



**通奥检测**  
T-ALL INSPECTION

# Solution for Quality and Safety Inspection of Oil and Gas Assets

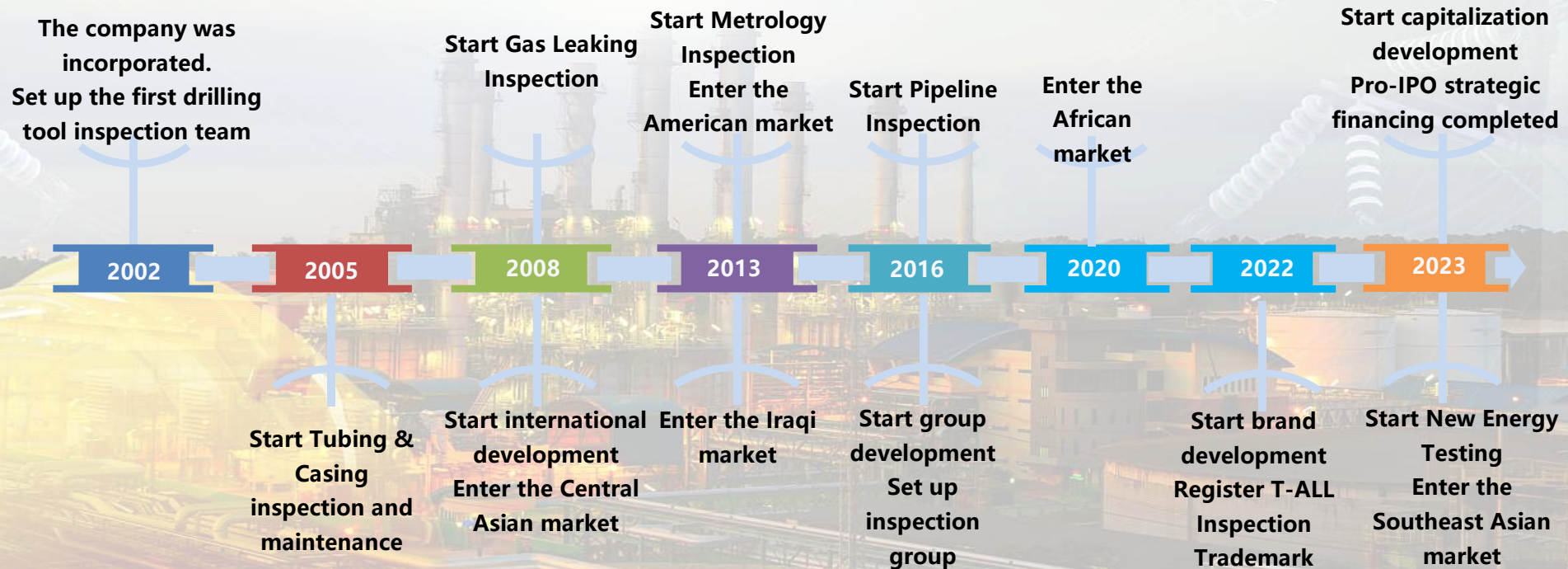
--T-ALL Inspection Group Co., Ltd.





# T-ALL Inspection Group Introduction

- T-ALL Inspection Group Co., Ltd. was founded in China in 2002, with a registered capital of 35 million USD, total assets exceeding 130 million USD, and nearly 1,000 employees.
- T-ALL business covers more than 20 “the Belt and Road” countries. It is China's largest independent third-party inspection technology service group in the oil and gas sector with comprehensive technical service capabilities and international competitiveness.



# Solution for Quality and Safety Inspection of Oil and Gas Assets

□ T-ALL has the ability of integrated inspection technology service in the whole process of oil and gas development, and is committed to providing customers with life-cycle quality and safety detection solutions for oil and gas development assets.







# I. Oil and Gas Asset Integrity Management Technical Services



Based on the concept of asset integrity, with risk management as the core, the whole process covers the whole life cycle of assets to achieve reliability, operability, safety and environmental protection and economy in asset use.

## Scope of service

### Static Equipment

- Pressure vessel (stationary/mobile)
- Storage tank
- Gathering and transportation pipeline
- Long-Distance Transportation pipeline
- Process pipeline

### Dynamic Equipment

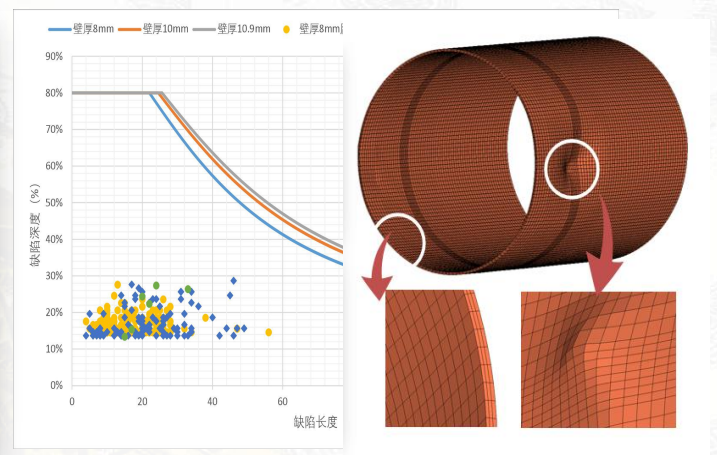
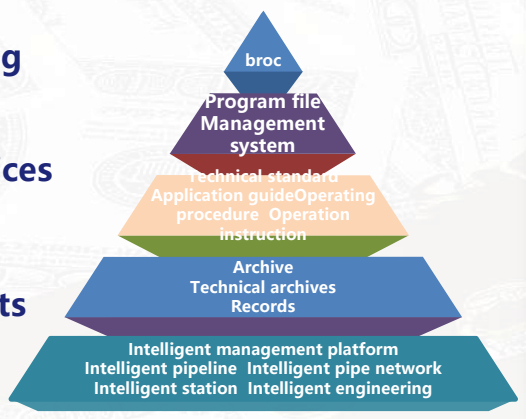
- Turbomachinery
- compressor
- Air blower
- Pump
- Centrifuge

### Instrumentation system

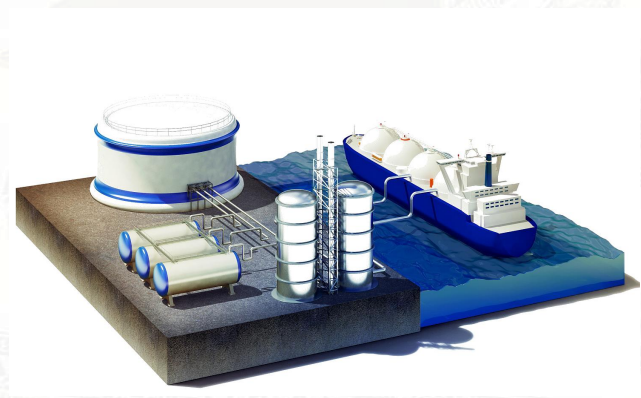
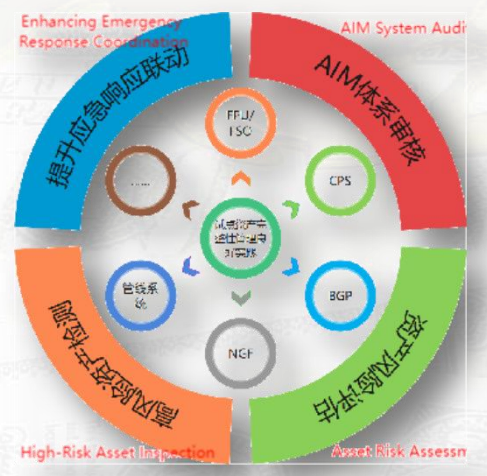
- Oil/gas/chemical/pharmaceutical/transportation/and other industry measuring instruments
- flowmeter
- Cylinders (Seamless cylinders/Welded cylinders/Special cylinders)
- Electrical safety equipment
- Safety valve

# Scope of service

- Asset Integrity Management Consulting Services
- Safety Risk Assessment Technical Services
- Integrity Evaluation Technical Services
- Equipment Integrity Status Assessments
- Digital Asset Management System



## Integration Specialization Customization Full life cycle



### Key Project

- Indonesia PCI Asset Integrity Management Technical Services Project
- Iraq Harfaya Oilfield Asset Interchangeability Project
- Sichuan Gas Field Pipeline Integrity Audit Project for PetroChina Southwest Oil & Gas Field Company
- PetroChina Changqing Oilfield Zero-Leakage Demonstration Engineering Construction Project





## **II. Inspection and Testing Technical Services for Drilling Tools and Drilling/Crude Extraction Equipment Facilities**

**Provide integrated testing technology services for drilling tools and drilling equipment and facilities to ensure operational efficiency and quality safety of assets during the whole drilling and workover process**

**Scope of service**

**Drilling Pipe**

- **Drill Pipe**
- **Drill Collars**
- **Heavyweight Drill Pipe**
- **Square Kelly Barrel**

**Drilling Tools**

- **Wellhead Tools**
- **Downhole Tools**
- **Stabilizers**
- **Fishing Tools**

**Drilling and workover equipment**

- **Drilling Equipment**
- **Workover Equipment**
- **Completion equipment**
- **Capacity Enhancement Equipment**
- **Oil production equipment**



# Scope of service

- Resident factory supervision
- Drilling tool inspection and rating
- Drilling tool repair
- Corrosion protection inside the drill
- Non-destructive testing of auxiliary facilities
- Drilling workover rig inspection and evaluation
- Metrology Inspection Technology Service
- Online monitoring of drilling and workover rig
- Asset digitization solutions
- Drilling Tool overhaul API-WORSHOP EPCC



## Integration      Specialization      Customization      Full life cycle



### Key Project

- Comprehensive Drilling Tool Testing Project for PetroChina Tarim Oilfield
- Comprehensive Drilling Tool Testing Project for PetroChina Western Drilling
- API-WORKSHOP EPCC Drilling Tool Maintenance Project for CNOOC COSL Ma Village
- Testing of various specifications of drilling tools and wellhead equipment for oilfields in Central Asia, South America, and the Middle East, amounting to 8 million inspections.





# **III. Tubing & Casing Inspection Technology Service**



**Provide integrated technical services for oil casing from the factory to the oilfield operation site, dedicated to helping customers solve quality and safety issues throughout the entire lifecycle of oil casing assets.**

### **Scope of service**

- **Tubing**
- **Casing**
- **Sucker rod**
- **Subs**
- **Coupling**
- **Tool Accessories (including screen liners, guide shoes, tubing shoes, and thread plugs, etc.)**
- **Mechanical Parts (gaskets, flanges, tubes, non-standard bolts)**



# Scope of service

- Resident factory supervision
- Inspection and evaluation
- Non-destructive Testing
- Thread repair
- joint machining
- Tubing inner coating (anti-corrosion and anti-wax)
- Gas seal detection of downhole string
- Toothless tubing connection
- Tubing & Casing repair API-WORKSHOP EPCC
- Agent sales and warehousing logistics



## Integration                      Specialization                      Customization                      Full life cycle



### Key Project

- Petrochina Tarim Oilfield oil casing cleaning, inspection, repair and anticorrosive coating project
- China LPG Gas Leakage inspection Service project (more than 3,000 Wells)
- API workshop EPCC project, Hafaya Oilfield, Iraq
- CNOOC Bulzurgan Oil Casings Inspection and Corrosion Protection Project





# **IV. Oil and Gas Engineering Inspection Technical Services**



**Provide quality and safety testing technical solutions for the whole process of oil and gas engineering construction and delivery, and comprehensively guarantee the quality and safety of engineering construction.**

### Scope of service

- **Oil and Gas Surface Engineering**
- **Oil and gas storage and transportation engineering**
- **Refining and chemical engineering**

## Scope of service

- Engineering supervision
- Engineering management
- Engineering NDT
- Supervision and inspection
- Metrology Inspection
- Tightness testing (water pressure test/air tightness test/helium nitrogen leak test)
- Construction safety monitoring
- Cathodic Protection Services
- Agency Sales



## Integration Specialization Customization Full life cycle



### Key Project

- CNOOC Development Onsite Quality Supervision and Inspection Projects
- Petrochina southwest oil and gas field pipeline network NDT project
- Non-destructive Testing Services Project for the Baotou-Linhe Gas Transmission Pipeline Line, Valve Chambers, and Stations of Inner Mongolia West Gas Co., Ltd.
- Iraq KEC BLOCK9 station construction NDT project
- Niger Benin pipeline construction NDT project



An aerial view of an offshore drilling workover platform in the middle of a vast blue ocean under a clear sky with scattered white clouds. The platform is a complex of steel structures, including two tall derrick-like towers. Two orange and white support vessels are positioned around the platform, one to the left and one to the right. The text 'V. Offshore Drilling Workover Platform Inspection Technical Services' is overlaid in the center in a bold, dark blue font with a reflection effect.

# V. Offshore Drilling Workover Platform Inspection Technical Services

**Providing comprehensive lifecycle inspection and testing technical services for offshore platform equipment and facilities, encompassing construction, installation, and production operations, to ensure the safety of offshore oil and gas production.**

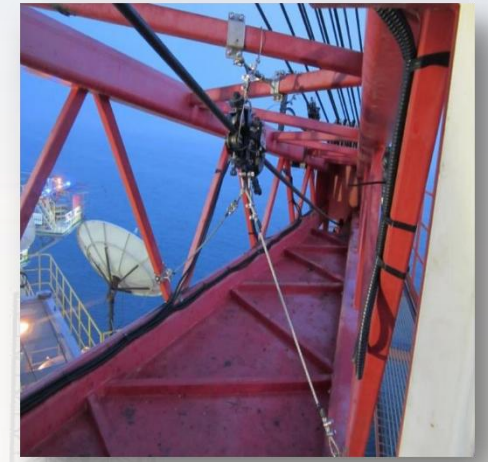
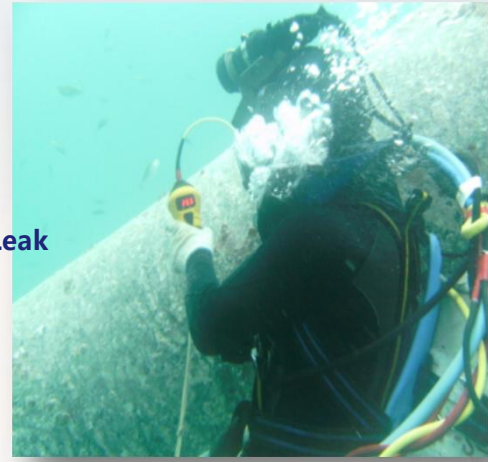
### **Scope of service**

- **Drilling and workover equipment**
- **Offshore structure**
- **Fixed platform**
- **Oil production equipment**
- **Marine Boilers and Pressure Vessels**
- **Oil and Gas Processing and Storage Facilities**
- **Crane Hoisting and Lifting Equipment**
- **Life-saving Equipment**
- **Alarm Systems**
- **Safety Valves**
- **Fire and Combustible Gas Detectors**
- **Wire Ropes and Associated Rigging Hardware**

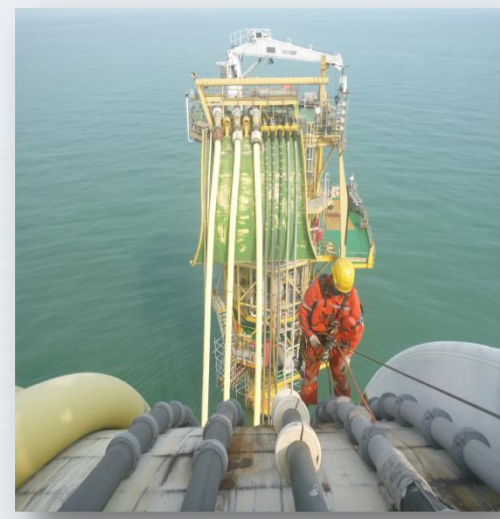


# Scope of service

- On-site Supervision during Manufacturing
- Non-destructive Testing
- Metrological Testing
- Inspection and Evaluation
- Safety supervision
- Storage Tank and Pressure Equipment Inspection & Assessment
- Leak Testing (Hydrostatic Testing / Pneumatic Testing / Helium-Nitrogen Leak Detection)
- Drilling and Workover Platform Online Monitoring
- Digital Asset Management System



## Integration                      Specialization                      Customization                      Full life cycle



### Key Project

- CNOOC Development Crane, Drilling & Workover Equipment, Wellhead Tools Inspection & Testing Technical Services Project
- CNOOC Service High-pressure Hose Inspection Support Services Project
- CNPC Drilling Engineering Company Derricking Line, Rigging & Sling Inspection & Testing Project
- CNOOC Development Offshore Drilling Platform Supervision During Construction Project
- Shell Penguin FPSO Helium-Nitrogen Leak Detection Services Project
- Hong Kong Offshore LNG Receiving Terminal Inerting, High-pressure Gas Tightness Testing & Helium-Nitrogen Leak Detection Services Project

The image shows an industrial oil and gas processing facility. In the foreground, several large yellow pipes with red reflective bands run parallel to a concrete walkway. In the background, there is a complex network of blue and yellow pipes, structural steel beams, and various pieces of industrial equipment under a clear sky.

## **VI. Oil and Gas Station Equipment and Facilities Inspection Technical Services**



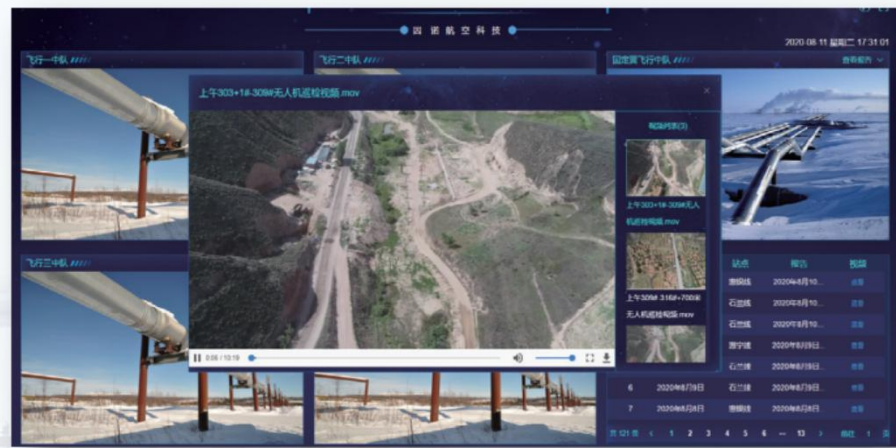
**Provide the whole life cycle inspection, risk assessment, monitoring and early warning, operation and maintenance and integrity management of integrated technical services for the oil and gas station.**

**Scope of service**

- **Wellhead Facilities**
- **Metering Station**
- **Gathering Station**
- **Processing Station (CPF/GPP)**
- **Storage Station**
- **Filling Station**
- **Compression Station**
- **Terminal Station**

# Scope of service

- Non-destructive Testing
- Metrological Testing
- Operations & Maintenance Services (Including Personnel Services)
- Station Asset Integrity Management
- Leak Testing (Hydrostatic Testing / Pneumatic Testing / Helium-Nitrogen Leak Detection)
- High-pressure Cleaning
- Green Station Certification
- LDAR (Leak Detection and Repair)
- Equipment & Facilities Online Monitoring
- Intelligent Inspections (Using Drones/Robots)
- Smart Station Solutions



## Integration      Specialization      Customization      Full life cycle



### Key Project

- National Pipeline Network Western Pipeline Station Metrological Testing Project
- PetroChina Southwest Oil & Gas Field Station Non-destructive Testing Project
- ROC Oil Boosting Dehydrogenation Station LDAR Testing Project
- Majnoon Oilfield, Iraq Smart Inspection Project
- OPIC Oilfield, Chad Comprehensive Inspection Project



A photograph of an industrial oil and gas facility. The scene is dominated by large, white, curved pipes and valves. In the background, there are metal structures, a tall tower, and a clear blue sky. The ground is covered in gravel. The text "VII. Oil and Gas Pipeline Inspection Technical Services" is overlaid in the center, with a red circle highlighting the Roman numeral "VII".

## VII. Oil and Gas Pipeline Inspection Technical Services

**With the aim of ensuring safe operation of oil and gas pipelines and storage and transportation facilities, we employ both conventional and proprietary technologies to achieve comprehensive pipeline inspection, thereby guaranteeing the secure operation of the pipeline network.**

### **Scope of service**

- **Long-distance Oil and Gas Pipelines**
- **Oil and Gas Gathering Pipelines in Fields**
- **Urban Gas Distribution Pipelines**
- **Subsea Oil and Gas Pipelines**
- **Complex Pipelines in Finished Petroleum Product Storage Areas**
- **Process Pipelines (Refineries, Chemical Plants, Power Plants, Water Treatment Plants, Pharmaceutical Factories, etc.)**



# Scope of service

- Pipeline Internal Inspection
- Pipeline External Inspection
- Pipeline Asset Integrity Management
- Smart Pipeline Solutions
- UAV (Drone) Inspections
- Metrological Testing
- Cathodic Protection Services
- Operations & Maintenance Services (Including Personnel Services)
- Pipeline Defect Remediation
- Pipeline Corrosion Monitoring
- Pigging & Tracking
- Non-destructive Testing



## Integration      Specialization      Customization      Full life cycle



### Key Project

- National Pipeline Network MFL (Magnetic Flux Leakage) Internal Inspection Project (Cumulative Over 4,000 KM), Foam Eddy Current Internal Inspection Project (Cumulative Over 2,000 KM), Bidirectional Ultrasonic Internal Inspection Project (Cumulative Over 10 Segments)
- Full-Foam Geometry Internal Inspection Project for Dual-Metal Composite Pipes in PetroChina Tarim Oilfield's Dinan Field
- Comprehensive Pipeline Inspection Project for KEC BLOCK9 in Iraq
- Pipeline Inspection Project for CNPCIC Oilfield in Chad





# **VIII. New Energy Equipment and Facilities Testing Technical Services**



**Provide integrated testing technology services for the whole life cycle of new energy (wind/photovoltaic/energy storage), covering comprehensive solutions for project planning, construction and operation.**

**Scope of service**

- **Wind Farm Equipment & Facilities**
- **Photovoltaic Plant Equipment & Facilities**
- **Energy Storage Equipment & Facilities**

## Scope of service

- Planning and design
- Training and consulting services
- Product certification and testing
- Non-destructive Testing
- Grid Testing
- Metrological Testing
- Operations & Maintenance Services (Including Personnel Services)
- Air Energy Storage System Gas Seal Testing



## Integration

## Specialization

## Customization

## Full life cycle



## Key Project

- Drone-Based Blade Inspection Project at Datang Chuzhou Tanglong Wind Farm, Anhui
- Weld Seam NDT Project for Turbine Towers at SDIC Erdos, Erenhot
- Operation & Maintenance Project for a 150 MW Ground-mounted Solar Plant in Leqing, Zhejiang





**IX. Oil & Gas Measuring Instrument  
Inspection & Testing Technical Services**

型号	精度	量程
	mm	mm
107-HG	0.01	10
107-DX	0.01	10
107	0.01	10
107F	0.01	10
107-SWA	0.01	10
107L	0.01	10
107-T	0.01	10
107-E	0.01	10
17	0.01	1
57-SWA	0.01	5
57	0.01	5
57F	0.01	5

**Providing integrated inspection and testing technical services for all types of measuring instruments throughout the entire process of oil and gas development, ensuring their stable and safe operation.**

### **Scope of service**

- **Measuring Instruments for Industries including Petroleum, Natural Gas, Chemicals, Pharmaceuticals, Transportation, etc.**
- **Flowmeters**
- **Cylinders (Seamless Cylinders, Welded Cylinders, Specialized Cylinders, etc.)**
- **Electrical Safety Tools (Insulating Gloves, Insulating Boots, Voltage Detectors, etc.)**
- **Safety Valves**
- **Gas Detectors**
- **Positive-Pressure Air Breathing Apparatuses**
- **Electric Vehicle Charging Stations**

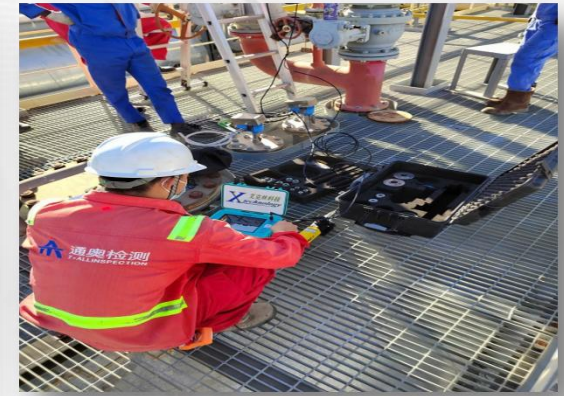


## Scope of service

- Calibration/Inspection
- Flowmeter Calibration
- Operations & Maintenance Services (Including Personnel Services)
- Digital Asset Management System
- Consultancy Services for Metrological Testing Qualification Certification
- Construction & Management of Metrology Laboratories
- Repair Services
- Agency Sales



## Integration Specialization Customization Full life cycle



### Key Project

- PetroChina Tarim Oilfield Metrological Testing Project (Continuous Service for Nearly 10 Years)
- National Pipeline Network Metrological Testing Projects (Western Pipeline, Southwest Pipeline, Gansu Pipeline, etc.) (Continuous Service for 5 Years)
- National Large-Volume Flow Measurement Station Services (Tarim Lunan Large-Volume Station/Changji Large-Volume Station in Urumqi/Guiyang Large-Volume Station)
- Iraq Flow Measurement Services (Oasis/East Baghdad/Bulzurgan, etc.)



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**Intelligent·Environmental·Safer·Better**