

# IVQ in Oil and Gas (8510)

## Equipment List

Mechanical Maintenance Technician

Electrical Maintenance Technician

Instrumentation Maintenance Technician

Process Technician



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## Equipment List



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# 1 IVQ in Oil and Gas

## List of Resource Requirements

**Equipment which may be required for any route in this qualification and specifically for the following:**

**Advanced Award in Oil and Gas Process Technician (Core Skills): Units 58 and 59**

**Advanced Award in Oil and Gas Process Technician: Units 60 and 61**

The equipment requirements are those to be found on onshore and offshore oil and gas processing sites. The type of plant and equipment available will depend upon the nature and purpose of the site. The requirements also include chemicals. Plant and equipment may comprise of, but not be limited to:

Absorbers (e.g. silica gel)	De-aerators
Accumulators	Dehydration towers
Air blowers	Degassing tanks
Air ejectors	Desiccants
All instrumentation and system logic control associated with the plant and equipment	Distillation columns
Anaerobic digesters	Downhole safety valves (DSV)
Annulus casing	Drains (hydrocarbon and water)
Ballast systems	Driers
Blenders	Economisers
Blowdown facilities	Electrochlorination plants
Booster pumps	Electrolytic cells
Brine reservoirs	Electrostatic treaters
Burners	Evaporators
Caissons	Expanders
Centrifuges	Fans (coolers)
Chemical injection package	Filter separators and strainers
Chemicals for hydrocarbon and water treatment	Filters (coarse, sand)
Choke valves	Firewater deluge systems
Christmas tree manifold	Fiscal flow meters
Coalescers	Flaps
Compressors (centrifugal and reciprocating)	Flares
Condensers	Flash drums
Contactors	Flotation units
CO <sub>2</sub> Absorbers	Foam systems
DC power units	Gas turbines
Gear boxes	Gaseous extinguishing systems
Generators (electrical)	Gaslift equipment
	Heat exchangers
	Hot oil systems

Heaters (electric and oil)  
Humidifiers  
Hydraulic crane  
Hydraulic oil pressurised reservoirs  
Hydrocarbon gas chillers  
Hydrogen displacement vessels  
Injection pumps  
Joule Thomson valve  
Knock-out drums  
Lube oil systems  
Mechanical refrigerators  
Meter provers  
Metering pumps  
Meters  
Moisture separators  
Molecular sieves  
Monitors (firefighting)  
Nitrogen (bottled and bulk storage systems)  
Off gas compressor  
Orifice plates  
Packers and seal/expansion arrangements  
pH control systems  
Pig launchers  
Pig receivers  
Pigs  
Plate separators  
Pressurised storage vessels  
Prime movers (diesel and electric)  
Pumps  
Reboilers  
Receivers  
Recirculation systems  
Re-compressors  
Reflux accumulators

Reflux drum  
Refrigerators and units  
Regulators  
Relief systems  
Reservoirs  
Scrubbers  
Sea oil systems  
Sea water lift pumps  
Separator drums  
Separators (conventional and test)  
Septic tanks  
Shore terminal receiving systems  
Skimmers  
Slug catchers  
Sour sea-oil traps  
Stabilisers  
Storage tanks  
Sub-sea safety valves (SSSV)  
Suction drums  
Surge tanks  
Sumps  
Tanker loading systems  
Trayed fractionation columns  
Trunking  
Tubing  
Vacuum pumps and packages  
Valves and pipework  
Vaporisers  
Vents  
Water drive equipment  
Water injection manifolds  
Water treaters  
Wellheads  
Wellhead master valves



## **2 Mechanical Maintenance Technician**

### List of Resource Requirements: Mechanical Maintenance

**Advanced Award in Oil and Gas Maintenance (Core Skills): Units 001, 002, 006.**

**Advanced Award in Oil and Gas – Mechanical Maintenance: Units, 007, 008, 009, 010, 011, 012, 013, 014, and 015.**

**Advanced Diploma in Oil and Gas – Mechanical Maintenance Technician: Units 016, 017, 018, 019, 020, 021, 022 and 023.**

The equipment requirements are those to be found on onshore and offshore oil and gas processing sites. The type of plant and equipment available will depend upon the nature and purpose of the site. Plant and equipment may comprise of, but not be limited to:

- Rotating Equipment
- Support Equipment
- Firefighting/Safety Equipment
- Pressure Relief Systems
- Reciprocating Equipment
- Heat Exchangers
- Vessels
- Pipework
- Marine Systems

### **3 Electrical Maintenance Technician**

#### List of Resource Requirements: Electrical Maintenance

**Advanced Award in Oil and Gas Maintenance (Core Skills): Units 001, 002, 006.**

**Advanced Award in Oil and Gas – Electrical Maintenance: Units 24, 25, 26, 27, 28, 29, 30, 31 and 32.**

**Advanced Diploma in Oil and Gas – Electrical Maintenance Technician: Units 33, 34, 35, 36, 37, 38, 39 and 40.**

The equipment requirements are those to be found on onshore and offshore oil and gas processing sites. The type of plant and equipment available will depend upon the nature and purpose of the site. Plant and equipment may comprise of, but not be limited to:

- Power Generation Systems and Equipment
- High Voltage Distribution Systems and Equipment
- Low Voltage Distribution Systems and Equipment
- Extra Low Voltage Distribution Systems and Equipment
- Rotating Electrical Systems and Equipment
- Electrical Protection Systems and Equipment
- Control Systems and Equipment

## **4 Instrumentation Maintenance Technician**

### List of Resource Requirements: Instrumentation Maintenance

**Advanced Award in Oil and Gas Maintenance (Core Skills): Units 001, 002, 006.**

**Advanced Award in Oil and Gas – Instrumentation Maintenance: Units 41, 42, 43, 44, 45, 46, 47, 48 and 49.**

**Advanced Diploma in Oil and Gas – Instrumentation Maintenance Technician: Units 50, 51, 52, 53, 54, 55, 56 and 57.**

The equipment requirements are those to be found on onshore and offshore oil and gas processing sites. The type of plant and equipment available will depend upon the nature and purpose of the site. Plant and equipment may comprise of, but not be limited to

Temperature Measurement and Control Equipment  
Pressure Measurement and Control Equipment  
Flow Measurement and Control Equipment  
Level Measurement and Control Equipment  
Position Measurement and Control Equipment  
Control Systems  
Single Loop Controllers  
Valves  
Shutdown Systems  
High Integrity Protection Systems (HIPS)  
Hydraulic Control Panels  
Well Control Systems and Equipment  
Rotating and Reciprocating Equipment Control and Protection  
Fire and Gas Systems  
Fiscal Metering and Allocation Systems and Equipment  
Analysis Equipment

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