



IRTS

International Robotic Tank Solutions

www.irts-global.com

Company Profile

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Introduction

International Robotic Tank Solutions (IRTS)

International Robotic Tank Solutions (IRTS) - one of the fast-growing companies in the field of In-service Robotic Tank Inspections. IRTS is an affiliate of Tamam Projects Company and pioneer in the development of Robotic Tank Inspection in Saudi Arabia and GCC countries. Aligned with its global strategic vision, the company partially acquired 30 % of a manufacturing facility in the Virginia USA to supply potential business partners with cutting-edge solutions. These solutions span the drivers of the hydrocarbon processing & utilities industries: integrity, cost-effectiveness, innovation, and efficiency.

From every sector that is experiencing rapid technological change, there is an increased demand for API 653 Tank Inspection provider and greater efficiency.

Our proposed solutions include in-service robotic tank inspection compliant to API 653 and industry latest standards and other innovative solutions.

IRTS, in association with strategic global partners, is continuously developing technologies and solutions that best meet the requirements of our clients.

IRTS is currently engaged in multifarious activities in the Kingdom of Saudi Arabia. Our core group activities are diversified into following Robotic Tanks Services:

- API 653 INSERVICE ROBOTIC TANK INSPECTION FOR BOTTOM PLATE
- ROBOTIC INSERVICE TANK CLEANING
- ROBOTIC INTERNAL / EXTERNAL TANK SURFACE PREPARATION
- ROBOTIC PAINTING AND COATING FOR TANK WALLS
- OUT OF SERVICE TANK REPAIR
- TOTAL TANK REHABILITATION

Vision, Mission & Values

Vision

“To be the prominent Innovative Robotic Tank Solutions consortium and the preferred around the globe.”

Mission

“To provide distinctive and internationally-competitive services as a leading In-service Robotic Tank Solutions enterprise in the Saudi Arabia, GCC countries and worldwide.”

Values

Innovation: Fresh thinking that creates value and leads to technological innovations designed to our product and services.

Integrity: We choose our thoughts and actions based on values we believe in.

Excellence: Superiority in the execution of the business process, from product development to projects and operations management.

Professionalism: We provide our services in a framework built on knowledge, quality, teamwork, and competence.

Customer Service: Our products and services are aimed towards receiving our clients' satisfaction and exceed their expectations

HERITAGE

International Robotic Tank Solutions (IRTS)

ALZARAH GLOBAL is a diversified and investment group established in 2000's carrying the vision of NZARCO which is a successful 50 years old family business. Operating in multiples industries and markets, ALZARAH GLOBAL owns, co-owns, and manages several investment vehicles providing innovative and state-of-art solutions.

NZARCO – “Determination Empowered by Faith”

The group employs capable, professional and world-class workforce who remain our biggest asset and investment. The organization represents a dynamic environment which utilizes modern proven disciplines of management to optimize all our business endeavors and operations.

Al-ZARAH Global – “Leadership blended with modernity”

Sheikh Ziad Bin Nasser Al-Zarah was committed to carry the vision of his late father. After serving 25 distinctive years in the Saudi Judicial field in leading positions such as justice of appeal, Sheikh Ziad established Al-Zarah Global in mid 2000s to continue the legacy of NZARCO. Al-ZARAH Global represents a dynamic conglomerate which operates in several industries and focuses on integrated innovative solutions.

HERITAGE

Why In Saudi Arabia?

INTERNATIONAL ROBOTIC SOLUTIONS (IRTS) is 100% Saudi Investment of AL ZARAH Family. The Chairman - Sheikh Zeyad Nasser H. Al-Zarah is a Former Judge in the Appealing Court and founder of Ziad Bin Nasser Al Zarah Law Firm – A member in the Gulf Council Commercial Arbitration Center and prominent Law Firm in Saudi Arabia and the Region.

The Technology was brought to a Main Contractor in Kingdom of Saudi Arabia by the early 2015 and then was discontinued as it was described by the CEO as DREAM.

Sheikh Ziyad Bin Nasser Al Zarah interacted proactively with the idea to make this dream come TRUE because this is the SMART proactive approach to convert the HRH Prince Mohammad Bin Salman interview with the ECONOMIST into actions.

Sheikh Ziyad Al Zarah believed that smart solutions are needed and further manufacturing capabilities are needed as well especially in projects that reduce the cost of expenditures and reduce risks in lives to minimal.

He invested.

King Salman last visit in Eastern Province in Saudi during ARAMCO Event 2016



Chairman



EXECUTIVE MANAGEMENT AND TEAM

IRTS is guided by the strong and active leadership of Sheikh Zeyad Bin Nasser Al-Zarah, Owner and Chairman of the company and Mr. Abdulsalam Ziyad Alzarah as CEO.

The company represents a dynamic environment of a dedicated world class staff from diverse backgrounds.

IRTS technical team is highly trained, (Managed directly by a Group of U.S Experts) highly knowledgeable, and highly qualified. Our inspectors, engineers, and technicians work together closely and understand each other's requirements. The result is solutions that are:

- Comprehensive
- Consistent
- Cost-effective

IRTS has a roster of professionals holding the latest certifications in the relevant industries from the American Petroleum Institute (API) to the recognized NDT disciplines throughout National Association of Corrosion Engineers (NACE) and other internationally recognized bodies of certification.

CORPORATE GOVERNANCE

Al Zarah Global implements a proficient framework to govern the corporate governance. The corporate governance encompasses the various mechanisms, processes, and relations by which our company is controlled and directed. Robust policies and procedures for decision making identified, assessed, reviewed, implemented and optimized as part of the continuous organizational development strategy in the company. The structure provides clear rights and responsibilities for both decision makers and stakeholders.

The board's actions are subject to laws, regulations and the shareholders in general meeting.

Within our overall framework, the specifically financial aspects of corporate are the way in which boards set financial policy and oversee its implementation, including the use of financial controls, and the process whereby they report on the activities and progress of the company to the shareholders.

There is a special steering committee whose objective is to provide support in order to raise the standards of corporate governance and the level of confidence in financial reporting and auditing.

General Information

1. Company Name : **INTERNATIONAL ROBOTIC TANKS SOLUTIONS (IRTS)**
2. Commercial Registration : **2051062636**
3. Date and Place of Issue : **17/09/1437H to 16/09/1442H**

Alkhobar, Kingdom of Saudi Arabia

4. Office Address:

KSA Office:

P.O. Box 76211, AlKhobar 31952 •
Kingdom of Saudi Arabia, Prince
Faisal Bin Fahd Bin Abdullah Bin
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United States Office – Houston:

Houston, 4682 S SAM Houston
PKWY E, Houston, Texas 77048 –
USA.

Telephone: +1 (832)433-7942

5. Type and Nature of Services provided

- ✓ API 653 INSERVICE ROBOTIC TANK INSPECTION FOR BOTTOM PLATE
- ✓ ROBOTIC INSERVICE TANK CLEANING
- ✓ ROBOTIC INTERNAL / EXTERNAL TANK SURFACE PREPARATION
- ✓ ROBOTIC PAINTING AND COATING FOR TANK WALLS
- ✓ OUT OF SERVICE TANK REPAIR
- ✓ TOTAL TANK REHABILITATION

6. Type of Firm : **Wholly Owned Saudi**

7. Type of Ownership : **100% Ownership**









8. Paid –up Capital : **SR 500,000.00**

9. Year Founded : **2016**

10. Key Personnel's / Partners and Percentage Shares:

- Shk. Zeyad Nasser Al-Zarah – **SAUDI 100%**

Registered Vendor List

S.NO	COMPANY	VENDOR/ SUPPLIER/BIDDER ID (OR) NUMBER	APPROVAL DATE
1	 ارامكو السعودية Saudi Aramco	10060549	25-May-17
2	 سابك سابك	11042553	28-Mar-17
3	 الفارابي FARABI PETROCHEMICALS	103017	18-Jul-17
4	 مرفق MARAFIQ	10564	30-Jul-17
5	 ياسرف Yasref	101251	24-Apr-17
6	 الشركة السعودية للكهرباء Saudi Electricity Company	5015253	16-Mar-17
7	 وزارة الطاقة Ministry of Energy	11977	9-Mar-17
8	 Achilles	5112544	1-Jan-17

APPLIED VENDOR LIST

S.NO	COMPANY	APPLICATION DATE	S.NO	COMPANY	APPLICATION DATE
1	 معادن MA'ADEN SAUDI ARABIAN MINING COMPANY	16-Mar-17	10	 صادرة Sadara	SADARA Chemical Company 4/25/2017
2	 المياه الوطنية NATIONAL WATER COMPANY	20-Feb-17	11	 المتقدمة Advanced	ADVANCED PETROCHEM 22-May-17
3	 المؤسسة العامة لتحويل المياه المالحة Saline Water Conversion Corporation	15-Mar-17	12	 ACT	ARABIAN CHEMICAL TERMINALS LTD (ACT) 21-May-17
4	 سامرف للمحولات SAUDI ARAMCO MOBIL REFINERY COMPANY LTD (SAMREF)	16-Mar-17	13	 NAMA CHEMICALS	NAMA CHEMICAL (ARABIAN INDUSTRIAL DEVELOPMENT COMPANY) 23-May-17
5	 سبكيم SIPCHEM	16-Jul-17	14	 بترورابغ Petro Rabigh	PETTORABIGH 22-May-17
6	 ساسرف SAUDI ARAMCO SHELL REFINERY COMPANY (SASREF)	16-Mar-17	15	 ساتورب satorp	SATORP 21-May-17
7	 التصنيع TASNEE	13-Mar-17	16	 BCI	SAUDI WATER TREATMENT COMPANY AND BASIC CHEMICAL NATIONAL COMPANY 23-May-17
8	 الصحراء للبتروكيماويات sahara petrochemicals	3/10/2017	17	 S-Chem	S-CHEM / CHEVERON 22-May-17
9	 UNILUBE	22-May-17			

A Brief Message from IRTS Chairman

INTERNATIONAL ROBOTIC TANK SOLUTIONS (IRTS) believes, that one of the major causes of success is the efficient and professional performance of the Management and firmly believes the doctrine it is the people (Employees) who makes the Company.

Accordingly our Company adopted and practicing sound Personnel Policies to retain desirable and motivated employees and attributed to the bottom line of the organization in terms of growth, profitability, flexibility and competitiveness. Through the Personnel Policies we could able to **improve the quality of work life** in terms of increased job involvement, increased satisfaction, reduced stress, accidents, illness and eliminated cost of lost contracts and enhanced community goodwill and general reputation.

In addition we practices **employees rights on the job, occupational safety and health** through we gain goodwill **decreasing employees grievances**. Quite often it is noticeable in the recent years mushroom growth of Contracting Companies executing Manpower Contracted Services in Oil & Petrochemical industries, not even meeting human resources basic needs and pure exploitation is visible throughout the area of their operation affecting productivity, absenteeism and clients valuable time is spent for the day to day grievances settlement of individual employees.

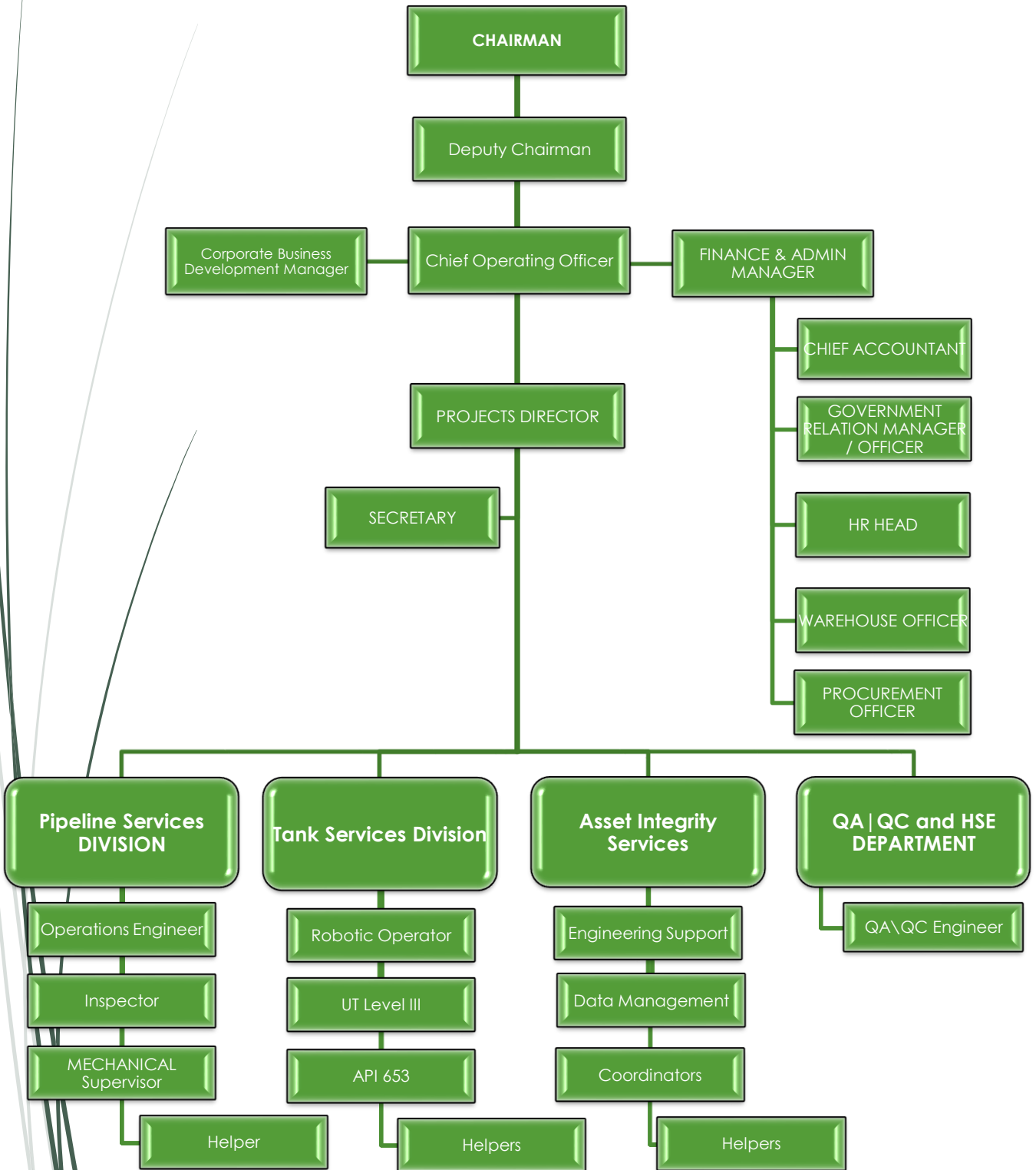
Analyzing all the above basic facts **INTERNATIONAL ROBOTIC TANK SOLUTIONS (IRTS)**. is kept aloof and stands in their strong foothold and adopted sound personnel policies and able to execute any contracted services with a sound financial background to set up any facilities based on client specification within short span of time.

With our humble request to you to put us to the test.

Sheikh Zeyad Nasser H. Alzarah

Chairman/Owner

ORGANIZATIONAL CHART



FIELD OF EXPERTISE

SERVICES OF INTERNATIONAL ROBOTIC TANK SOLUTIONS (IRTS)

IRTS provides its services to variety of industry segments.

1. terminals and storage
2. pipeline
3. shipping and transportation
4. offshore
5. Petrochemical
6. government and military
7. shutdowns and turnarounds
8. Fabrication

SERVICES:

- I. **IN SERVICE TANK Solutions**
- II. **PIPELINE INTEGRITY**
- III. **Corrosion Services**
- IV. **SHUTDOWNS AND TURNAROUNDS**
- V. **NON-DESTRUCTIVE TESTING**
- VI. **ADVANCED SERVICES**

FIELD OF EXPERTISE

I. IN SERVICE TANK Solutions

API 653 In-Service Robotic Tank Solution

IRTS is an ISO 9001 certified Robotic In-Service Tank Inspection based on API 653 codes of above ground storage tanks. Our team is highly trained, knowledgeable, and highly qualified. Our inspectors, engineers, and technicians work together closely and understand each other's requirements. The result is solutions that are:

- Comprehensive
- Consistent
- Cost-effective
- No Shutdown

IRTS offers a unique technology in the industry to inspect the Tank bottom of an above ground storage tank while in operation.

1. IN-SERVICE TANK INSPECTIONS

API 653 Robotic Tank Inspection is incorporated as an approved method under the API 575

With the combination of highly skilled personnel & in-service robotic tank floor inspection systems, IRTS provides API-653 compliant inspections of above ground storage tanks without the safety risks, cost, or hassle of removing tanks from operations.

Our Robotic Systems is the key to IRTS's success for in-service tank inspections. Our remotely controlled hydraulic & electrical robotic systems are specifically designed to inspect in-service tank floor bottoms.

FIELD OF EXPERTISE

Our Systems features include:

- ✓ An array of 8 immersion ultrasonic transducers that collect the floor thickness measurements every 2.54mm (.1")
- ✓ An X/Y triangular navigation system that continuously locates the robot and tracks the ultrasonic readings on the tank bottom.
- ✓ A sonar system that continuously monitors the robot 360 degrees from floor obstacles and objects.
- ✓ A sediment removal suction system that cleans the tank floor as the robot scans the tank bottom.
- ✓ An infrared video camera is mounted on our systems that allows for visual inspections of instrumentation, columns, supports, internal nozzles, & liners.
- ✓ A navigation system to pin point location of robot in the tank
- ✓ Three major pieces of information is derived from the UT signals. ie Plate nominal thickness, Minimum thickness and Corrosion type.

Robotic System Description

- The Robotic system consists of:
- Navigation system
- Ultra-Sonic system
- Vehicle
- Sonar system
- Camera and lights
- System Safety
- Umbilical
- Umbilical cart (only hydraulic system only)
- Deployment Crane
- Appropriate protection method to meet the IEC and customer safety requirements (only hydraulic system only)
- Suction and Discharge Pumps
- Container and control room for hydraulic system. Control rack for water system.

FIELD OF EXPERTISE

Electric Robot



Hydraulic robot



Benefits to our in-service tank inspections consist of:

- ❖ No tank interruption
- ❖ No pre-inspection cleaning
- ❖ No product downgrade due to material transfer
- ❖ No safety risk to inspector personnel entering a confined space

FIELD OF EXPERTISE

Type of tanks/Products

Our Robotic Systems are designed to be used in fixed roof tanks as well as tanks with external floating roofs. It can be used in water, petroleum products and many other chemicals.

At the present time our Robotic Systems can be used in tanks containing a wide range of middle distillates including kerosene, diesel, jet fuels, bunker C and lube oils. There are some chemical tanks where the Robot can be used. These applications are determined on a case-by-case basis. Client has to provide MSDS of the content to study on compatibility. We use our "Probe system" for potable water and smaller tanks below 40 feet in diameter. We also have a dedicated plastic robot for these kinds of tanks.

Requirements from client for an In-service tank robotic inspection proposal are:

- ✓ Dimension of the tank in consideration (ie Height, Diameter, roof type, size of the man way etc.)
- ✓ Product information's.
- ✓ MSDS sheet.
- ✓ Internal drawings.
- ✓ Last inspection reports if any.

Operational Location

IRTS's operate across the Asia, Middle East and Gulf Cooperation Council (GCC) countries.

FIELD OF EXPERTISE

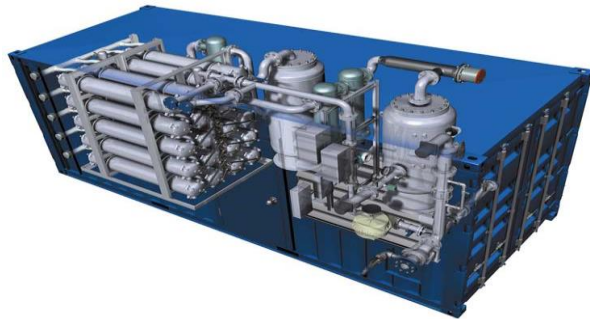
II. PIPELINE INTEGRITY

-Nitrogen Purging :

Our mobile nitrogen generation equipment is capable of delivering continuous and unrivaled nitrogen rates for the most demanding projects, onshore & offshore. Membrane nitrogen provides an excellent alternative to liquid nitrogen, especially for remote sites and projects requiring large volumes of nitrogen. It provides the clients with significant cost savings, eliminates the logistical challenges, and ensures maximum productivity.

Application

Purging,
De-curling
De-watering,
Pressure testing,
Inerting,
Reactor Cooling



Capabilities

With solid capabilities to deliver Nitrogen **at 8,500 psig** and purity up to **99.7%**, our equipment reliably delivers the required injection rates for critical applications such as those requiring Coiled Tubing, where this high level of nitrogen purity cannot be compromised. When the project calls for large amounts of nitrogen, we can generate **3,000 SCFM**, which is equivalent to **46,000 gallons** or **7 truck-loads** of liquid nitrogen per day from a single unit.

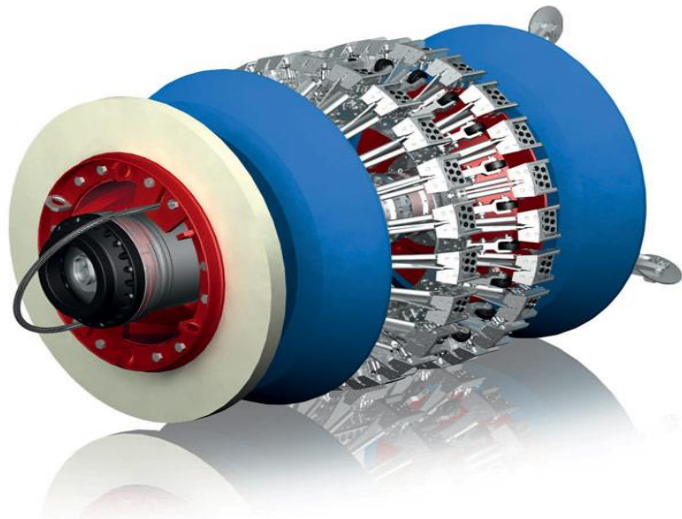


FIELD OF EXPERTISE

- Pigging

We are the leading local company in Saudi Arabia to get our own IP service in the local market. Our achievements to cover all the pipe line Diameter up to 62 " our tools having the GPS Modules to locate the instrument in the pipeline during the inspection. Our IP service covering all pigging inspection scopes:

- Caliper Geometrical change tools
- MFL
- Intelligent Pigs for corrosion detection.



FIELD OF EXPERTISE

III. Corrosion Services

IRTS's integrity team provides:

Cathodic protection and corrosion surveys for annual surveys, structure identification, CIS (close interval surveys), and rectifier and bond troubleshooting direct valuation packages for baseline and revaluation surveys

Direct Testing

The direct Testing surveys include:

- soils testing
- corrosion measurements
- phased array defect and linear indication assessments
- ultrasonic flaw detection and defect measurements
- magnetic particle testing
- pH testing
- coating evaluation
- remediation inspection
- ultrasonic flaw detection and defect measurements
- automated ultrasonic corrosion scanning and mapping

Post-Evaluation Report

When our evaluation is complete we provide a detailed and simple-to-understand report with complete survey results. Moreover, our software will integrate with any GIS system and we provide you with all the raw field data.

3. Chemical Coating and COMPOSITE REPAIR

Fix Defective Pipelines

IRTS also offers pipeline repair solutions when defects are found. Using composite repair technology, IRTS has the ability to fix many pipeline defects permanently.

FIELD OF EXPERTISE

No Downtime to Establish

The important advantage to using composite repair technology is that no welding or cutting is needed during installation so the repair can be applied to in-service pipelines. This means:

- ❖ safety risks for workers are minimized
- ❖ environmental risks are minimized
- ❖ cost saving

Wide Industrial Applications

Composite repair can be used for many industry pipelines, including:

- ❖ petrochemical lines
- ❖ water lines
- ❖ flare lines
- ❖ hydrocarbon lines
- ❖ offshore lines
- ❖ tank farm and terminal lines
- ❖ transmission lines

In addition, **IRTS** is equipped to perform a range of advanced non-destructive testing techniques under one roof.

IV. SHUTDOWNS AND TURNAROUNDS

IRTS provides expert inspectors and NDT technicians for turnarounds, shutdowns, and outages. We are experienced in providing shutdown and turnaround services for many industries segments, including:

- ❖ terminal storage
- ❖ oil and gas
- ❖ petrochemical

Our Team

IRTS has a team holding the latest certifications in the relevant industries from the American Petroleum Institute (API) to the recognized NDT disciplines throughout National Association of Corrosion Engineers (NACE) and other internationally recognized bodies of certification.

FIELD OF EXPERTISE

V. NON-DESTRUCTIVE TESTING

IRTS offers a varied range of inspection and NDT services including:

- ❖ Short Range Wave Ultrasonic Testing
- ❖ Thermal Imaging
- ❖ Pulsed Eddy Current

Short Range Wave Ultrasonic Testing

Short range wave ultrasonic testing (SRUT) is designed to produce exact wall thickness measurements of difficult-to-access locations of tanks, vessels, and piping, such as:
the annular plate of above ground storage tanks
areas underneath supports, clamps, and composite repairs

IRTS's video inspection tools are ideal for a wide set of applications, including:

- ❖ confirming the results of other non-destructive testing methods
- ❖ proving drawings and schematics
- ❖ assessing equipment reliability
- ❖ inspecting internal piping components, such as floats, baffles, valves, and internal coatings
- ❖ testing the material condition inside pipes, tubes, vessels, and tanks
- ❖ evaluating insulation integrity

Thermal Imaging

IRTS's infrared (IR) inspections provide thermal images of equipment to assist in showing problems in:

- process equipment
- rotating equipment
- mechanical equipment
- electrical equipment
- structural systems

FIELD OF EXPERTISE

Video and Still Photography

IRTS's certified infrared technicians perform infrared inspection using high-resolution infrared imaging devices with video and still photography capabilities. Components can be watched in real-time, meaning thermal changes can be identified simultaneously as changes occur in:

- ❖ temperature
- ❖ pressure
- ❖ load
- ❖ Process

Wide Range of Application

Infrared inspections are non-elusive and can be used in a many situations, including to pin-point:

- ❖ moisture intrusion on roofs
- ❖ damaged insulation on structural envelopes
- ❖ material level in storage tanks
- ❖ overheating in mechanical equipment
- ❖ leaks or blockages in pipes, vessels, and tanks
- ❖ hot spots in electrical systems

Advantages to in-service tank inspection include:

- ❖ no product downgrade due to material transfer
- ❖ no safety risk to human inspectors entering the tank
- ❖ no tank downtime
- ❖ no pre-inspection cleaning
- ❖ no environmental risk from emptying tanks.

❑ Pulsed Eddy Current

Pulsed eddy current (PEC) technology uses electromagnetic induction to inspect corrosion of ferromagnetic material without making any contact with the material's surface.

FIELD OF EXPERTISE

Because PEC equipment does not make surface contact with the components under inspection, it is ideal for components that are:

- ❖ covered in corrosive material, such as rust
- ❖ used in high temperature applications
- ❖ covered by insulation, asbestos, fireproofing, or concrete
- ❖ coated with materials like bitumen, polyethylene, or epoxy
- ❖ partially or fully submerged in water
- ❖ used to house or transport hazardous material and therefore cannot risk damage that may occur if surface were scoured for testing

Penetrating Scans

PEC can produce wall thickness measurement with $\pm 10\%$ accuracy through:

- ❖ 20mm of marine growth, coatings, and corrosion
- ❖ 250mm of obscuring insulation or fireproofing

Cost effective

PEC is less cost than testing methods that require surface contact because there is:

- ❖ no need for extensive scaffolding since equipment can often be operated through rope access, on extension poles, or by robotic crawlers
- ❖ no time or money spent removing corrosion, dirt, or scale
- ❖ no need to remove and restore coatings, paint, or insulation

Moreover, watching the wall thickness of critical equipment while it is in service extends equipment run times and reduces both the frequency and duration of shutdowns

Wide Range of Application

Typical applications include inspections of:
structural applications with fireproofing
annular rings of storage tanks
insulated vessels and columns
insulated storage tanks and spheres
insulated piping systems
offshore risers protected by neoprene

Professionally Trained Techs

Shell Global Solutions developed PEC and has trained and licensed IRTS technicians to use PEC. Shell awarded the license after IRTS proved its technical competence and satisfied their service guidelines.

FIELD OF EXPERTISE

VI. ADVANCED SERVICES

- **In-Service Robotic Surface preparation and Coating**
- **Acoustic Emission Testing**
- **Guided Wave Ultrasonic Testing**
- **Phased Array Ultrasonic Testing**

In-Service Robotic Surface preparation and Coating

This method uses closed loop high pressure water jet of 65000psi and Re-use the water through a separator.

Advantages

- ❖ No Scaffolding
- ❖ Un-manned process
- ❖ Reduces Health Hazards and high on Safety
- ❖ Less time consuming
- ❖ Cost effective
- ❖ No Sandblasting

Acoustic Emission Testing

Acoustic emission testing (AET) is a powerful screening technique that provides real time, 100% volumetric monitoring of in-service equipment.

AET uses innovative equipment to spot the acoustic signals produced within material that is under stress. Software analyzes the collected signals and identifies the location and strictness of any structural defects found, such as:

- ❖ corrosion
- ❖ Cracking
- ❖ embrittlement

FIELD OF EXPERTISE

Effective Screening

Acoustic emission testing (AET) is a powerful screening technique that provides real time, 100% volumetric monitoring of in-service equipment. AET uses innovative equipment to spot the acoustic signals produced within material that is under stress. Software analyzes the collected signals and identifies the location and strictness of any structural defects found, such as:

- ❖ corrosion
- ❖ Cracking
- ❖ embrittlement

For Dynamic Processes

AET is unique within NDT techniques in dealing with dynamic processes, or changes, in a material. Because only active features, like crack growth, are highlighted, AET allows you differentiate between developing and stagnant defects. The result will let you monitor how different processes or changes in load, pressure, or how temperature affect your components.

Minimum Disruption

With AET, equipment can be inspected on-line. Since AET can be used with temperatures as high as 1475°F (800°C), it is an excellent means for inspecting insulated components and for use during cool-downs and start-ups.

Background Noise

Background noise is a problem when collecting acoustic emissions. Our tools include software, sensors, and preamplifiers designed to help remove unwanted signals. However, in some cases background noise may make AET unusable.

FIELD OF EXPERTISE

Wide Range of Application

AET is suitable for both on-stream monitoring and remote long term monitoring. It can be applied to:

- ❖ Horton spheres and legs
- ❖ nuclear reactors and piping
- ❖ tube trailers
- ❖ fiberglass reinforced plastic tanks and piping
- ❖ offshore platform monitoring
- ❖ above ground storage tanks
- ❖ pressure containment vessels, including columns, bullets, and cat crackers
- ❖ railroad tank cars
- ❖ bridge critical members monitoring
- ❖ pre- and post-stressed concrete beams
- ❖ high-energy seam-welded piping systems in power plants

❑ Guided Wave Ultrasonic Testing

Guided wave ultrasonic testing (GWUT), also known as long range ultrasonic testing (LRUT), is a screening tool for rapidly testing long lengths of pipe from a single inspection point.

GWUT provides 100% coverage of the pipe wall without having to get rid of insulation or coating. It quickly identifies areas of corrosion or erosion that may then undergo more detailed inspections using other NDT techniques, such as radiography or 3D structured light.

Effective Screening Tool

Guided wave ultrasonic testing (GWUT), also known as long range ultrasonic testing (LRUT), is a screening tool for rapidly testing long lengths of pipe from a single inspection point.

GWUT provides 100% coverage of the pipe wall without having to remove insulation or coating. It quickly identifies areas of corrosion or erosion that may then undergo more detailed inspections using other NDT techniques, such as radiography or 3D structured light.

FIELD OF EXPERTISE

Inspect Difficult to Access Systems

GWUT can inspect systems that can't be accessed easily, such as:

- ❖ river or bridge pipeline crossings
- ❖ insulated pipe in refineries
- ❖ cased road or railway crossings
- ❖ offshore pipeline risers
- ❖ tank dyke pipeline crossings
- ❖ loading lines and associated pipe work
- ❖ above ground or buried flow lines.

IRTS's GWUT inspections of cased road or railway crossings meet US DOT inspection requirements.

❑ Phased Array Ultrasonic Testing

Phased array ultrasonic testing produces real-time sectorial scans (S-Scans) that provide a complete volumetric examination from a single inspection point. Phased array equipment can spot defects regardless of their orientation to the transducer.

Phased array ultrasonic testing can be used for:

- ❖ crack detection
- ❖ thickness measurements
- ❖ inspection of welds
- ❖ corrosion inspection

Complete View from One Point

Phased array ultrasonic testing produces real-time sectorial scans (S-Scans) that provide a complete volumetric examination from a single inspection point. Phased array equipment can spot defects regardless of their orientation to the transducer. Specialized software improves signal-to-noise ratio to ensure accurate data.

Phased array ultrasonic testing can be used for:

- ❖ crack detection
- ❖ thickness measurements
- ❖ inspection of welds
- ❖ corrosion inspection

Occupational, Safety, Health and Environmental Program (OSHE)

International Robotic Tank Solutions (IRTS) approach towards safety is guided by two broad basic principles:

- 🔑 A true and demonstrated concern for the safety and health of our employees.
- 🔑 A measured and evaluated appraisal of the economic benefits to our clients and the company.

The avoidance of accidents and other unplanned occurrence which result in injury to employee, interruption of production and equipment damage is of prime concern to Tamam Projects Company, it is our policy to take whatever actions are necessary through our supervisory and safety personnel in engineering, planning, assigning, supervising and performing all work operations to ensure that safe and healthy working conditions are established and maintained.

SAFETY PROGRAM.

International Robotic Tank Solutions (IRTS) Safety program is determined through written procedures contained in the Safety Procedure Manual such as Fire Protection and Prevention, Hazardous Material Manual and Standardized work plan procedures as well as Statutory Safety and Health Regulations. The program will be monitored to document progress and to identify areas, which require immediate or remedial actions. The Safety Program for a client's facility will be tailored to the specific requirements of the plant will be published as a Plant Safety Action Plan and will be structured so as to dovetail with existing plant requirements. The plan will be completed and submitted for the clients review prior to commencement of work.

HIGHLIGHTS OF THE PROGRAM.

A. SAFETY:

Safe practices and working conditions in the plant are accomplished through a combination of inspection, training and enforcement. Continuing inspections by supervisors and safety personnel on a daily basis identify unsafe conditions and unsafe acts. The problems identified are corrected immediately and documented problems, which evolve naturally out of work environments, are identified in a timely manner and dealt with through responsible planning and scheduling. Enforcement of the program through written notices of non-compliance and documented disciplinary action notices to employees is an ongoing supplement to training.

Occupational, Safety, Health and Environmental Program (OSHE)

B. OCCUPATIONAL HEALTH:

All work areas are monitored for those occupational health hazards, which are associated with the work environment. The hazards that are continually monitored are evaluated are chemicals which may occur in a liquid dust, fume, mist, vapor or gaseous form, physical hazards such as radiation, noise, pressure, vibration and illumination are also monitored and controlled. Biological hazards although occurring less frequently are also monitored through respiratory protection program, which includes medical screening, and evaluation will be implemented for those employees exposed to either feedstock or products which through industry experience or regulations are determined to detrimental to employee health.

C. RECORD & REPORTS:

All reports and records required by statutory regulations will be maintained at the site. Weekly safety activities reports will be completed.

D. SAFETY TRAINING:

All employees will receive a new hire safety orientation at which **International Robotic Tank Solutions (IRTS)** Safety Practice Booklet will be issued and discussed. Specific plant safety and health rules will also be detailed.

Weekly toolbox safety meetings are held for all personnel. Timely safety issues and plant accident trends are used as topics for discussion at these meetings. Special safety training is conducted on an "as needed" basis for work with hazardous materials, especially hazardous work operations, confined space work, respiratory protection, medical requirements etc.,

Supervisory safety training is an important part of all overall safety-training programs. Each newly appointed foreman receives a foreman's safety orientation detailing his new safety responsibilities.

International Robotic Tank Solutions (IRTS) safety department maintains strong central control over the project safety program through the direct control of the Executive Manager. He will be available for technical advice and consultation as the need arises and routinely will monitor the safety performance at the project to ensure that applicable policies and procedures are in place and working as designed.

International Robotic Tank Solutions (IRTS) Project Manager will be assigned the responsibility of implementing and maintaining the Plant Safety Action Plan. SCEC Safety department will be available for consultation on safety matters whenever clients require clarifications.

Company Experience

IRTS have been conducted jobs in Marafic and SABIC for API in-service Robotic Tank Inspections in KSA . Our technology has been approved by SABIC TECHNOLOGY CENTER.

- ✓ **ARAMCO** adopted this technology for specific tank products.
- ✓ **SABIC** : Approved and accepted the technology its by inspection and reliability departments under the presence of many of SABIC AFFILIATES plus SABIC TECHNOLOGY CENTER. The Result was PASS.
- ✓ **MARAFIQ**: Under the management of SAUR And MARAFIQ we conducted Successful Job and the result was PASS by TSD.

IRTS also been attended for SABTANK RELIABILITY CAMPAIGN 2016 and IBN SINA RELIABILITY CAMPAIGN 2016 recently been held in Jubail Industrial City.



Royal Commission in Jubail Land Acquisition

We have recently been approved by Royal Commission in Jubail Industrial City to acquired plot of land approximately 5,202.5 sqm to start the construction of our manufacturing facility for Robotic Tank Inspection equipment assembly.



PROJECT PICTURES



PROJECT PICTURES



PROJECT PICTURES



Location Map



Main Office Address:
P.O. Box 76211 Al-Khobar 31952
Prince Faisal Bin Fahd Bin Abdullah
Bin Jalawi Al Saud Street, Rakkah 2 South Area,
Al-Khobar – Dammam Highway
Kingdom of Saudi Arabia
Tel no.: +966-3-847-6921 / 22
Fax no.: +966-3-847-6920

CR CERTIFICATES

رؤية VISION 2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

وزارة التجارة والاستثمار
Ministry of Commerce and Investment

شهادة تسجيل شركة

رقم: ٢٠٥١٠٢٢٢٣٦
التاريخ: ١٤٣٧/٠٩/١٧
٢٠٢٥١١٢٩٠

اسم الشركة:
نوعها:
مدة الشركة: ١٠ سنوات
مركزها الرئيسي:
ص ب: ٧٦٢١١
النشاط: تشييد وصيانة وفحص الخزانات بالروبوت ،،،،

شركة الآليات المبتكرة لحلول الخزانات للصيانة
ذات مسؤولية محدودة

تبدأ من: ١٤٣٨/١١/٢٩
جنتيها:
سجلها:
رقم: ٨٤٧٦٩٢٠
هاتف: ٣١٩٥٢
الرمز البريدي: ٧٦٢١١

رأس المال:
المديرون: زياد بن ناصر حمد الزرع

١ زياد بن ناصر حمد الزرع
٢ عبد السلام بن زياد ناصر الزرع
٣
٤
٥
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١١
١٢

سلطات المدير/المديرين: احسب ما نرس عليه عقد الشركة ~

السلام
بانه تم تسجيل الشركة المذكورة اعلاه بمدينة:
يشهد مكتب السجل التجاري بمدينة:
وتنتهي صلاحية الشهادة في: ١٤٤٧/٠٩/١٦

مدير السجل التجاري الشركات:
التوقيع:
عبد العزيز الخالدي
١٤٣٨/١١/٢٩ وتاريخ: ٣١/٩/٢٥
بموجب النصوص رقم: ١٤٤٧/٠٩/١٦

الخبر:
عبد العزيز الخالدي
١٤٣٨/١١/٢٩

ماجد
٢٠٢٥

CC CERTIFICATES

شهادة اشتراك

رقم العضوية: 211225
الدرجة : الثانية
تاريخ الاصدار: 1438/03/09

تشهد الغرفة التجارية الصناعية بالمنطقة الشرقية بأن:
الايات المبتكرة لحلول الخزانات للصيانة
المقيدة بالسجل التجاري / الترخيص رقم (2051062636)
مستزكة لدينا لهذا العام
ويتمهي سريان هذه الشهادة في 16/09/1442

صندوق البريد 76211 الخبر 31952
صدرت في: 1438/03/09 الموافق 2016/12/8 م
رقم السند: 1-227234464-60 / تاريخ الاشتراك: 1438/03/08 هـ 12707

شهادة اشتراك

رقم العضوية: 211225
الدرجة : الثانية
تاريخ الاصدار: 1438/03/09

تشهد الغرفة التجارية الصناعية بالمنطقة الشرقية بأن:
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التوقيع

غرفة الشرقية
ASHARQIA CHAMBER
مركز خدمات
الخبر

Membership No : 211225
Classification: Second
Date of Issue: 8/12/2016

Asharqia Chamber Certifies that :
International Robotic Tank Solutions
Commercial/Registrar No (2051062636)
Registered for this year
The certificate expires on 28/4/2021

P.O.Box 76211 KHOBAR 31952

نعمل معاً... لهدف أفضل

الرقم الموحد ٩٢٠٠٠١٣٠١٣٠٠٠
فاكس ٠١٣٠٨٥٧٠٦٠٧٠٠١٣٠٠٠

www.chamber.org.sa
E-mail: info@chamber.org.sa

غرفة الشرقية
ASHARQIA CHAMBER

التوقيع

غرفة الشرقية
ASHARQIA CHAMBER
مركز خدمات
الخبر

التوقيع

غرفة الشرقية
ASHARQIA CHAMBER
مركز خدمات
الخبر

التوقيع

غرفة الشرقية
ASHARQIA CHAMBER
مركز خدمات
الخبر

Membership No : 211225
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International Robotic Tank Solutions
Commercial/Registrar No (2051062636)
Registered for this year
The certificate expires on 28/4/2021

P.O.Box 76211 KHOBAR 31952

نعمل معاً... لهدف أفضل

الرقم الموحد 92000 1361
Fax 013 8570607

SF-MB-02/REV.05 / 01 / 07 / 2012

ISO CERTIFICATES

CERTIFICATE OF REGISTRATION



This is to certify that the Quality Management System of
International Robotic Tank Solutions

P.O. Box 76211, Al-Khobar 31952

Kingdom of Saudi Arabia

has been assessed and registered by TNV as conforming
to the requirements of:

ISO 9001:2015

For the following Scope

**“Provision of Robotic In-Service Tank
Inspection Services (based on API Std 653)”**

Certificate Number : 1708110660123
Issue Date: 11th Aug. 2017
Valid Until: 10th Aug. 2018
1st Surveillance on or before 11th Jul. 2018
2nd Surveillance on or before 11th Jul. 2019

TNV Certification UK Ltd.

Auth. Signatory



Authorised Signatory
TNV Certification UK Ltd.
Regd. Off: Armstrong House, First Avenue, Robin Hood Airport, Doncaster, South
Yorkshire, England, DN9 3GA, United Kingdom
Mail: info@tnv.uk.com
Certificate can be verified on Accreditation Board website: www.abcab.org and on CAB's
website www.tnv.uk.com

TNV Certification UK Ltd is a Conformity Assessment Body as per requirement of ISO 17021 and meet the requirement of all Mandatory Documents of International Accreditation Forum for the Management System Certification Scheme.

In the issuance of this certificate, TNV Certification UK Ltd. assumes no liability to any party other than to the Client, and then only in accordance with the agreed upon Certification Agreement. This certificate's validity is subject to the organisation maintaining their system in accordance with TNV's requirements for systems certification organisation maintaining their system in accordance with TNV's requirements for systems certification.



TNV UK TNV UK TNV UK TNV UK

SABIC CAMPAIGN CERTIFICATES



ابن سينا
ibn sina

CERTIFICATE OF APPRECIATION

IBN SINA Management recognizes

IRTS (International Robotic Tank Solutions)

in recognition of your contribution during IBN SINA 2016 Reliability Campaign.



Shamrani-Al, Mohammed O.
GM, TECHNICAL



Mohammad M. Al Khaldi
President

Date: 11th December 2016

ساب تانك
sabtank

CERTIFICATE OF APPRECIATION

Awarded to

INTERNATIONAL ROBOTIC TANK SOLUTIONS (IRTS)

For their quality involvement and participation of SABTANK Reliability Campaign titled
"Reliability Towards Process Safety" for the year 2016.



AHMAD S. AL-BADRANI
PRESIDENT

A SABIC Affiliate

PARTNERSHIP CERTIFICATE



**The American Society for
Nondestructive Testing, Inc.**

recognizes

International Robotic Tank Solutions

as a Corporate Partner of this Society.

Dedicated to the development and perpetuation of the highest standards of professional service and efficiency in the field of nondestructive testing, ASNT® exists to create a safer world.


Chairperson of the Board

August 1, 2016

Date

ACHILLES CERTIFICATE

Achilles

Chemicals &
Allied Industries
Global

Certificate of Verification

This is to certify that

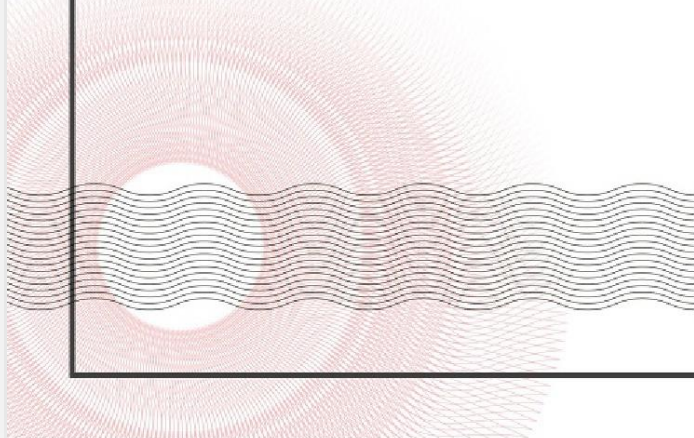
International Robotic Tank Solutions (IRTS)

is now a verified supplier in the Achilles Chemicals & Allied Industries Community, and that company information related to the following criteria has been checked and validated by Achilles Information Limited, an independent third party:

- Supply Chain Management
- Corporate Social Responsibility
- Health & Safety Management
- Quality Management
- Environmental Management
- Carbon Management
- Financial & Insurance

Supplier ID: 5112544
Issue Date: 07-11-2017
Expiration Date: 03-01-2018

Gareth Palmer
Chemicals & Allied Industries Community Director
Achilles Information Limited



ACHILLES CERTIFICATE




Verified Products/Services

Product/Service Code and Description

- 10.1.26 Industrial painting and specialist coating services
- 10.1.5 HVAC component hire
- 17.6.1 Asset management / operation services
- 17.6.10 Industrial cleaning services
- 17.6.4 Factory and heavy plant maintenance and refurbishment services
- 17.6.99 Other facilities management services
- 2.6.1 Painting robots
- 2.6.2 Robotics accessories and spare parts
- 2.6.4 Welding robots
- 3.4.1 Abrasive surface treatment services
- 3.4.2 Coating services
- 3.4.5 Painting services
- 3.4.9 Plating services
- 3.4.99 Other surface treatment services
- 3.6.8 Pipe maintenance services
- 4.2.14 Laboratory sampling and specimen equipment and products
- 4.2.15 Laboratory sensors and recording instruments
- 4.2.16 Light and wave generating and measuring equipment
- 4.2.18 Navigational equipment
- 4.2.19 Non destructive testing NDT equipment

Product/Service Code and Description

- 5.1.9 Water testing services
- 5.2.1 Analysing services
- 5.2.2 Chemical testing services
- 5.2.4 Sampling services
- 8.10.3 Vetting, surveying and inspection services





IRTS

International Robotic Tank Solutions

www.irts-global.com

Contact Details:

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Deputy Chairman

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Telephone: +1 (832)433-7942