

المعهد الوطني لتقنيه الفحص وضمان الجرودة Inspection Technology & Quality Assurance National Institute

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# INSPECTION TRADE PROFILES



ITQAN is a state-of-the-art institute that inspires passion for training excellence, world-class training programs, and human resources development. ITQAN is an independent, not-for-profit training institute. It is the result of a strategic partnership between Saudi Aramco (SA) and the Technical & Vocational Training Corporation (TVTC) in accordance with a signed agreement.

#### THE INSPECTION TECHNOLOGY AND QUALITY ASSURANCE NATIONAL INSTITUTE

ITQAN is located in Juaymah, and it intends to train and qualify young Saudi's in order to meet the market needs, contribute to community growth, help reduce unemployment and support the Kingdom's workforce and nationalization efforts. ITQAN offers inspection training mainly to high school graduates to qualify them to work in the energy sector.





To achieve its ambitious objectives, ITQAN will need to have the services of high-end trade profiles who will impart theoretical and practical training to the institutes' inmates. These trade personnel is picked from a pool of high profile professionals with a proven track record of excellence. After concluding extensive talent procurement initiatives, ITQAN can proudly state that it will have the services of the top local and international experts on its roster.

The following pages will give you in-depth information of the background and scope of appointment.



ITQAN FOCUSES ON ADDRESSING THE PRIORITY TRADES FOR THE ENERGY SECTOR. PROGRAMS SPECIALIZED BY TRADE, CERTIFIED INTERNATIONALLY AND ACCOMMODATE STUDENTS FROM VARIOUS STUDENT STREAMS



#### MECHANICAL INSPECTOR TRADE PROFILE - MECHANICAL INSPECTOR

Inspection of machined parts using a broad range of inspection methods DESCRIPTION **JOB DUTIES** Determine condition of plant equipment, record measurements and . predict useful life of equipment components Analysis of equipment downtime and investigate recurring equipment problems Make decisions on corrective actions to be taken based on inspection results and analysis Testing and inspection of 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 are created to allow for specialization e.g. Welding inspector WORK Location: 80% of the time on-site CONDITIONS

### WELDING INSPECTOR TRADE PROFILE – WELDING INSPECTOR

DESCRIPTION	Inspection focused on welding activities using different techniques
JOB DUTIES	<ul> <li>Inspects and tests welded joints for e.g. visible defects, correct dimensions and joint strength</li> <li>Examines joint to detect flaws using flashlight and magnifying glass</li> <li>Inspects joints for hidden cracks NDT techniques</li> <li>Performs stress tests on joints</li> <li>Determine most effective welding process.</li> </ul>
TRENDS	<ul> <li>Specialization requirements driven by assets, new testing methods and overall demand</li> <li>New jobs separated out of original mechanical inspector are created to allow for specialization e.g. Welding inspector</li> </ul>
WORK CONDITIONS	Location: 80% of the time on-site

#### ELECTRICAL INSPECTOR trade profile - electrical inspector

DESCRIPTION	Inspection of electrical components and / or equipment
JOB DUTIES	<ul> <li>Test and measure components or assemblies</li> <li>Read dials and meters to verify functioning of equipment according to specifications</li> <li>Analyze and interpret blueprints, sample data, and other materials to determine, change, or measure specifications or inspection and testing procedures</li> <li>Inspect Panel Boards, Batteries / Battery rooms, power transformers</li> </ul>
TRENDS	<ul> <li>Demand mainly driven by projects in power generation segment</li> <li>New technology and additional specialization requirements lead to additional training requirements</li> </ul>
WORK CONDITIONS	Location: 90% of the time on-site



DESCRIPTION	Inspection of construction-sites to ensure adherence to standards
JOB DUTIES	<ul> <li>Inspect and monitor construction-sites to meet safety standards, building codes, and specifications</li> <li>Conduct inspection using survey instruments, metering devices, tape measures, and test equipment e.g. concrete strength measurers</li> <li>Review and interpret plans, blueprints, site layouts, specifications, and construction methods o ensure compliance to legal and safety requirements</li> </ul>
TRENDS	<ul> <li>Responsibilities in the area of safety are more and more allocated to dedicated inspector</li> <li>Focus on actual construction and inspection based on defined standards</li> </ul>
WORK CONDITIONS	Location: 80% of the time on-site

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



# NON-DESTRUCTIVE TESTING INSPECTOR

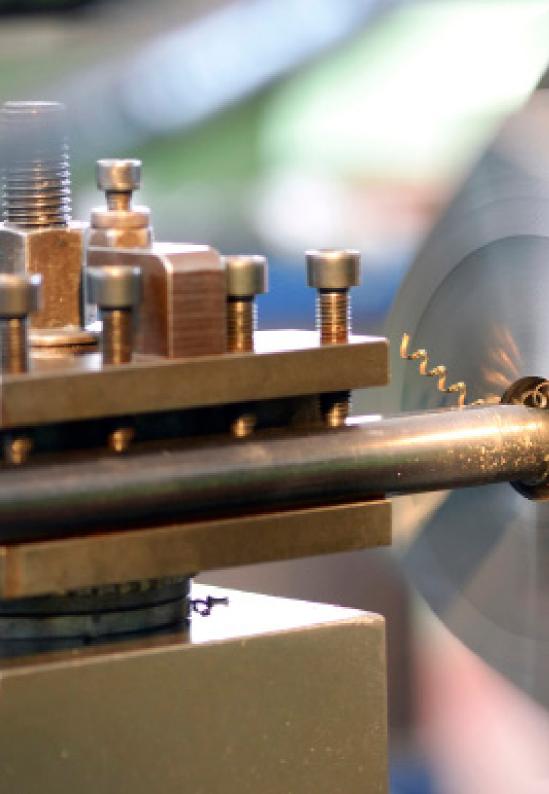
TRADE PROFILE - NON-DESTRUCTIVE TESTING INSPECTOR

DESCRIPTION	Conduct advanced non-destructive testing to identify non-visible material defects
JOB DUTIES	<ul> <li>Evaluate material properties using non-destructive testing methods e.g. penetrant testing, magnetic particle testing, ultrasonic, radiographic</li> <li>Document non-destructive testing (NDT) methods, processes and or results</li> <li>Examine visually materials, structures, or components using tools and equipment such as endoscopes, closed circuit television systems, and fiber optics for signs of corrosion, metal fatigue, cracks, or other flaws</li> </ul>
TRENDS	<ul> <li>Fastest growing inspection segment</li> <li>New NDT techniques require training and research capabilities in the KSA</li> <li>Current specialized demand is addressed through external service providers</li> </ul>
WORK CONDITIONS	Location: 90% of the time on-site

# OCCUPATIONAL HEALTH & SAFETY INSPECTOR

TRADE PROFILE – OHS INSPECTOR

DESCRIPTION	Offer the fundamentals required to manage day-to-day risks effectively and develop knowledge and skills required to enter the workplace
JOB DUTIES	<ul> <li>Identify and manage workplace risks and hazards</li> <li>Develop OSHI-safe systems and processes that positively impact how risk is managed</li> <li>Ensures that the procedures detailed within the permit and referenced documentation are followed.</li> <li>Investigate and determine the root cause of the incident and why did the incident occur</li> <li>Perform hazard investigation and conditions that would aggravate an emergency situation and work to eliminate them</li> <li>Identify the root cause of the incident occur</li> <li>produce or contribute to a construction health and safety plan</li> <li>Impact an organization's safety culture and behaviors</li> </ul>
TRENDS	<ul> <li>Responsibilities in the area of safety for dedicated inspectors</li> <li>Focus on actual safety and health inspection based on defined standards</li> </ul>
WORK CONDITIONS	Location: 80% of the time on-site



ITQAN OFFERS INSPECTION TRAINING MAINLY TO HIGH SCHOOL GRADUATES TO QUALIFY THEM TO WORK IN THE ENERGY SECTOR



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