



# INSPECTION TRADE PROFILES





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## THE DAWN OF A NEW ERA IN QUALITY CONSCIOUSNESS

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At the heart of every developed and progressive civilization is the pursuit and passion for excellence. Quality is not only an outcome, but also a culture and the hallmark of a nation.

The time has come to inspire a passion for excellence. It's the time for the Inspection Technology and Quality Assurance National Institute (ITQAN) - a confident step towards building a generation of informed, responsible, and active members of society.

Good vision, agile thinking and a culture of change... ITQAN Institute welcomes you to be a part of building a better future based on quality management.



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## TRAINING THE NEXT GENERATION OF PROFESSIONALS

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To support the Saudi Arabian economy's growth in the oil and gas, power, mining, petrochemicals, manufacturing, and construction sectors, it is imperative to have a workforce of competent and qualified inspection and quality assurance professionals. Therefore, a strategic partnership between Saudi Aramco and the Technical & Vocational Training Corporation (TVTC) was formed to create the Inspection Technology and Quality Assurance National Institute (ITQAN).

ITQAN's goal is not only to fulfil the current labor market's demand for qualified Saudi inspectors in various industries, but also to support the human capital development of the Kingdom. Through high-quality practice oriented and technology-based training and certifications through its institute in Juaymah, ITQAN aims to train and qualify young Saudis to fulfill the inspection workforce requirements of the Kingdom.





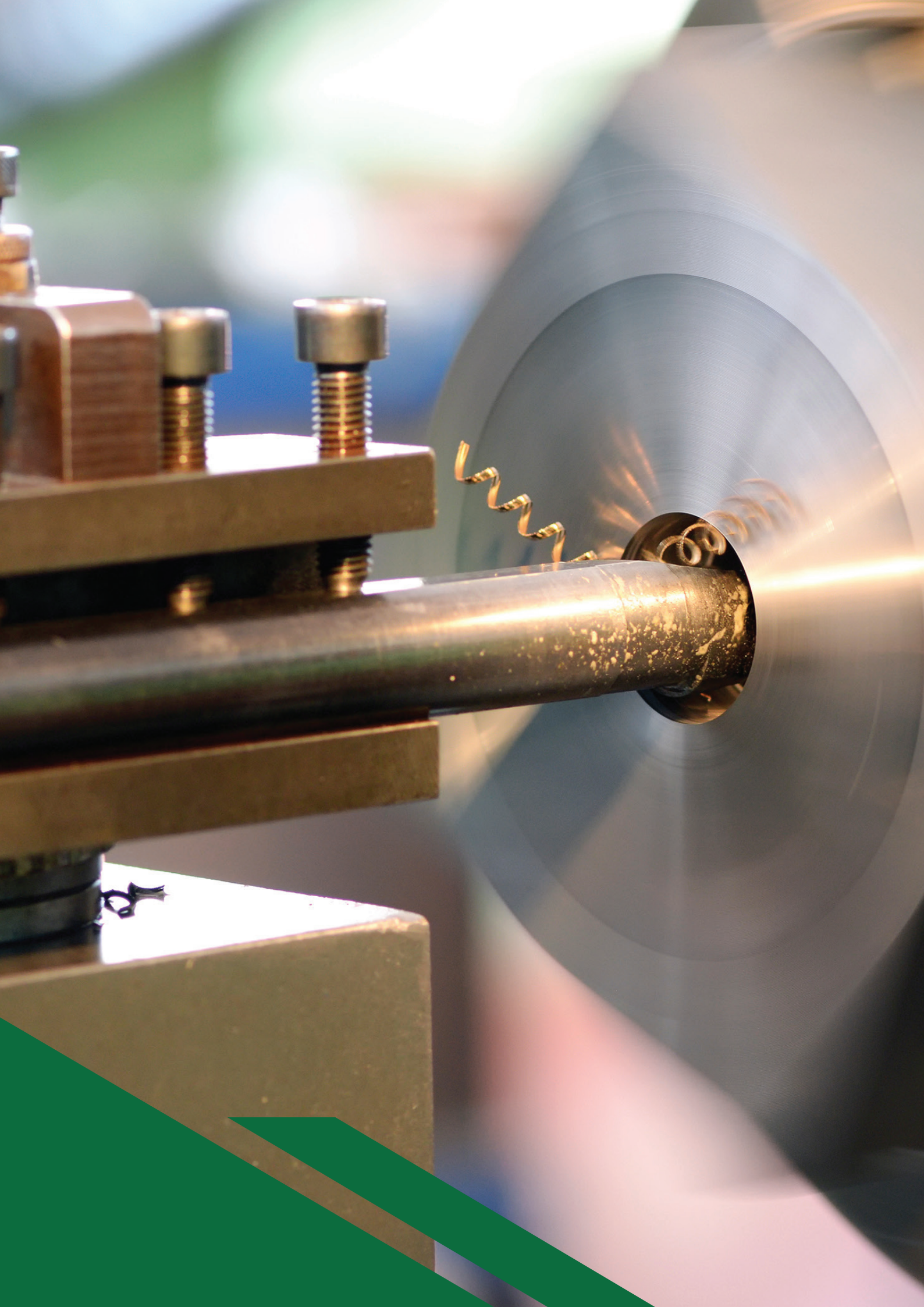
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## INSPIRING PASSION FOR EXCELLENCE

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Inspection Technology and Quality Assurance is pivotal to industries, helping them achieve their desired level of quality and safety for their products, assets and processes; to protect their brands and enable their success in the global marketplace.

ITQAN'S world-class training programs and state-of-the-art facilities are designed to ensure the highest standards of industrial inspection practices. This training is imparted from a carefully selected pool of high profile training professionals with proven track records of academic excellence.



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**PRACTICE-ORIENTED,  
STANDARDS-BASED TRAINING  
AND CERTIFICATION TO SAUDI  
YOUTHS IN INSPECTION AND  
HIGH-END CONSTRUCTION**

THE FOLLOWING TRADE PROFILES ARE  
OFFERED TO DEVELOP COMPETENT AND  
QUALIFIED INSPECTION AND QUALITY  
ASSURANCE PROFESSIONALS

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TRADE PROFILE:

# MECHANICAL INSPECTOR

**DESCRIPTION** Inspection of machined parts using a broad range of inspection methods.

- JOB DUTIES**
- Determine condition of plant equipment, record measurements and predict useful life of equipment components.
  - Analyse equipment downtime and investigate recurring equipment problems.
  - Make decisions on corrective actions to be taken based on inspection results and analysis.
  - Test and inspect welds, conduct pressure test to confirm integrity, conduct risk based inspection and non-destructive testing.

- TRENDS**
- Specialization requirements driven by assets, new testing methods and overall demand.
  - New jobs separated out of original mechanical inspector created to allow for specialization e.g. Welding inspector.

**WORK CONDITIONS** Location: 80% of the time on-site.



TRADE PROFILE:

# WELDING INSPECTOR

**DESCRIPTION** Inspection focused on welding activities using different techniques.

- JOB DUTIES**
- Test and inspect welded joints for e.g. visible defects, correct dimensions and joint strength.
  - Examine joint to detect flaws using flashlight and magnifying glass.
  - Inspect joints for hidden cracks NDT techniques.
  - Perform stress tests on joints.
  - Determine most effective welding process.

- TRENDS**
- Specialization requirements driven by assets, new testing methods and overall demand.
  - New jobs separated out of original mechanical inspector created to allow for specialization e.g. Welding inspector.

**WORK CONDITIONS** Location: 80% of the time on-site.





TRADE PROFILE:

# ELECTRICAL INSPECTOR

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DESCRIPTION Inspection of electrical components and / or equipment.

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JOB DUTIES

- Test and measure components or assemblies.
- Read dials and meters to verify functioning of equipment according to specifications.
- Analyse and interpret blueprints, sample data, and other materials to determine, change, or measure specifications or inspection and testing procedures.
- Inspect Panel Boards, Batteries / Battery rooms, power transformers.

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TRENDS

- Demand mainly driven by projects in power generation segment
- New technology and additional specialization requirements leading to additional training requirements.

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WORK CONDITIONS Location: 90% of the time on-site.

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TRADE PROFILE:

# CIVIL INSPECTOR

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DESCRIPTION Inspection of construction-sites to ensure adherence to standards.

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JOB DUTIES

- Inspect and monitor construction-sites to meet safety standards, building codes, and specifications.
- Conduct inspection using survey instruments, metering devices, tape measures, and test equipment e.g. concrete strength measures.
- Review and interpret plans, blueprints, site layouts, specifications, and construction methods.
- Ensure compliance to legal and safety requirements.

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TRENDS

- Responsibilities in the area of safety for dedicated inspectors.
- Focus on actual construction and inspection based on defined standards.

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WORK CONDITIONS Location: 80% of the time on-site.

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TRADE PROFILE:

# NON-DESTRUCTIVE TESTING INSPECTOR

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**DESCRIPTION** Conduct advanced non-destructive testing to identify non-visible material defects.

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**JOB DUTIES**

- Evaluate material properties using non-destructive testing methods e.g. penetrant testing, magnetic particle testing, ultrasonic, radiographic.
- Document non-destructive testing (NDT) methods, processes and or results.
- Examine visually materials, structures, or components using tools and equipment such as endoscopes, closed circuit television systems, and fibre optics for signs of corrosion, metal fatigue, cracks, or other flaws.

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**TRENDS**

- Fastest growing inspection segment.
- New NDT techniques requiring training and research capabilities in the KSA.
- Current specialized demands addressed through external service providers.

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**WORK CONDITIONS** Location: 90% of the time on-site.

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PROVIDING HIGH-QUALITY  
CURRICULUM AND  
ACADEMIC PROGRAMS  
THROUGH AN EXPERIENCED  
INTERNATIONAL TEAM  
FROM THE WORLD'S MAJOR  
INDUSTRIAL CENTERS

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التقانة  
ITQAN  
INSTITUTE معهد



المعهد الوطني لتقنية الفحص وضمان الجودة  
Inspection Technology & Quality Assurance National Institute

P.O. Box 54 Ras Tanura 31941  
Kingdom of Saudi Arabia  
T : +966 (0) 54 254 1754  
E: info@itqaninstitute.edu.sa

[www.itqaninstitute.edu.sa](http://www.itqaninstitute.edu.sa)