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Contractors Workforce Qualification Assurance Program (CWQAP) Approved By









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## **CWOAP** - Electrical







#### **Course Overview**

This short training course provides systematic refresher training in order to pass the "Contractor Workforce Assessment Test" as provided in the NITI premises. In close relation to the test requirements, the course deals with the essential background on electrical knowledge being identified on "must know-level". This short training course cannot provide foundations.



#### Who Should Attend?

This short training course is addressed to experienced "Electrical Technicians" who intend to participate in the "Contractor Workforce Assess-ment Test" or are in need of a refresher course before participating in the respective test. The course is not suitable to qualify newcomers and inexperienced persons in the electrical discipline due to the limited time and the more theoretical nature of the contents. Participants should possess the required technical knowledge already.



## **Enabling Objectives:**

The training provides a very quick review on a number of tech-nical subjects, which could be part of the Contractor Assessment test.

- Health and safety at the workplace
- Identification of hazards and precaution
- Lockout-Tagout procedures
- Review of electrical principles and calculations
- Proper usage of electrical test equipment
- Differences between serial and parallel circuits
- Installation of lighting system
- Maintenance of lighting systems and motors
- Review of electrical drawings and symbols
- Introduction to the test environment



- ITC-C-001 CWQAP Electrical Test 1 day
- ITC-C-002 CWQAP Electrical Training + Test 4 days





#### **Course Overview**

This short training course provides systematic refresher training in order to pass the "Contractor Workforce Assessment Test" as provided in the NITI premises. In close relation to the test requirements, the course deals with the essential background on knowledge of HVAC being identified on "must know-level". This short training course cannot provide foundations.



#### Who Should Attend?

This short training course is addressed to experienced "HVAC Technicians" who intend to participate in the "Contractor Workforce Assessment Test" or are in need of a refresher course before participating in the respective test. The course is not suitable to qualify newcomers and inex-perienced persons in the HVAC discipline due to the limited time and the more theoretical nature of the contents. Participants should possess the required technical knowledge already.



## **Enabling Objectives:**

The training provides a very quick review on a number of tech-nical subjects, which could be part of the Contractor Assessment test.

- Health and safety at the workplace
- Identification of hazards and precaution measures
- Lockout-Tagout procedures
- Different HVAC equipment and its proper PM procedures for Water Chillers, Package Units, Window type AC units etc.
- Correct procedure in HVAC component replacement : Control-lers, Motors, Duct Heater, Compressors
- General troubleshooting of HVAC equipment and components
- Repairing of Compressors, AHU components and controllers



- ITC-C-001 CWQAP Electrical Test 1 day
- ITC-C-002 CWQAP Electrical Training + Test 4 days

## CWQAP Instrumentation (PCST)

Minimum participants





#### **Course Overview**

This short training course provides systematic refresher training in order to pass the "Contractor Workforce Assessment Test" as provided in the NITI premises. In close relation to the test requirements, the course deals with the essential background on knowledge of Instrumentation being identified on "must know-level". This short training course cannot provide foundations.



#### Who Should Attend?

This short training course is addressed to experienced "Instrumentation Technicians" who intend to participate in the "Contractor Workforce Assessment Test" or are in need of a refresher course before participating in the respective test. The course is not suitable to qualify newcom-ers and inexperienced persons in the Instrumentation discipline due to the limited time and the more theoretical nature of the contents. Par-ticipants should possess the required technical knowledge already.



## **Enabling Objectives:**

The training provides a very quick review on a number of tech-nical subjects, which could be part of the Contractor Assessment test.

- Health and safety at the workplace
- Identification of hazards and precaution measures
- Lockout-Tagout procedures
- Terms, Symbols and P&ID Terminology
- Identify Instrument loops
- Proper use of test equipment in the trade
- Identify instrument and control loop components, transducers
- Define Piston Actuator principles
- Troubleshooting of Pneumatic Control Loops
- Thermocouple principles and troubleshooting
- Calibration of switches, sensors and electronic transmitters
- General troubleshooting and instrumentation repairing



- ITC-C-005 CWQAP Instrumentation Test 1 day
- ITC-C-006 CWQAP Instrumentation Training + Test 4 days



## CWQAP Mechanical





#### **Course Overview**

This short training course provides systematic refresher training in order to pass the "Contractor Workforce Assessment Test" as provided in the NITI premises. In close relation to the test requirements, the course deals with the essential background on knowledge of mechanics being iden-tified on "must know-level". This short training course cannot provide foundations.



#### Who Should Attend?

This short training course is addressed to experienced "mechanics" who intend to participate in the "Contractor Workforce Assessment Test" or are in need of a refresher course before participating in the respective test. The course is not suitable to qualify newcomers and inexperi-enced persons in the mechanical discipline due to the limited time and the more theoretical nature of the contents. Participants should pos-sess the required technical knowledge already.



## **Enabling Objectives:**

The training provides a very quick review on a number of tech-nical subjects, which could be part of the Contractor Assessment test.

- Health and safety at the workplace
- Identification of hazards and precaution measures
- Lockout-Tagout procedures
- Machine Shop terminology
- Identify Valve symbols and terminology
- Pump principles
- Principles of Valve operation
- Operating principles of Compressors
- Maintenance of Bearings
- Lubrication principles
- Keys and Couplings
- Transmission principles
- Mechanical Seals



- ITC-C-007 CWOAP Mechanical Test 1 day
- ITC-C-008 CWQAP Mechanical Training + Test 4 days

# CWQAP Metals Fabricator





#### **Course Overview**

This short training course provides systematic refresher training in order to pass the "Contractor Workforce Assessment Test" as provided in the NITI premises. In close relation to the test requirements, the course deals with the essential background on knowledge of metals fabricator being identified on "must know-level". This short training course cannot provide foundations.



#### Who Should Attend?

This short training course is addressed to experienced "metals fabricator" who intend to participate in the "Contractor Workforce Assessment Test" or are in need of a refresher course before participating in the respective test. The course is not suitable to qualify newcomers and inex-perienced persons in the metals fabrication discipline due to the limited time and the more theoretical nature of the contents. Participants should possess the required technical knowledge already.



#### **Enabling Objectives:**

The training provides a very quick review on a number of tech-nical subjects, which could be part of the Contractor Assessment test.

- Health and safety at the workplace
- Identification of hazards and precaution measures
- Lockout-Tagout procedures
- Piping systems and Pipe Fitting symbols
- Identify Valves and related equipments
- Pipe threading and Pipe Spool fabrication
- Welded Pipe Spool fabrications
- Pipe and Structural fabrications
- Hydro-testing procedures
- Oxy-acetylene equipment and its operating principles



- ITC-C-009 CWQAP Metals Fabricator Test 1 day
- ITC-C-010 CWQAP Metals Fabricator Training + Test 4 days

## CWQAP Metals Mechanical (Pipefitter)

12 Minimum participants





#### **Course Overview**

This short training course provides systematic refresher training in order to pass the "Contractor Workforce Assessment Test" as provided in the NITI premises. In close relation to the test requirements, the course deals with the essential background on knowledge of metals mechanics be-ing identified on "must know-level". This short training course cannot provide foundations.



#### Who Should Attend?

This short training course is addressed to experienced "metals mechanics" who intend to participate in the "Contractor Workforce Assessment Test" or are in need of a refresher course before participating in the respective test. The course is not suitable to qualify newcomers and inex-perienced persons in the metals mechanical discipline due to the limited time and the more theoretical nature of the contents. Participants should possess the required technical knowledge already.



#### **Enabling Objectives:**

The training provides a very quick review on a number of tech-nical subjects, which could be part of the Contractor Assessment test.

- Health and safety at the workplace
- Identification of hazards and precaution measures
- Lockout-Tagout procedures
- Use of Hand Tools
- Proper use of Lifting Equipment
- Describe Piping Systems, Symbols and Installation equipment
- Installation and removal of valves and piping equipment
- Identification of valves
- Works steps in different Valve and Piping tasks
- Explain Hydro-testing procedures
- Pipe threading and Spool fabrication



- ITC-C-011 CWQAP Metals Mechanical Test 1 day
- ITC-C-012 CWQAP Metals Mechanical Training + Test 4 days



