Module
Confined Spaces in WTG

(7 h)

Objectives

The Confined Spaces in Wind Turbines course trains you to work safely in confined spaces such as inside the blades and hub of wind turbines. You will learn to identify specific risks, use personal and collective protective equipment, and follow rescue and evacuation procedures in emergency situations. The course also covers the management of hazardous atmospheres and the application of current regulations in the wind energy sector.

In the practical part, you will acquire skills in handling gas measurement equipment and ventilation systems, as well as using respiratory and fall protection. Additionally, you will learn to perform rescue and evacuation maneuvers effectively, ensuring safe operations and minimizing risks in confined spaces within wind turbines.

Program: Confined Spaces in WTG

1. Introduction to Confined Spaces in WTG
   1.1 Course objectives
   1.2 Introduction to Confined Spaces (CS)
   1.3 Types of confined spaces
   1.4 Confined spaces in WTG
2. Legislation related to confined spaces
   2.1 Legislation related to confined spaces
   2.2 Legislation on confined spaces in wind turbines
   2.3 Work procedures according to regulations
   2.4 Organization and supervision
3. Environmental, geometric, worker, and physical load requirements
   3.1 Environmental requirements
   3.2 Geometric requirements
   3.3 Worker requirements
   3.4 Physical load requirements
4. Risks present in CS
   4.1 General risks
   4.2 Specific risks
   4.3 Common causes of accidents
5. Personal and collective protective equipment
   5.1 Personal and collective protective equipment
   5.2 Respiratory protection equipment
   5.3 Filtering respiratory equipment
   5.4 Isolating respiratory equipment
   5.5 Breathing with self-contained breathing devices
   5.6 Putting on self-contained breathing devices
6. Rescue materials and equipment
7. Signage
   7.1 Safety signs
   7.2 Signage in confined spaces
8. Lighting equipment
   8.1 Regulations
   8.2 Complementary lighting equipment
   8.3 Lighting in explosive atmospheres
   8.4 Lighting in atmospheres with electrical risk
9. Atmosphere evaluation
   9.1 Oxygen-deficient atmospheres
   9.2 Toxic atmospheres
   9.3 Flammable and/or explosive atmospheres (ATEX)
   9.4 Evaluation and measurement equipment
   9.5 Measurement procedures
10. Ventilation
    10.1 Ventilation
    10.2 Effective ventilation in confined spaces
11. Orientation and tracking in low or no visibility conditions
    11.1 Introduction to orientation and tracking
    11.2 Search and tracking
    11.3 Recognition of enclosures
    11.4 Positions during searches
    11.5 Orientation and mobility techniques
12. Emergency management
13. Rescue techniques and procedures
    13.1 Initial assessment
    13.2 Blade-hub rescue procedure

Confined Spaces in WTG

Duration: 7 hours (1 day)
Certificate Validity: 2 years
Program: Sections 1 to 13
Maximum students: 12 persons per edition

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