



**MTS**

# Al Mada Technology for Inspection & Surveying Company

For Construction & Inspection





**LIFTING**

**INSPECTION**

**TRAINING**

**PIPELINES**

# About Us

- Every Business transaction is executed with a level of risk. Whatever you do, you can rely on our team of experts to provide you with first class inspection solutions that will facilitate your business, reduce your risk and help protect your interest.
- Wherever you decide to work, we are there to offer our independent services with the utmost integrity and impartiality.
- **MTS** is registered in Iraqi government Companies .
- **MTS** is a third-party inspection company that provides inspection, verification and testing services in various industries. We are a member of the American Society for Non-Destructive Testing (ASNT) as well as an ISO certified company and a member of Lifting Equipment Engineers Association (LEEA)



# About Us

- We deliver sustainable inspection solutions that will support your business activities and assist you to improve product quality and safety.
- We are always looking to provide solutions that are beyond customers expectations.
- We assist our customers in complying with increased governmental regulations in order to satisfy the quality and safety needs of their business.
- In **MTS** we believe in providing solutions that ensure business sustainability and growth. Sustainability assists in managing long-term economic effects on businesses and societies.



# About Us

- MTS also provide pipe line construction and welding
- The pipeline construction process is divided into three phases: pre-construction, construction and post-construction – it's a highly-coordinated.
- Well-planned operation by a large team of experienced professionals.



## OUR VISION

- To become a leader in third-party inspection through delivering first class quality services and prompt responses to customer needs. These services will produce efficient and safe transactions for our customers.
- MTS is working toward achieving highly competitive and productive services.

## OUR VALUES

- We share the following core values, which guide the way we do business.

## QUALITY

- MTS prides itself on providing sustainable high quality services. Our work history is a proven example of achievement and it shows that we are capable of getting our job done well and on time.

## COMPETENCE

- Our dedicated team of highly qualified experts is our greatest asset. They are able to provide professional and reliable services to our clients.

## RESPONCIBILITY

- The MTS team has great experience and is capable of carrying out the scope of work required with utmost responsibility and integrity.

## HONESTY & TRUST

- Honesty and trust are our most valued guiding principles. All of our transactions are conducted in an open, honest, and transparent manner.

# LIFTING EQUIPMENT INSPECTION & CERTIFICATION

MTS is an approved entity to inspect and certify lifting equipment in accordance with LEEA, LOLER, BS & European Standards, API, or as required by other International Standards to major clients in a variety of industrial sectors including construction, oil and gas (offshore and onshore), alternative energy and public infrastructure.

Periodic inspection of all cranes and lifting equipment, this includes but is not limited to drilling equipment & tools, pedestal and overhead cranes, ROV/Dive spreads, fixed lifting equipment, lifeboats and life raft launch and recovery systems and loose lifting equipment. We ensure that the inspected equipment is marked by our color code system using the color code tags and tie wrap.

## LIFTING OPERATIONS SERVICES:

This covers a wide range of Lifting equipment including

- Lifting Plan and supervision.
- Crane Inspection, Mobile, Platform, Overhead crane (OTC) Gantry and Crawler
- Forklifts
- Pad Eye Testing
- Container and Storage Bin load Testing
- Man Riding Baskets and Elevators
- Vehicle Inspection Lifts
- Excavators & Earth Moving Equipment
- Trucks
- Lifts
- Hoist
- Mobile Elevating Work Platform
- Lifting Accessories Such As Sling, Shackles, Chain and Wire Rope Inspections
- General SWL Test and Certification
- Safety Harness and other Safety Devices Inspection
- Manual /Power Lifting Machines Inspection.
- All equipment inspected is entered into a database which conforms with LOLER 1998 and generates
- the certificates and reports required by relevant standards.





## TUBULAR , OCTG INSPECTION & WELDING

Your pipes and oilfield tubulars can be prone to corrosion, cracking, third-party damage and manufacturing flaws. Our Drill Pipe and Tubular inspection services identify defects and discontinuities before they cause serious damage, assuring smooth operation and reducing financial risks

Our welding team authorized for welding 1G,2G,3G,4G,5G&6G as per AWI .

Welding Type such as TIG ,MIG & STICK

TIG (GTAW) TIG (tungsten inert gas) welding is used to make precise, critical welds when joining metals such as mild steel, aluminum, or stainless steel. TIG welding is a two handed process (one hand holds the torch while the other feeds filler metal) and commonly involves a foot pedal or fingertip remote to control the arc amperage while welding. Like MIG welding, a shielding gas (typically argon) is required.



MIG (GMAW) MIG welding (GMAW – Gas Metal Arc Welding) is the most common process used in home shops, small businesses, manufacturing and metal fabrication applications. Choose from single-phase Miller matrix all-in-one MIG welding machines or more powerful three-phase MIG welding systems that suit an endless variety of applications, including stainless steel and aluminum welding.

Stick (SMAW) Stick welding is a simple yet versatile, inexpensive and portable welding process. Flux coated welding rods are used, eliminating the need for bottled shielding gas like that used in MIG welding or TIG welding. Stick welders are ideal to use when welding outdoors and/or welding objects that are rusty or dirty. Most common metals and alloys can be joined using a stick welder. Choose from a variety of Miller stick welders, including some that also offer TIG welding capabilities for more versatility.

## DRILL PIPE INSPECTION

- Depending on your requirements, IIS is able to provide a variety of drill pipe-related services, ranging from the Basic/Standards API to critical well service standards DS1 & NS2

## BOTTOM HOLE ASSEMBLY (BHA) INSPECTION

- We can provide BHA inspections on any drilling component used in the industry to check conformation to API RP7, T.H.Hill DS1, NS2, or any other standards requested by the client

## BHA INSPECTION CONSISTS OF INSPECTION OF :

- » Drill Collars
- » Heavy Weight Drill Pipe
- » Cross Over Subs
- » Stabilizers
- » Reamers
- » Bit Subs
- » Down Hole BHA
- » Special tools : MWD, Mud motors/ turbines, fishing tools, etc



## BHA TYPES OF INSPECTION :

- » Visual Inspection
- » Dimensional Inspection
- » Magnetic Particle Examination
- » Dye Penetrant Examination
- » Ultrasonic Wall Thickness
- » Prefacing.
- » X-Ray

## OIL COuNTRY TuBuLAR GOODS (OCTG) INSPECTION SERVICES :

- » Casing and Tubing Inspection
- » Premium Connections / API Connections Inspection
- » Visual Thread Inspection
- » Full Length API Drift
- » Full Length Magnetic Particle Examination
- » Special End Area Inspection

## **NON-DESTRUCTIVE TESTING (NDT):**

MTS offers Specialized Non-Destructive Testing (NDT) inspection to ensure safety and efficient operation of equipment and assets by detecting defects before they result in severe damage, and assures compliance with international standards.

### **MAGNETIC PARTICLE INSPECTION**

Done in accordance with ASME Section V, MPI detects cracks and other discontinuities on or near the surface of ferromagnetic materials.

### **ULTRASONIC WELD INSPECTION**

This inspection is done in accordance with ASME Section V.

### **ULTRASONIC THICKNESS GAUGING**

This inspection is done in accordance with ASME Section V, using an A-Scan or digital thickness measurement equipment. The key objective is to identify any loss or reduction in material thickness which may or may not be detrimental to the integrity of the structure.

### **DYE PENETRANT INSPECTION**

This inspection is done in accordance with ASME Section V Article 6 and involves visible solvent removable methods on non-porous metal.



## POSITIVE MATERIAL IDENTIFICATION

PMI is the analysis of a metallic alloy to establish composition by reading the quantities by percentage of its constituent elements.

## HARDNESS TESTING

To Rockwell, Vickers or Brinell Scales



# DROPPED OBJECTS

MTS follow drop objects principle at all works and it has a capability to guide the client to work on it according to customers requirements.

**We typically cover the following on a full survey, which can be specified as per the client's instructions:**

- Derrick Structure
- Sub-structure/Moon pool
- Deck Cranes
- Gantry Cranes
- Knuckle boom Cranes
- Traveling Equipment
- Jack House and Legs
- Raised Catwalks and Conveyors
- Communication Masts
- Fixed Third Party Equipment
- Accommodation & Rig Compartments





# DROPPED OBJECTS

## What DROPS From Your Rig?

**LEGEND:**

- RED - DROPS FROM CROWN BLOCK SECTION
- BLUE - DROPS FROM DERRICK FLOOR
- GREEN - DROPS FROM RIG FLOOR

**Labels on the left side of the rig:** LIGHTS, FACIES, SHACKLES, SWITCH BLOCK, ELECTRICAL SOCKETS / RECEPTACLES, CCTV CAMERA, CARABINES, SPEAKERS, WINCH, LADDER, SPOTLIGHTS, WIND SOCK, LOAD SPREADER, CCTV CAMERA, BREATHING AIR UNITS, MOTORS, BLOWER, SAFETY.

**Labels on the right side of the rig:** LIGHT, RAILINGS, BLOCKS, ARRESTOR BLOCKS, BREATHING AIR UNIT, ALARM BELL, TALK BACK BOX, WINCH/GEAR SHEAVES, RAILINGS, PIPE CLAMPS, DEADLINE ANCHOR ROSE, SHEAVES, DEADLINE ANCHOR, BRUSH.

**Labels at the top of the rig:** AFFRAME STOP HATCH, SAFETY CHAINS, FRAME LADDER, ELECTRICAL SOCKETS / RECEPTACLES, BELLS AND, DUMPER BLOCK.

The only thing that should fall on your head are raindrops!

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# SAFETY INSPECTION & LIFTING PLAN FOR RIG MOVE



Reducing downtime and increase of production in a safely manner. A rig move starts with detailed preparations. IIS offers Safety Inspection & Lifting Plan for Rig Move. From Equipment Loading at Yard up to the Equipment Off-loading on location IIS will ensure that safe lifting operation and safety of the people will be in place. IIS assure our customers that their rig move project will be carried out in accordance with the latest regulations combined with IIS most recent field experiences to meet expectations.

**MTS**

# TRAINING COURSES

## SAFETY COURSES:

- LIFTING PLAN & LOAD ANALYSIS .
- RIGGING & SLINGGING AWARENESS.
- ACCIDENT AND INCIDENT INVESTIGATION
- EMERGENCY RESPONSE
- ENVIRONMENTAL AWARENESS
- GAS TESTING
- GENERAL SAFETY
- HOME AND OFFICE SAFETY
- MANUAL HANDLING
- NOISE AT WORK
- PERMIT TO WORK
- RISK ASSESSMENT
- RISK MANAGEMENT
- SAFE WORKING PROCEDURES, HAND AND POWER TOOLS SAFETY
- WELDING SAFETY
- WORKSHOP AND WAREHOUSE SAFETY
- SCAFFOLDING SAFETY AWARENESS
- WORKING AT HEIGHTS



## NDT COURSES:

VT TRAINING COURSES LEVEL II

PT TRAINING COURSES LEVEL II

MT TRAINING COURSES LEVEL II

UT TRAINING COURSES LEVEL II

RT TRAINING COURSES LEVEL II

## LIFTING OPERATIONS COURSES:

- MANLIFT OPERATIONS
- RIGGING LOFT MANAGEMENT AWARENESS
- LIFTING EQUIPMENT INSPECTION TRAINING COURSE
- LIFTING OPERATION SUPERVISOR TRAINING COURSE
- MANAGEMENT OF LIFTING OPERATIONS (BS71 21-APPOINTED PERSON)
- FORKLIFT OPERATOR ASSESSMENT TRAINING COURSE.
- FORK LIFT TRUCK - REFRESHER/RE-CERTIFICATION TRAINING COURSE.
- MOBILE CRANE OPERATOR ASSESSMENT TRAINING COURSE.
- MOBILE CRANE - REFRESHER/RE-CERTIFICATION TRAINING COURSE.
- MOBILE CRANE SUPERVISOR LEVEL II TRAINING COURSE
- OVERHEAD GANTRY CRANE ASSESSMENT TRAINING COURSE.
- RIGGING & SLINGING TRAINING COURSE.
- RIGGING & SLINGING SUPERVISOR TRAINING COURSE.
- SLINGER / BANKS MAN/ SIGNALER TRAINING COURSE.
- DROPPED OBJECTS AWARENESS AND PREVENTION TRAINING COURSE

**FIRE FIGHTING COURSES:**

BASIC FIRE FIGHTING  
ADVANCED FIRE FIGHTING  
FIRE TEAM LEADER  
H2S BREATHING APPARATUS

**FIRST AID COURSES:**

BASIC FIRST AID  
ADVANCED FIRST AID

MTS is dedicated to helping you maintain a safe working environment by achieving operator competence and heightened levels of safety awareness amongst your employees.

We offer several training courses to meet your needs. These courses focus on safety and technical competency and are designed in accordance with international and local standards.

## METERING, CALIBRATION & FLOW MEASUREMENT SERVICES

To enhance our presence in the Gulf region we are developing our measurement services, products and technologies. We are now providing audit and consultancy services, field technicians, and office-based engineers to help Oil & Gas companies manage their fiscal, allocation, production, and environmental measurement infrastructure. We help ensure that you can measure your production or throughput with optimal certainty, meet your commitments to partners and official bodies, and operate in a compliant, transparent and open manner.

Recognizing that our strengths come from our employees, MTS ensures that the personnel allocated to your project are suitably experienced and qualified to handle the job.

Our expert engineers will support your company at the conceptual stage in order to produce practical, operable, and cost-effective engineering solutions that fully comply with appropriate standards and statutory requirements.

We understand the importance of establishing a precise set of objectives before starting a project-that's why we liaise with our clients from the very beginning to consider all aspects of the project, including engineering, commercial, and legal requirements. We cover projects from Conceptual and Front End Engineering Designs (FEED), Specifications, Basis of Design (BOD) and detailed engineering through to Installation, Commissioning and Operation of Systems.



Our service is always specifically tailored to the needs of the client. It is effective in all areas of metering activities from specialist engineering through to routine calibration. As your total metering service provider, we wear your company badge. For all intents and purposes, we consider ourselves honorary members of your organization, fully committed to its success.

With IIS managing all of your measurement and allocation needs, you can be sure that your health & safety is uncompromised, your reputation is protected, and profitability is maximized



# NEFTEMER MULTIPHASE FLOWMETER

Neftemer MPFM is the only non-intrusive; clamp on MPFM in the market to measure unseparated three phase flow (oil, water, gas) independently. Once installed, it runs man less with no human intervention necessary whatsoever. The MPFM can be used in a stand-alone mode as well as with DCS mode & can be used in onshore & offshore fields. Apart from cost savings, many complexities & safety issues common to traditional well testing/metering practices are reduced or eliminated with Neftemer MPFM.

Neftemer has an established and successful installed base of at least 300 meters. Past and active projects have been carried out at offshore Malaysia, offshore Brazil, Alberta Canada, Mexico, Western Europe, Greater Ekofisk platform Norway, West Africa and the Middle East plus the Research Partnership for Secure Energy for America (RPSEA) in Houston, Texas project.





## Key Features

- Being a non-intrusive MPFM, the oil and gas flow is tested at its production/line conditions
- The MPFM eliminates common issues of inline MPFM such as choking, plugging and clogging.
- The MPFM reduces the risks associated with HSE significantly by not adding any leak points.
- The measurements are taken without conditioning the flow (i.e. without homogenization or separation).
- There is no process interruption whatsoever. The MPFM allows for continuous well production while any job is being carried out due to its complete non-intrusive approach.
- Neftemer MPFM gamma ray detector scans at 250 Hz.
- The measurement philosophy combines “phase fraction & velocity measurement” & “pattern recognition” techniques with the help of advanced signal processing.
- Wide turn-down ratio of the MPFM permits monitoring & measurement of oil and gas well throughout its lifecycle, from peak production to declining production.
- Being a clamp-on type MPFM, it can be installed by one or two field personnel with ease.
- No expensive pipe work alterations are required for installation. Being compact and flexible, the MPFM is installed with ease even in limited spaces.

- No cemented platform is required for its installation.
- For temporary applications, the MPFM requires no truck/ trailer mounting as it is easily retrofitted directly onto well flow lines even in remote locations.
- Using alternative clamping accessories; same MPFM can be installed onto flow lines with diameters from 3 to 8 inches.
- Neftemer MPFM for its robust design and long service life was selected by Research Partnership to Secure Energy for America (RPSEA) for world's first subsea ROV assisted clamp-on measurement solution which was a part of Improvements to Deep Water Subsea Measurement project.

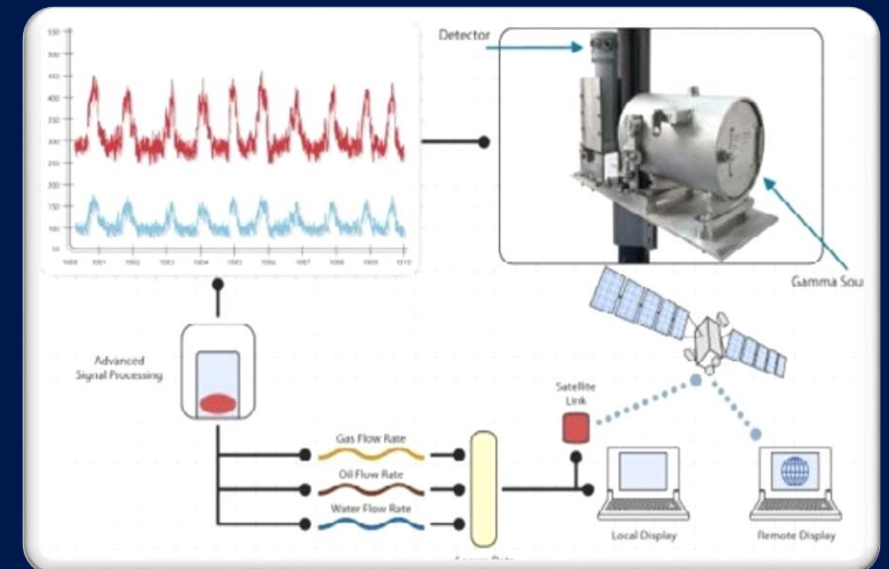
### Basic Operating range

- » Crude oil density: 820-1000 kg/ m<sup>3</sup>
- » Formation water density: 1,000- 1060 kg/m<sup>3</sup>
- » Water cut: 0 to 100%
- » Gas hold up: 10% to 80%. Also up to 95% depending on well flow profile
- » Flow line diameter: 75 to 200 mm, up to 15 mm wall thickness

### Metrological Specifications

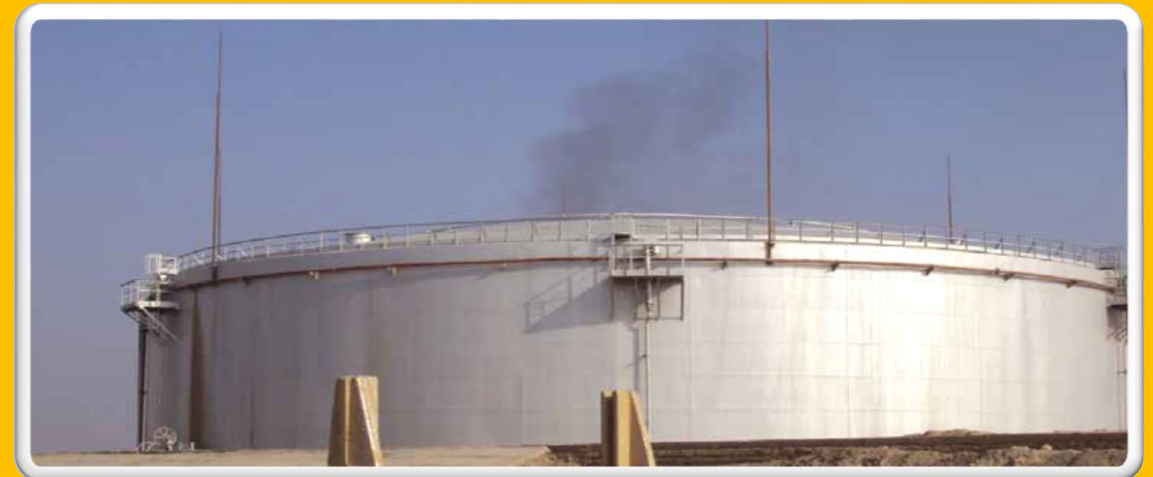
Random measurement uncertainties at 95 % confidence level are:

- » Relative error of liquid mass flow rate-  $\pm 5\%$
- » Relative error of gas volumetric flow rate-  $\pm 5\%$
- » Absolute error of water cut-  $\pm 5\%$



# STORAGE TANK CALIBRATION & SURVEY

- Calibration is a process of accurately measuring storage tanks, barges, ships & liquid bulk containers the capacity or partial capacities in a linear increment or height of liquid. Surveying will be performed using EODR (Electro -Optical Distance Ranging) method compliant with API Manual of Petroleum Management Standards (MPMS).
- Calibration is very much essential as reliable volumetric measures is vital while storing, blending, processing etc. Accurate calibration is always preferred as it maintains the quality and quantity of products. It is called re-calibration when any changes or repairs are made to the tank; detailed study is made through re-scantling analysis, tank settlement, tilt survey etc. Tank survey can be carried out before any remedial work on the tank and / or after the work is complete and hydro tested.
- A theodolite measures the time needed for a pulse of infra-red light to travel from the instrument to target and back. All the distances measured, and the positions of the distances measured, i.e.: the vertical and horizontal angles and slope distances are recorded in the data terminal (GRE3) for subsequent calculations. This method meets all the requirements as laid down in API Chapter 2 section 2D.



- As per the standard, the number of target points per set, on each course of the tank shell wall, is dependent on tank circumference.
- 
- To achieve an accurate calibration of the tanks, it is necessary to establish the profile of both the tank floor and the tank walls. The procedure sets out the methods used to survey of an element has started, it shall be continued without interruption until completed.
- 
- Tank specific Data is required, it can be referred to the tank drawings or operator to determine the exact internal dimensions of each course and to calculate volumes as a function of the liquid height measured at a particular dip point.
- 
- With the presence of a floating roof, Roof Landed Height at the gauging point, Roof Landed at the shell/
  - annulus, Profile of the roof along one radius and Roof or pontoon depth will be determined.
- 
- Field Data will be recorded for table calculation. A reference number, pertinent dates and location will be visible on the table for reference.

# MARINE SERVICES

MTS has qualified marine surveyors who are capable of conducting the following services at the loading and/ or discharging ports:-



We typically cover the following on a full survey, which can be specified as per the client's instructions:

- Quantity determination by draft survey or ullage survey
- Sampling from ship holds or tanks, or shore storage tanks at ports, including sample preparation, sealing and dispatching
- Physical measurements of the liquid level in ship tanks and shore tanks
- Sealing of holds/hatches/shore tanks
- Carrying out damaged cargo survey
- Supervision during loading and/or discharge of vessels
- ON/OFF hire survey



## Features and Advantages of crane load test water weight bags:



Made from heavy duty UV resistance PVC coated fabrics  
Heavy duty webbing harness terminates with single steel lifting ring

Easy to handle and operate to enhance the work efficiency

Complete with all accessories and fill/drain valves, quick couplings

6: 1 safety factor verified for type test

Multi size are available for unlimited variants of test weight

Delivery ready for use

CCS " Certificate of Type Approval" and BV third Party All proof load test water weight bags are Manufactured in accordance with ISO 9001 Quality Management Standard

## Steel structure Fabrication

- MTS has involved with steel structure Fabrication.
- Steel fabrication is the process of bending, cutting, and modelling steel to form a structure. Structural steel fabrication is when pieces of steel are put together to make different structures that are usually of predefined sizes and shapes.



## Contact us



MTS COMPANY+



Iraq – Basra City / Al Bradiaa area