic or non-metallic materials, depending on the change of some physical properties, such as acoustic, magnetic and radiographic properties. Checking for welds defects is one of the most common applications of NDT techniques, since welds represent points of weakness and they often contain various types of flaws, for instance, cracks, porosity, splatter, undercut and so on.

Providing Solutions for Inspecting Materials Without Causing Damage.

CONVENTIONAL NDT

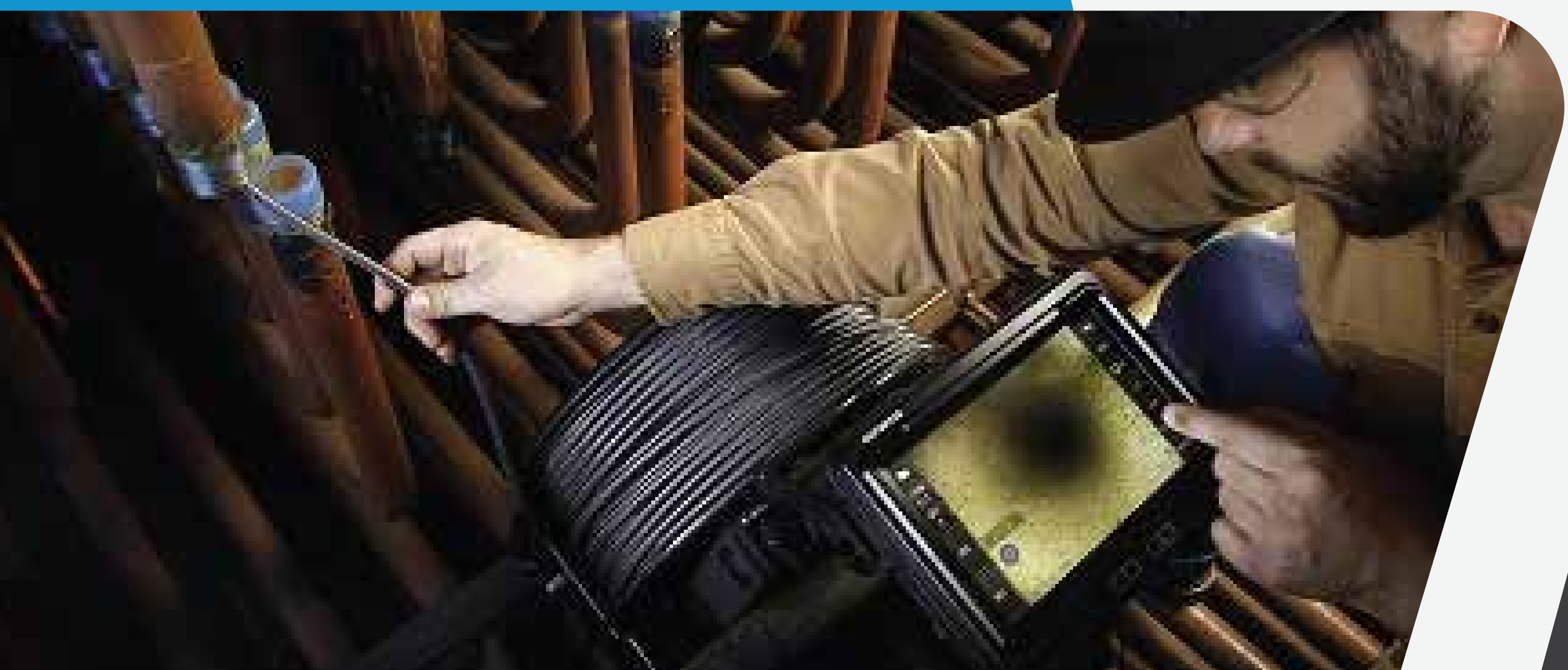
- Visual Inspection (VT)
- Ferrite Measurement
- Ultrasonic Testing Shear wave (UT)
- Ultrasonic Thickness Measurement (UTT)
- Magnetic Particle Inspection (MPI)
- Liquid Penetrant Testing (LPT)
- Positive Material Identification (PMI)
- Infrared Thermography
- Radiography Testing X –Ray & Gamma Ray (RT)

Visual Inspection (VT)

Visual Inspection (VT) is the oldest and most fundamental method of non-destructive testing (NDT).
It involves the direct observation of a component's surface to identify any visible defects such as cracks, corrosion, misalignment, or other forms of damage. This technique is widely used across various industries due to its simplicity and effectiveness in detecting surface flaws.

Ferrite Measurement

Ferrite measurement is a crucial aspect that evaluates the ferrite content in stainless steel and other alloys.
Several companies specialize in this service, providing accurate assessments to ensure material integrity and compliance with industry standards.



Ultrasonic Testing Shear wave (UT)

Ultrasonic Testing (UT) using shear waves is a specialized method primarily employed for inspecting welds and detecting subsurface flaws in materials. This technique utilizes high-frequency sound waves that are introduced into the material being tested, allowing for the identification of defects such as cracks, porosity, and inclusions without causing any damage to the component.

Ultrasonic Thickness Measurement (UTT)

Ultrasonic thickness measurement (UTT) is a widely used method that assesses the thickness of materials, primarily metals, by utilizing high- frequency sound waves.
This technique is essential for evaluating the integrity and safety of various structures and components, such as pipelines, pressure vessels, and ship hulls.

From Surface to Core Get the Full Picture with UTT!

Magnetic Particle Inspection (MPI)

Magnetic Particle Inspection (MPI) is a widely used method that detects surface and near-surface discontinuities in ferromagnetic materials. This technique is particularly effective for identifying defects such as cracks, laps, seams, and inclusions in materials like iron, nickel, cobalt, and their alloys. The following sections outline the principles, processes, equipment, advantages, limitations, and applications of (MPI).

Liquid Penetrant Testing (LPT)

Liquid Penetrant Testing (LPT) also known as Dye Penetrant Testing (DPT), is a widely used method designed to detect surface-breaking flaws such as cracks, porosity, laps, and other discontinuities in non-porous materials. This technique is particularly valued for its simplicity, cost-effectiveness, and ability to inspect large areas or complex geometries.

Positive Material Identification (PMI)

Positive Material Identification (PMI) is a critical method used to verify the chemical composition of metals and alloys.
This process ensures that materials conform to specified standards and specifications, which is essential for quality control and safety compliance across various industries.

Infrared Thermography

Infrared thermography is a technique that utilizes thermal imaging to detect defects in materials by analyzing temperature variations on the surface of an object.
This method has gained significant traction due to its ability to inspect large areas quickly and effectively, making it particularly valuable in industries such as aerospace, automotive, and civil engineering.

Radiography Testing X –Ray & Gamma Ray (RT)

Radiography Testing (RT) is a widely used method that employs X-rays or gamma rays to inspect the internal structure of materials, components, or assemblies without causing any damage. This technique is particularly effective for detecting internal defects such as cracks, voids, inclusions, and other discontinuities in welds, castings, and other materials.

X-Ray Radiography

X-rays are generated by X-ray machines using high-voltage electricity to accelerate electrons toward a metal target. When these electrons collide with the target material, X-rays are produced.

Gamma Ray Radiography

Gamma rays are emitted from radioactive isotopes such as Iridium-192 (^192Ir), Cobalt-60 (^60Co), or Cesium-137 (^137Cs). These isotopes naturally emit high-energy photons during radioactive decay.

ADVANCED NDT

New and advanced NDT techniques are continually under development for the sake of more accuracy and more convenience.
Advanced NDT techniques that we utilize include:

- Automated Ultrasonic Testing (AUT)
- Automated Ultrasonic Testing (AUT) for Corrosion Mapping
- Phased Array Ultrasonic Testing (PAUT)
- Time of Flight Diffraction (TOFD)
- Rapid Motion Scanner (RMS)
- Tank Floor Scanning Magnetic Flux Leakage (MFL)
- Pipe Scan Systems Magnetic Flux Leakage (MFL)
- Electromagnetic Inspection (EMI)
- Advanced Digital Radiography (ART)
- Digital radiography (CR & DR)
- Eddy Current (ECT)
- Internal Rotary Inspection System (IRIS)
- Alternating Current Field Measurement (ACFM)
- Long Range Ultrasonic Testing (LRUT)
- Short Range Ultrasonic Testing (SRUT)
- Acoustic emission (AE)

Automated Ultrasonic Testing (AUT)

Automated Ultrasonic Testing (AUT) is an advanced non-destructive testing (NDT) method that uses high-frequency sound waves to detect flaws, measure material thickness, and assess structural integrity—without damaging the component. Unlike manual UT, AUT employs robotic scanners, encoded positioning, and software-driven data analysis for higher speed, accuracy, and repeatability.

Importance of Pipeline Girth Weld Inspection

Pipeline girth welds are essential connections in pipeline systems where even minor defects can lead to significant failures.
The integrity of these welds is crucial for ensuring the safety and reliability of the entire pipeline infrastructure. Therefore, effective inspection methods are necessary to identify and address potential issues before they escalate, automated ultrasonic testing (AUT) is the replacement of choice for traditional radiography.

Automated Ultrasonic Testing (AUT) for Corrosion Mapping

Automated Ultrasonic Testing (AUT) is a sophisticated non-destructive testing technique used for corrosion mapping, which provides detailed insights into the integrity of materials, particularly in industrial applications. This method employs high-frequency sound waves to detect and assess corrosion and other forms of material degradation without causing any damage to the inspected components.

Phased Array Ultrasonic Testing (PAUT)

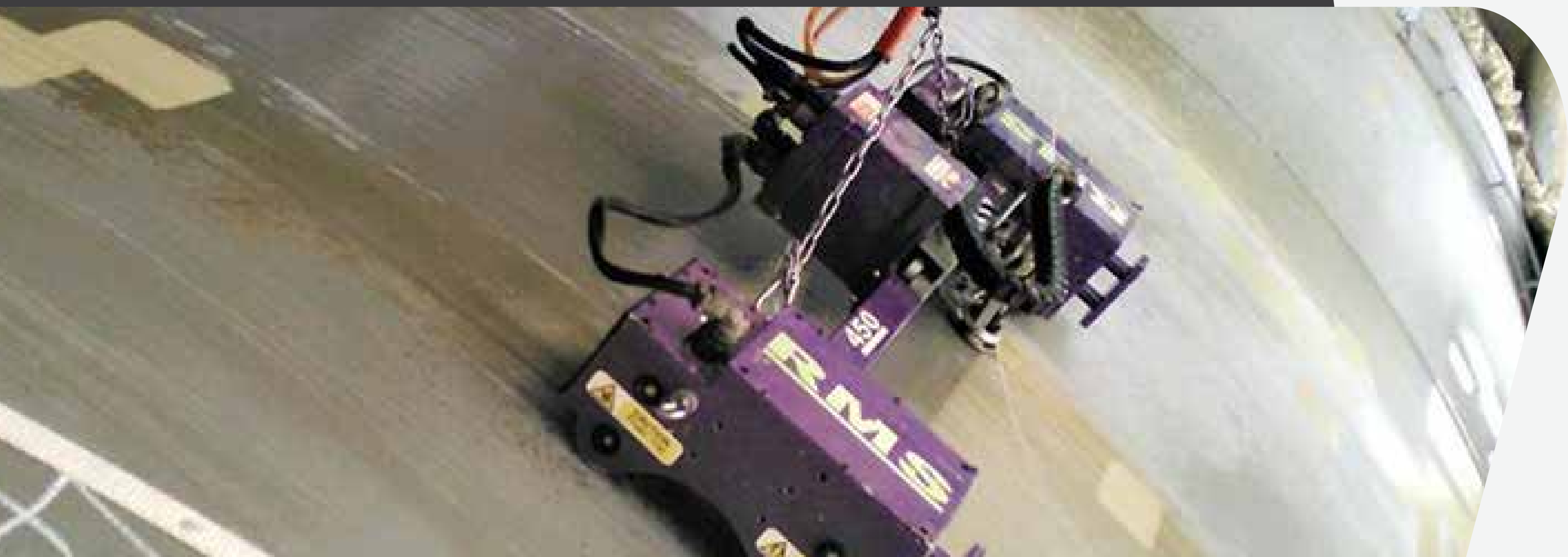
Phased Array Ultrasonic Testing (PAUT) is a technique that utilizes a specialized probe composed of multiple small ultrasonic elements. Each element can be pulsed independently, allowing for precise control over the emitted ultrasonic beams. This capability enables PAUT to effectively detect and characterize internal flaws in materials, making it a valuable tool across various industries.

Time of Flight Diffraction (TOFD)

Time of Flight Diffraction (TOFD) is an advanced ultrasonic technique primarily used for the inspection of welds and other critical engineering structures. It was developed in the 1970s, initially as a research tool in the UK, and has since become one of the most reliable methods for detecting and sizing defects in welded components. Unlike traditional ultrasonic testing methods that rely on reflected signals, TOFD uses diffracted sound waves from defect tips to provide accurate information about flaw size and location.

Rapid Motion Scanner (RMS)

Rapid Motion Scanner (RMS) is a sophisticated piece of equipment developed by Silverwing UK, designed for advanced ultrasonic testing and corrosion mapping. This scanner is notable for its high-speed scanning capabilities and versatility in various industrial applications.



Tank Floor Scanning Magnetic Flux Leakage (MFL)

Magnetic Flux Leakage (MFL) is a widely used non-destructive testing (NDT) technique for inspecting ferromagnetic materials, particularly steel tank floors. It is designed to detect and map material loss caused by corrosion, pitting, or wall thinning. This method is especially critical in industries like petrochemicals. MFL technology provides rapid and reliable results over large areas, making it an essential tool for maintaining the structural integrity of storage tanks.

Pipe Scan Systems Magnetic Flux Leakage (MFL)

Pipe Scan Systems Magnetic Flux Leakage (MFL) the connection setup depends on the specific model and manufacturer (e.g., GE, Olympus, Eddyfi, Rosen). Below is a general guide for MFL PipeScan probe connections, data transfer, and integration.MFL PipeScan is used for inspecting pipelines by detecting corrosion, pitting, and metal loss using magnetic flux leakage principles. Below is a step-by-step guide on how to operate an MFL PipeScan system.

Electromagnetic Inspection (EMI)

Electromagnetic Inspection (EMI) is a critical nondestructive testing method used to detect various types of defects in materials, particularly in metallic structures such as drill pipes. This technique utilizes electromagnetic fields to identify flaws that could compromise the integrity and longevity of the material being tested.

Advanced Digital Radiography (ART)

Advanced Digital Radiography (ART) is a cutting-edge imaging technology utilized to enhance the inspection and evaluation processes in various industries. This method leverages digital imaging techniques to provide high-quality, detailed images for the assessment of materials and structures.

Digital radiography (CR & DR)

Digital radiography (CR & DR) has transformed imaging by providing faster, more efficient, and higher-quality images compared to traditional film-based methods.

See the Unseen, Secure Your Systems !

Eddy Current (ECT)

Eddy Current Testing (ECT) is a sophisticated nondestructive testing (NDT) method that utilizes electromagnetic induction to detect and characterize surface and near-surface flaws in conductive materials. This technique is particularly valuable in various industries, including aerospace, power generation, petrochemical, and pharmaceuticals, due to its ability to provide immediate results without damaging the test material.

Internal Rotary Inspection System (IRIS)

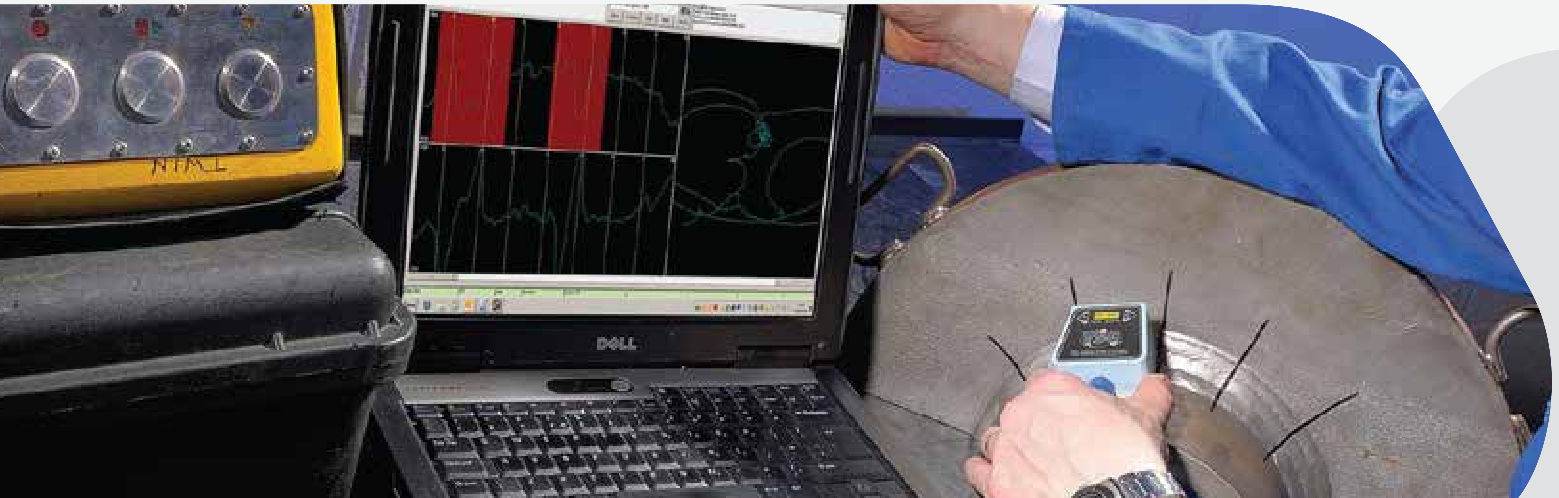
Internal Rotary Inspection System (IRIS) is a sophisticated technique primarily used for inspecting the integrity of pipes and tubes in various industrial applications. This method employs ultrasonic technology to assess wall thickness and detect defects such as corrosion, pitting, and wall loss.

Alternating Current Field Measurement (ACFM)

Alternating Current Field Measurement (ACFM) is a non-destructive testing (NDT) technique used to detect and size surface-breaking cracks in metals.It works by inducing an alternating electric current into the surface of the material and analyzing the resulting electromagnetic field.
The presence of a crack disrupts the current flow, and this disturbance is measured and analyzed to identify and characterize the crack.

Long Range Ultrasonic Testing (LRUT)

Long Range Ultrasonic Testing (LRUT) also known as Guided Wave Ultrasonic Testing (GWUT), is a method for rapidly screening pipelines for corrosion and erosion. It uses low-frequency ultrasonic guided waves to inspect long lengths of pipe from a single test point, detecting defects like corrosion and erosion over significant distances. This technique is particularly useful for inspecting pipelines that are buried, insulated, or difficult to access.



Short Range Ultrasonic Testing (SRUT)

Short Range Ultrasonic Testing (SRUT) is a non-destructive testing (NDT) technique that uses guided ultrasonic waves to inspect for corrosion and other defects in areas that are difficult to access directly, such as under pipe supports or inside concrete. It's a screening tool that can rapidly scan large areas and is particularly useful for inspecting tank floor annular rings, vessel supports, and pipes.

Acoustic emission (AE)

Acoustic emission (AE) is the phenomenon where elastic waves are generated by the sudden release of energy within a material under stress.This release is often due to irreversible changes in the material's structure, like crack formation or plastic deformation.
AE is used in non-destructive testing (NDT) to detect and analyze these changes, providing insights into material behavior and structural integrity.

Proactive Performance, Perfect Protection.

IN-SERVICE INSPECTION

In-service inspections are critical for maintaining the integrity and safety of various industrial assets, particularly in sectors such as oil and gas, petrochemicals, and power generation. Advanced Non-Destructive Testing (ANDT) plays a vital role in these inspections by providing detailed insights into the condition of materials without causing any damage. This approach allows for timely maintenance decisions that can prevent catastrophic failures and ensure compliance with regulatory standards.

- Plant Integrity Inspection
- Pressure Vessel Inspection as per API 510
  Advanced Digital Radiography (ART)
- Storage Tank Inspection as per API 653
- Piping Inspection as per API 570
  Tank Floor Scanning Magnetic Flux Leakage
- Welding Inspection Standards

Plant Integrity Inspection

Plant integrity inspection is a critical process in various industries, particularly in sectors such as oil and gas, power generation, and manufacturing. The goal of these inspections is to ensure that equipment and structures are safe, reliable, and compliant with regulatory standards. Non-Destructive Testing (NDT) plays a vital role in this process by allowing inspectors to evaluate the condition of materials and components without causing any damage.

Benefits of Plant Integrity Inspections

Increased Safety: Regular inspections help identify potential hazards before they lead to accidents.

Cost Savings: By detecting issues early, companies can avoid costly repairs and downtime associated with unexpected failures.

Regulatory Compliance: Inspections ensure adherence to industry regulations and standards, reducing legal liabilities.

Pressure Vessel Inspection as per API 510
Advanced Digital Radiography

API 510 is a certification program established by the American Petroleum Institute (API) that focuses on the inspection, maintenance, repair, and alteration of pressure vessels. This standard is crucial for ensuring the safety and integrity of pressure vessels used in various industries, particularly in oil and gas, petrochemicals, and power generation.
The certification process involves passing a rigorous examination that tests knowledge of relevant codes, standards, and inspection techniques.

Storage Tank Inspection as per API 653

API 653 is a standard developed by the American Petroleum Institute (API) that outlines the minimum requirements for the inspection, repair, alteration, and reconstruction of aboveground storage tanks (ASTs). This standard is crucial for ensuring the safety and reliability of tanks used in various industries, particularly in petroleum and chemical sectors.

Piping Inspection as per API 570
Tank Floor Scanning Magnetic Flux Leakage

Magnetic Flux Leakage (MFL) is a critical non-destructive testing (NDT) method used in piping inspection, particularly under the guidelines of API 570. This method is essential for assessing the integrity of pipelines and storage tanks by detecting corrosion, pitting, and wall loss.

Overview of API 570

API 570 is the American Petroleum Institute's standard for the inspection, repair, alteration, and rerating of in-service piping systems. It provides guidelines to ensure that piping systems are maintained in a safe condition throughout their operational life. The standard emphasizes regular inspections to identify potential failures before they occur.

Welding Inspection Standards

Welding Inspection is a critical process in ensuring the integrity and quality of welded structures. Various standards and codes govern this practice, including CSWIP 3.1, AWS-CWI, ASME Section VIII, Section IX, ASME B31.3, B31.1, B31.4, AWS D1.1, and API 1104. Each of these standards has specific requirements for welding inspection that professionals must adhere to.

CSWIP 3.1

The CSWIP 3.1 certification is a widely recognized qualification for welding inspectors developed by the Welding Institute (TWI). This standard focuses on the knowledge required to inspect welds effectively and includes topics

AWS-CWI

The AWS Certified Welding Inspector (CWI) program is administered by the American Welding Society (AWS). It provides a framework for assessing the qualifications of welding inspectors in North America.

LIFTING INSPECTION

Lifting inspections are critical for ensuring the safety and compliance of lifting equipment, including cranes, hoists, slings, and other rigging gear.

These inspections are mandated by various regulatory bodies such as:

OSHA (Occupational Safety and Health Administration)
ASME (American Society of Mechanical Engineers).

The primary goal is to verify that all lifting equipment is in safe working condition and meets the required standards for operation.

Importance of Compliance

Compliance with inspection requirements is not just about adhering to regulations; it significantly enhances workplace safety by preventing accidents caused by equipment failure. Regular inspections help maintain operational efficiency and reduce downtime due to unexpected failures or repairs.

Types of Inspections

- Pre-Operational Inspections.
- Monthly Inspections.
- Annual Inspections.
- Specialized Inspections.

Regular Checks, Zero Risks.

DESTRUCTIVE TESTING

Destructive testing (DT) is a critical inspection method used to evaluate the performance and structural integrity of materials by subjecting them to extreme conditions that lead to permanent damage or failure. This approach is essential in various industries, including aerospace, automotive, construction, and manufacturing, as it provides valuable insights into material behavior under stress.

Common Methods of Destructive Testing

There are several methods employed in destructive testing, each designed to assess different material properties:

- Tensile Testing
- Impact Testing
- Corrosion Testing
- Hardness Testing
- Fatigue Testing
- Residual Stress Measurement
- Fracture Testing
- Creep Testing

OTHER SERVICES

A wide range of techniques and services that are essential for ensuring the integrity and safety of materials and structures without causing any damage. Our services play a crucial role in various sectors by facilitating inspections.

- Painting and Coating Inspection
- Welder/Welding Procedure Qualifications
- Welder Performance Qualification (WPQ)
- Post Weld Heat Treatment (PWHT)
- Vacuum Box Leak Inspection
- Pressure Testing (Hydrostatic & Pneumatic)
- X-Ray Digitalized Film
- Cathodic Protection (CP)
- Quality Consultation Services

Painting and Coating Inspection

Painting and coating inspection is a critical process in ensuring that protective coatings are applied correctly to various structures and equipment. This inspection is vital for maintaining the integrity and longevity of industrial assets, as improper application can lead to corrosion, structural failures, and costly repairs.

Welder/Welding Procedure Qualifications

Welding qualifications are critical in ensuring that welders and welding procedures meet industry standards and safety requirements.
The qualification process involves several key components: the Welding Procedure Specification (WPS), the Procedure Qualification Record (PQR), and the Welder Performance Qualification (WPQ).
Each of these documents plays a vital role in the welding process, ensuring that welds are performed correctly and safely.

Post Weld Heat Treatment (PWHT)

Post Weld Heat Treatment (PWHT) is a critical process used in welding to enhance the properties of welded joints and mitigate issues that arise from the welding process itself. This treatment involves applying heat to a welded structure after the welding has been completed, with the primary goals of relieving residual stresses, improving mechanical properties, and preventing potential failures.

Vacuum Box Leak Inspection

Vacuum box leak inspection is a method used primarily to identify leaks in welds, tanks, and other sealed components. This technique is particularly useful for areas that cannot be pressurized directly, allowing for effective detection of leaks without damaging the tested materials.

Pressure Testing (Hydrostatic & Pneumatic)

Pressure testing is a critical non-destructive method used to verify the integrity, strength, and leak-tightness of equipment such as pipelines, pressure vessels, plumbing systems, gas cylinders, boilers, and fuel tanks. It ensures that these components can safely withstand their rated pressures under operational conditions. The two primary methods of pressure testing are **Hydrostatic Testing** and **Pneumatic Testing**, each with its own applications, advantages, and risks.

Both methods are governed by industry standards such as the ASME B31 Pressure Piping Code, which includes specific guidelines for different types of piping systems like power piping (ASME B31.1), process piping (ASME B31.3), and refrigeration piping (ASME B31.5). These codes ensure consistency in procedures and safety across industries.

X-Ray Digitalized Film

X-Ray digitalized film is a process that involves converting traditional X-ray films used in NDT into digital formats. This process is crucial for industries such as aerospace, manufacturing, and construction, where X-ray examinations are used to inspect the internal structures of components and products without causing damage.

Benefits of Digital Radiography in NDT

Enhances inspection efficiency, productivity, and profit margins by providing immediate digital images that can be analyzed and shared easily. The use of digital radiography also supports continuous product improvement by allowing for the easy comparison of current and past inspections.

- Eliminates aging of films, retaining image quality
- Physical archive storage to the computer or Diconde Cloud
- Associated documents such as UT, MPI, and associated reports can
- also be archived
- Radiographs can be electronically reported and archived
- With Diconde Cloud, information is available to authorized users 24/7
- from any Internet browser
- Eliminates storage costs of film

The Smart Choice for Modern Radiology.

Cathodic Protection (CP)

Khairat Khaleej Engineering testing Co. Ltd
is highly experienced the Design, Installation and commissioning of complete cathodic protection systems for :

- Under Ground Pipeline.
- Temporary CP systems.
- Permanent CP systems.
- Tank Farm (Both internal & external).
- Off-Shore Structures.
- Scraper launcher, receiver traps & buried steel valves
- Substations and Power Stations grounding systems.

K.KETCo. is specialist company in perform repairing , testing and commissioning for Total Plants Cathodic Protection System in both types (ICCP and SACP and Performs all activities according to International standards and applied codes to ensure high quality).
KKETCO. dealing with international suppliers for supplying construction materials and spares parts KKETCO. have test Equipment and construction equipment from western origin and (calibrated periodically)

Protecting Infrastructure, Preserving Value!

Khairat Khaleej Engineering testing Co. Ltd
is in a position to offer the following services in the field of Cathodic Protection:

- Soil resistivity Measurements and profiling.
- Cathodic protection Systems design.
- Assessment and recalculation of existing CP systems.
- Materials Supply, from highly reputable European suppliers.
- Installation of Cathodic Protection Systems.
- Test and Commissioning of Cathodic Protection Systems.
- Cathodic Protection Interference and Mitigation investigations.
- AC interference and Mitigation Studies.
- Our company is also in the position to carry out Close Interval Potential surveys for both existing and new pipelines.

Khairat Khaleej Engineering testing Co. Ltd
perform both types of CP systems:

- Impressed current cathodic protection system (ICCP)

- Sacrificial anodes cathodic protection system (SACP)

Quality Consultation Services

Preparation and Conducting Employee Training Programs and Seminars

Khairat Khaleej Engineering testing Co. Ltd prepares professional training programs for personnel who work in quality control field, especially in the area of non-destructive testing, making use of our expert advisors' expertise in this field.

Procedures and Specifications Preparation

Our extensive experience allows us to prepare testing procedures to be followed in a workplace, as well as specifications that should be met by inspector.

Quality Systems Review

We also provide the service of reviewing and checking the performance of quality systems to help other companies improve their quality control results.

Detecting Flaws Before They Become Failures.

OUR POTENTIALS

HUMAN RESOURCES

Our staff members hold multiple recognized **international certificates** that are relevant to NDT techniques, such as The **ASNT NDT Level II and III certification, CSWIP, CWI and many others,** which in turn guarantee the highest level of proficiency and accuracy of our individuals. Plus, we've set some well-informed criteria based on which we hire new personnel, those criteria cover both technical and personal sides including years of experience, problem solving skills and passion for what they do. Moreover, we spare no efforts in providing our engineers and workers with regular courses to make sure that they are fully aware of the latest methodologies and approaches that are used in non-destructive testing practices all over the world and to train them to use upgraded equipment to further enhance accuracy and sensitivity of testing.

QUALITY CONTROL SYSTEM

Khairat Khaleej Engineering Testing Co. Ltd. boasts a highly professional quality control department, and our quality team members hold global quality certificates, thus, they apply international quality standards and they work in accordance to a very strict system that ensures high accuracy in all our projects. They conduct many inspection and testing processes on multiple levels and to materials, structures and practices within the company, they also exert great efforts to urge workers and technicians to stick to the quality assurance procedures to minimize repairs, and consequently minimize wastes as far as possible. The company's management, in general, believes that quality in such projects is not optional, but it can be the border between life and death, because disregarding quality can cause serious disasters that may take people's lives, which is non-negotiable and no room for complacency. On another side, neglecting quality issues may hold the company legally accountable, since we are obliged to stick to standard codes that are compulsory and we cannot violate any of their specifications

Invisible Insights for Visible Safety.

HEALTH, SAFETY & ENVIRONMENT (HSE)

Since human resources are the most important resources and the backbone of the company, we must preserve them and protect them against industrial accidents that may cause us irreplaceable damages, like human losses. Therefore, our department of safety and occupational health sincerely works on making sure that all processes, practices, materials and technical structures are subject to safety procedures stated in all local and global standards, and our **HSE** department ensures their application as tightly as possible. **HSE** team specifies risks, advises on how to avoid them, highlights dangerous areas and puts restrictions on individuals' movements within, besides, it provides all personnel with PPE (personal protective equipment). As for the environment, we never underestimate this matter; the culture of preserving the environment permeates throughout the company, among all personnel who are fully aware that causing harm to the environment is nothing other than causing harm to themselves and their health, at least on the long run.

LEEA Membership

KKETCo. carries out lifting equipment inspection in accordance with industry standards and applicable legislations according to **LEEA** requirements

Our lifting equipment inspection Engineers are qualified and competent to conduct a full-scale thorough examination of all types of lifting gears in addition to Mobile Crane With over 15 years of hands-on involvement in carrying out inspection services combined with classroom / academic training, our Inspection Engineers are able to accomplish any given task in a timely manner without compromising quality.

To supplement a thorough examination of any item of lifting equipment, we provide the most comprehensive NDT methods available as may be required.
Our Inspection teams are multi-skilled and are certified SNT Level II according to SNT-TC-1A in different NDT methods such as MT, PT, VT, UT, RT, and ET.

We strictly follow the **LEEA** codes of practice and other international standards and regional statutory requirements.
We never compromise our Lifting Equipment Inspection Quality Standard.

Inspection Association

Joining with inspection association offers numerous benefits that can significantly enhance both professional development and operational effectiveness within the field.

K.KETCo has been accredited as a second-party inspector, authorized by the Iraqi Ministry of Oil to represent an external inspection company in non-destructive testing sector.

K.KETCo has an authorization from TÜV AUSTRIA IRAQ, to representing as a third-party inspection company in the oil and gas sector.

TÜV AUSTRIA IRAQ plays a crucial role in ensuring that products meet safety and quality standards before entering the Iraqi market through its comprehensive verification processes and certification programs.

Inspect. Protect. Perform.

OUR PROJECTS

EPCC for FSF Flowline Pig Launchers and Receivers
Location: Iraq-basra. **Client:** KHAERAT MSK ALIRAQ (KMSK)
Scope of Work: Non-destructive-testing Services

Modification of CPF Facilities Priority 2&3 EPC West Qurna 2
Location: Iraq-basra. **Client:** LUKOIL / BONATTI / Maintenance
Scope of Work: Non-destructive-testing Services

EPC of Produced Water Treatment & Water Injection Facilities Expansion Phase 1
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope of Work: Non-destructive-testing Services

EPC of Gas Turbine Power Plant Expansion at The West Qurna (Phase 2)
Location: Iraq-basra. **Client:** LUKOIL / CALIK NENERJi / Maintenance
Scope of Work: Non-destructive-testing Services

Where Technology Meets Trust.

Roo-Water Pipeline – Iq4001
Location: Iraq-basra. **Client:** BP / BONATTI
Scope Of Work: Non-destructive-testing Services

Development of Al Khor Port
Location: Iraq-basra. **Client:** PORTS / HAZRF
Scope Of Work: Non-Destructive-Testing Services

Engineering, Procurement & Construction For for Well Pads 4 &9, WQ (Phase 2), Iraq
Location: Iraq-basra. **Client:** LUKOIL / SICIM / Steel Structure
Scope Of Work: Procurement 1,700T & Non-Destructive-Testing Services

Engineering, Procurement & Construction for Well Pads 4 &9, Wq (Phase 2), Iraq
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope Of Work: Procurement 1,700T and Non-Destructive-Testing Services

Provision of EPCC Services for The Installation of Boc Separator Train at Ewtu-2
Location: Iraq-basra. **Client:** KUWAIT ENERGY / GOLDEN WELL
Scope of Work: Non-Destructive-Testing Services

Construction for Flare System West Qurna Phase 2
Location: Iraq-basra. **Client:** LUKOIL / STX / QIMAT AL-IQTIDAR
Scope of Work: Non-Destructive-Testing Services

Engineering, Procurement & Construction Foryamama Pilot Production Facilities at The West Qurna
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope of Work: Non-Destructive-Testing Services

Basra Gas Company, Bngl Pipeline Project
Location: Iraq-basra. **Client:** BGC / Shell / SICIM
Scope of Work: Non-Destructive-Testing Services

EPC for Dammam Decentralize Water Injection Facilities for Water Supply Wells at The West Quran
Location: Iraq-basra. **Client:** Lukoil / 77 Insaat ve Taahhut A.S
Scope of Work: Non-Destructive-Testing Services

EPC for Water Injection Network Installation in Zubair Oil Field - Iraq
Location: Iraq-basra. **Client:** SOC/ZFOD/ENI/DRAKE & SCULL International (PJSC)
Scope of Work: Non-Destructive-Testing Services

Zubair Oil Field Development – EPC for Oilgathering & Maltvise –IQ33-IQ22-IQ87
Location: Iraq-basra. **Client:** SOC/ZFOD/ENI/SICIM SPA
Scope of Work: Non-Destructive-Testing Services

EPC Piping & Pipe Line Installation Project / in Zubair Oil Field - Iraq
Location: Iraq-basra. **Client:** SOC/ZFOD/ENI/Aljazeel Company for General Contracts
Scope of Work: Non-Destructive-Testing Services

Hammar Mishrif DGS/Discharge Pipe in Zubair Oil Field- Iraq
Location: Iraq-basra. **Client:** SOC/ZFOD/ENI/Egyptian Maintenance Company (EMC)
Scope of Work: Non-Destructive-Testing Services

Zubair Oil Field Development – Iraq Zubair North New DGS Project Site Piping Erection
Location: Iraq-basra. **Client:** SOC/ZFOD/ENI/ Samsung Engineering
Scope of Work: Non-Destructive-Testing Services

Zubair Oil Field Development – Iraq Zubair North New DGS Project Tanks
Location: Iraq-basra. **Client:** SOC/ZFOD/ENI/Samsung/ Belad Al-Duha Co.
Scope of Work: Non-Destructive-Testing Services

Zubair Oil Field Development – Iraq Zubair North New DGS Project Tanks
Location: Iraq-basra. **Client:** SOC/ZFOD/ENI/Samsung/ MSK Group
Scope of Work: Non-Destructive-Testing Services

Zubair Oil Field Development – Iraq Zubair North New DGS Project Fab Shop Piping
Location: Iraq-basra. **Client:** SOC/ZFOD/ENI/Samsung/ Petro Jet
Scope of Work: Non-Destructive-Testing Services

Zubair Oil Field Development
Location: Iraq-basra. **Client:** SOC/ZFOD/ENI/STX Heay Industries
Egyptian Maintenance Company (EMC)
International (PJSC)
Scope of Work: Non-Destructive-Testing Services

Zubair Oil Field Development – EPC Pipeline Installation Manifolds
Location: Iraq-basra. **Client:** SOC/ZFOD/ENI/SICIM/DSI JV
Scope of Work: Non-Destructive-Testing Services

Zupair Oil Field Development – EPC Pipeline Installation Well heads
Location: Iraq-basra. **Client:** SOC/ZFOD/ENI/SICIM/DSI JV
Scope of Work: Non-Destructive-Testing Services

Zupair Oil Field Development - EPC Pipeline Installation & Oil flow Lines (52"-36"-24"-16"-10"-8"-6"&4")
Location: Iraq-basra. **Client:** SOC/ZFOD/ENI/SICIM/DSI JV
Scope of Work: Non-Destructive-Testing Services

PROCUREMENT DEPARTMENT

K.KETCo established a special procurement department in **2020** to provide all the necessary project needs, as we can provide materials from inside and outside Iraq. We are specializes in equipping steel structures in terms of casting, construction and accompanying chemicals, in addition to camp services.
K.KETCo provides all camp needs from equipping caravans with special specifications or approved international specifications and providing spare parts and equipment to be used in oil projects.

Equipping the laboratories needed by oil companies to carry out water, oil and bacteria tests. and providing the oil pipeline extension needs that companies need for lifting, cutting and welding operations.

K.KETCo offers a variety of engineering solutions for the construction and supply of polyethylene pipes of all types, sizes and cuts. We are agents for the **Firat Plastic Pipe - PVC / Firatbora Factory**.

Sourcing Materials and Services

The first step in the procurement department to process involves identifying and sourcing the materials and services required for NDT operations. This may include specialized testing equipment, consumables (such as ultrasonic gel or radiographic films), safety gear, and even subcontracted services for specific testing methodologies.
The procurement team must evaluate suppliers based on their ability to meet quality standards, delivery timelines, and cost-effectiveness.

Cost Estimation and Budgeting

Cost estimation is a critical function of the procurement department in **K.KETCo.** It involves analyzing market prices for various NDT materials and services to create accurate budgets for projects. The procurement team must work closely with project managers to understand project requirements and constraints while ensuring that costs remain within budgetary limits.

Identify Today, Succeed Tomorrow.

Purchase Order Management

After selecting qualified suppliers, the procurement department issues purchase orders (POs) detailing the specifications of the required items or services, quantities needed, delivery schedules, and payment terms.
Effective management of POs ensures that all parties are aligned on expectations and helps prevent misunderstandings or delays.

Steel Structures

Steel structures are engineering structures made primarily of steel components, designed to withstand loads and resist environmental forces. **K.KETCo** specializes in the supply, design and erection of steel structures for large projects, including:
Delivering Materials, Installation, Shop Drowing, Painting, Welding, Iration for steel structures and Steel Structres inspaction.

K.KETCo provides many engineering solutions for building and supplying structures. More than **2000 tons** were completed during the year for **LUKOIL Oil Company and BP**.

Your Safety is Our Priority.

Chemical Division

K.KETCo's provides a special chemical division where non-destructive testing uses different chemicals to detect defects and ensure the integrity of materials without causing any harm. The basic types of chemicals used in non-destructive testing include penetrants, developers, strippers, and magnetic particles. Each type serves a specific purpose in the testing process.

Quality Assurance

Quality assurance is an ongoing responsibility of the procurement department in K.KETCo throughout the supply chain process.
They must verify that all received materials meet specified quality standards before they are used in NDT operations. This may involve conducting inspections or tests on incoming goods to ensure compliance with client specifications.

Relationship Management

Building strong relationships with suppliers is key to successful procurement in **K.KETCo.** The procurement team engages in regular communication with suppliers to address any issues promptly, negotiate better terms when possible, and foster collaboration for future projects.

Compliance with Regulations

Finally, it is crucial for the procurement department to stay informed about relevant regulations governing NDT practices and material usage within different jurisdictions. Compliance ensures that all procured items meet legal requirements related to safety standards and environmental considerations.

OUR PROJECTS

EPC for Produced Water Treatment And Water Injection Facilities Expansion (Phase 1) At The West Qurna (Phase 2) Contract Area
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope of Work: Supply,Fabrication,painting,testing pipe support and pipe rack

EPC for The Provision of Source Water Supply Pipelines IQ4001
Location: Iraq-basra. **Client:** BP / BONATTI
Scope of Work: Supply , Fabrication Launching Troughs pipe 48"

EPC for Produced Water Treatment And Water Injection Facilities Expansion (Phase 1) at The West Qurna (Phase 2) Contract Area
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope of Work: Supply,Raw Matiral for pipe support 80 ton

The Silent Guardian of Quality.

EPC for Produced Water Treatment and Water Injection Facilities Expansion (Phase 1) at The West Qurna (Phase 2) Contract Arean Facilities Expansion (Phase 1) At The West Qurna (Phase 2) Contract Area
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope Of Work: Supply steel plate thikness 10MM, 15MM 20 TON

Bngl Pipe Line Installation Services
Location: Iraq-basra. **Client:** BGC / SICIM
Scope Of Work: Supply, Febrication Pipe Clamps - 6"

EPC for Produced Water Treatment and Water Injection Facilities Expansion (Phase 1) at The West Qurna (Phase 2) Contract Area
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope Of Work: Supply steel plate thikness 10MM, 15MM and steel profile HEA,L angle

Bngl Pipe Line Installation Services
Location: Iraq-basra. **Client:** BGC / SICIM
Scope Of Work: Supply,Fabrication,LIGHTING SYSTEMPRODUCTION 50mm G.I PIPE HOT DIP GALVANIZED (CLASS HEAVY)

Safeguarding Assets Through Expert Inspections.

EPC for Produced Water Treatment and Water Injection Facilities Expansion (Phase 1) at The West Qurna (Phase 2) Contract Area
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope of Work: Supply , Fabrication,bend Existing Duplexplate Stainless

EPC for Produced Water Treatment and Water Injection Facilities Expansion (Phase 1) at The West Qurna (Phase 2) Contract Area
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope of Work: Supply , Fabrication,bend Existing Duplexplate Stainless

EPC for Produced Water Treatment and Water Injection Facilities Expansion (Phase 1) at The West Qurna (Phase 2) Contract Area
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope of Work: Supply Steel Profileupn100,hea180,220,400

EPC for Produced Water Treatment and Water Injection Facilities Expansion (Phase 1) at The West Qurna (Phase 2) Contract Area
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope of Work: Supply Hdg Cheequered Plates & Anchor Bolt

EPC for Produced Water Treatment and Water Injection Facilities Expansion (Phase 1) at The West Qurna (Phase 2) Contract Area
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope Of Work: Supplysupply Steel Profilel45 L60

Bngl Pipe Line Installation Services
Location: Iraq-basra. **Client:** BGC / SICIM
Scope Of Work: Supply , Fabrication 6 Inch Pipe Clamp

EPC for Produced Water Treatment and Water Injection Facilities Expansion (Phase 1) at The West Qurna (Phase 2) Contract Area
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope Of Work: Supply , Fabrication - Reinfprced Pad

Bngl Pipe Line Installation Services
Location: Iraq-basra. **Client:** BGC / SICIM
Scope Of Work: Supply , Fabrication 2''and 6 size Pipe Clamp Shoe Support

EPC for Produced Water Treatment and Water Injection Facilities Expansion (Phase 1) at The West Qurna (Phase 2) Contract Area
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope of Work: Supply , Febrication Reinfprced Pad

EPC for Produced Water Treatment and Water Injection Facilities Expansion (Phase 1) at The West Qurna (Phase 2) Contract Area
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope of Work: Supply Febrication Stiffening Rings_sicim

Produced Water Treatment and Water Injection Facilities Expansion (Phase 1)
Location: Iraq-basra. **Client:** LUKOIL / SICIM
Scope of Work: Supply , Fabrication

ACCREDITATION

Khirat Khaleej Engineering Testing Company Ltd.

Ensures the organization meets specific standards of quality and competence in its testing practices. This process not only enhances the credibility of the company but also assures clients that the services provided are reliable and adhere to industry regulations.

K.KETCo obtained several certificates for quality and safety

Iraqi Accreditation System (IQAS) TYPE A

IQAS TYPE A accreditation signifies that an organization has met specific standards set forth by the International Organization for Standardization (ISO), particularly ISO/IEC 17020:2012. This standard outlines the requirements for the competence of bodies performing inspections and emphasizes impartiality and consistency in inspection activities.

ISO 17020

ISO/IEC 17020 accreditation is a globally recognized standard that sets the criteria for the competence, impartiality, and consistent operation of inspection bodies.

IB205

ISO 17025

ISO/IEC 17025 is the international standard that specifies the general requirements for the competence, impartiality, and consistent operation of laboratories.

IB205

Our Commitment to Excellence.

ISO 14001

ISO 14001 is the internationally recognized standard for environmental management systems (EMS). It provides a framework for organizations to design and implement an EMS, and continually improve their environmental performance

ISO 9001

ISO 9001 is an internationally recognized standard for quality management systems (QMS). It provides a framework that organizations can use to ensure they meet customer and regulatory requirements while continually improving their processes.

ISO 45001

S045001 is an international standard that specifies requirements for an occupational health and safety (OH&S) management system.

OUR CLIENTS

Trust Through Testing.

SAMSUNG E&A

HBP

Bonatti

ISN

حقل مجنون النفط
MAJNOON OIL FIELD

وزارة النفط
MINISTRY OF OIL

TotalEnergies

bp

AL-JAZEEL

Contacts

For more information kindly contact us at:

Basra - Al Jazaer area, Ben Gazwan St.
Building No.6. **Iraq**
Tel. +964 78 222 688 08

Amman - Khalda Abdullah, Azzam St.
Building No.8 1st Floor. **Jordan**
Tel. +962 78 75 11115

Email. info@kkhaleej.com
Website. https://kkhaleej.com

“ **Precision** beyond
the **Expectations** ”

Quality You Can Trust, Service You Can Count On. ”