



## **ABI19010 INTERNATIONAL CERTIFICATE IN MARINE AND OFFSHORE TRAINING ( CONFINED SPACE )**

## OVERVIEW

Confined Space – a dangerous work place that refers to any place – including

- Any pipeline
- Vessel
- Ship
- Container
- Pit
- Bund
- Chamber
- Cellar
- Maintenance holes
- Ductwork
- Tunnels
- Tanks
- Equipment housing

Or any other similar space which by virtue of its enclosed nature creates conditions that would lead to the occurrence of an accident, cause a person to come to harm or be injured to such an extent as to require emergency treatment. This could be due to the presence (or reasonable foreseeable presence) of flammable or explosive:

- Atmospheres
- Harmful gasses
- Fume or vapor
- Free flowing solid
- Or an increasing level of liquid
- Excess of oxygen
- Excessively high temperatures
- Lack of oxygen

Maritime and offshore workers are often required to work in confined spaces on board ships or drilling platforms. There are atmospheric and physical risks involved with working in cramped spaces around heavy machinery but many injuries or deaths in confined spaces could be prevented by following safety guidelines for worker safety.

This Marine and Offshore Confined Space course is designed for maritime and offshore professionals both on land and sea that have a need to enter a vessels confined or enclosed. The course presents the construction, operational features, limitations and calibration of oxygen analyzers, portable gas detection instruments and colorimetric tubes.

Various confined space training techniques are used along with entry into a vessels confined space so that attendees get as close as possible to realistic training in testing, entering, working in and handling emergencies.

To ensure the workers safety in confined spaces various National and International regulatory bodies have place rigorous guidelines governing such spaces. Abiosh offers confined spaces training ranging from awareness level courses to specific required training and even specialized modules.

## **COURSE DESCRIPTION**

This course combines theory and practical based training with emphasis on ships and the general maritime environment. It is intended for all employees required to enter confined or enclosed spaces where a specified risk may be present and it proposes a comprehensive program that would prevent different situations that may occur during the performance of a task in confined spaces.

The course is compulsory for workers who might be assigned jobs that require entry into or around permit required confined spaces as it exposes the hazards involved within these – entrapment, engulfment, dangerous atmospheric conditions and effective control measures for workers – entry into confined spaces is a dangerous activity and requires thorough training and supervision to avoid serious incidents. The course teaches the delegates about the different types of confined spaces, hazards associated with confined space entry and the control measures required to safely enter and exit these environments as defined by OSHA 29, CFR 1910.146 AND IMO resolution A.1050(27) S.I 1988/1638.

The course provides a most efficient way to stay compliant and abreast of the newest regulations and standards concerning confined space work environment worldwide.

## **COURSE OBJECTIVES**

The design of this course takes into account all aspects of personal and engineering, emergency preparedness, knowledge, evaluation and control of risks. Responsibilities and functions as well as first aid.

At the end of the course the delegate would be able to identify confined spaces according to their classification and use appropriate and specific procedures to enter them, by observing all the safety measures in place.

At the end of the course participants should be able to:

- Identify what is a confined space with examples
- Identify the characteristics of a confined space
- Describe the basic hazards associated with confined space operations
- Identify permit required confined spaces
- Perform the procedure for obtaining the permit and working safely in a confined space in accordance with standards
- Demonstrate a safe operation in a confined space with relevant safety measures and equipment
- Identify and describe the primary roles of authorized entrants, attendants, supervisors and designated rescue team/services
- Carry out rescue operations following recommended procedures

## **COURSE DURATION**

3 day classroom and practical

## **LEARNING OUTCOME**

At the end of the course delegates would be able to

- Identify the hazards associated with confined spaces including entrapment, engulfment, dangerous atmospheric conditions
- Harness belt, obtaining a permit to work, having a dedicated attendant, taking regular breaks and gas testing the atmosphere at regular intervals
- Use and maintain different types of personal protective equipment (PPE)
- Apply the general principles of health safety and environment (HSE)
- Employ control measures to safely enter and exit a confined space

**TARGET AUDIENCE AND INDUSTRIES**

- MARITIME PROFESSIONALS
- ENGINEERS AND SUPERVISORS
- DECK CREW PERSONNELS
- ELECTRICIANS AND MECHANICS
- COILED TUBING OPERATORS
- WIRELINE OPERATORS
- SNUBBING OPERATORS
- WELDERS AND GRINDERS
- DRILLERS AND ASSISTANT DRILLERS
- PLUMBERS AND FITTERS
- ANY OTHER EMPLOYEES REQUIRED TO ENTER CONFINED OR ENCLOSED SPACES
- MARINE AND OFFSHORE
- CONSTRUCTION INDUSTRY
- MANUFACTURING
- PETROCHEMICAL
- OIL AND GAS
- UTILITY

## **COURSE CONTENT**

### **Part A – classroom based**

Assessment of delegates basic knowledge

#### Unit 1 – Confined space regulation and pre-incident planning

- Introduction to confined space
- Confined space regulation
- Pre-incident planning

#### Unit 2 – Hazards of confined spaces

- Hazards of confined spaces
- Toxic atmospheres
- Flammable atmospheres
- Asphyxiating atmospheres
- Oxygen enriched atmospheres
- Physical hazards
- Heat stress
- Untrained rescuers
- Balancing risks and benefits

#### Unit 3 – Monitoring hazardous atmospheres

- Monitoring hazardous atmospheres
- Determining acceptable entry conditions
- Oxygen meters
- Combustible gas indicators
- Carbon monoxide and hydrogen sulfide meters

#### Unit 4 – Ventilating confined spaces

- Confined space ventilation
- Ventilation devices and safety
- Determinants of confined space ventilation
- Ventilation tactics
- Inspection and maintenance
- Ventilation safety

#### Unit 5 – Confined space rescue equipment and procedures

- Personal and respiratory protective equipment
- Protective clothing
- Rescue procedures
- Communication
- Decontamination

#### Unit 6 – Retrieval systems

- Retrieval systems
- Knots, bends and hitches
- Rescue and lowering systems

#### Unit 7 – Emergency trench operations

- Emergency trench operations
- Protective systems
- Trench procedures
- Unsafe trench conditions

#### Unit 8 – Confined space management system

- Confined space management system
- Incident management for confined space incidents and rescues
- Lapses in confined space legislations

#### Unit 9 – Confined space accident statistics

- Fatal occupational injuries involving confined spaces
- Types of confined spaces for fatal occupational injuries
- Occupations with the most fatal workplace injuries involving confined spaces

### **Part B – onsite practical exercises**

- Entry and exit using a tripod and winch
- Carrying out a work task
- Self-rescue with escape set
- Retrieval of a casualty

### **Training methodology**

- Class room session – onsite practical demonstrations and real situation exercises
- High quality course manual for all delegates
- Digital in-focus projector to display lecture slides
- Video of learning activities and real-life incidents
- **2 hour written exams**

**All successful delegates will be issued with a certificate**

