

## CONFINED SPACE INDUSTRIAL ROPE RESCUE

### 8 HOUR REFRESHER — COURSE OUTLINE

#### 1: Introduction and Overview

- a. Registration
- b. Orientation
- c. Course Objectives
- d. Safety Directives

#### 2: Permit Required Confined Space 29cfr1910.146

- a. OSHA Regulation Overview
- b. Definitions
- c. Employer responsibilities
- d. Employee responsibilities
  - i. Attendant duties
  - ii. Entrant duties
  - iii. Supervisor duties
- e. Atmospheric Hazards
- f. Atmospheric Monitoring
  - i. LEL
  - ii. Oxygen
  - iii. Toxicity
- g. Physical Hazards
- h. Work Activity Hazards
- i. Permits

#### 3: Equipment Review

- a. Software
  - i. Rope/cord
  - ii. Webbing
  - iii. Anchor straps
  - iv. pick-off straps
- b. Hardware
  - i. Tri-links
  - ii. Carabineers
  - iii. Ascenders
  - iv. Descenders

#### 3: Equipment Review *(continued)*

- b. Hardware
  - v. Pulleys
  - vi. Friction devices
  - vii. Baskets
  - viii. Tripods
- c. Harnesses

#### 4: Rope Rescue Knots & Hitches Review

- i. Family of eight's
  - 1. Simple
  - 2. On a bight
  - 3. Follow-through
  - 4. Splice or bend
  - 5. Double figure
- ii. Hitches
  - 1. Clove
  - 2. Munter
  - 3. Prussik
- iii. Knots
  - 1. Square
  - 2. Bowline
  - 3. Safety
  - 4. Butterfly
  - 5. Water knot (webbing)
  - 6. Double fisherman
- iv. Harnesses
  - 1. Bowtie harness

#### 5: Mechanical Advantage Systems Review

- a. 2:1
- b. 3:1 Block and Tackle
- c. 4:1 Block and Tackle
- d. 3:1 Z-rig
- e. Piggy back

The IPS training program implements the curriculum mandated by the Pro Board to assure that all students in the program have gone through a valid, fair and reliable testing process.

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#### 6: Rigging Techniques Review

- a. Anchors
- b. High point
- c. Same level
- d. Back up system
- e. Load control
- f. Safety Checks

#### 7: Patient Packaging Review

- a. Long board
- b. Short spine devices
- c. Stokes basket
- d. SKED

#### 8: Tri-Pod Operations Review

- a. Safety rules
- b. Techniques

#### 9: Rescue Scenarios (*Confined Space Prop*)

- a. Complete at least 4 of the scenarios and a team evaluation scenario
  1. **Rescue #1**  
Setup system to lower rescuer from high-angle location with cantilever project
  2. **Rescue #2**  
Lower Patient vertically in stokes basket from high-angle point down without using a high point anchor
  3. **Rescue #3**  
Lower Patient horizontally over railing in stokes basket or SKED from high-angle location without using a high point anchor
  4. **Rescue #4**  
Lower Patient horizontally over railing in stokes basket or SKED from high-angle point using a high point anchor
  5. **Rescue #5**  
Stairwell rescue (helicopter) using stokes basket or SKED

#### 9: Rescue Scenarios (*continued*)

6. **Rescue #6**  
Horizontal rescue using basket or spinal immobilization equipment
7. **Rescue #7**  
Rescue entrant down in confined space with no harness using a tripod
8. **Team Evaluation Scenario**  
Setup system and rescue fall victim hanging on-line by performing a victim pick-off with either a lower or retrieval

#### 10: Post Class questions & discussion

#### 11: Dismissal (*Reference Material:*)

- a. OSHA regulation 29cfr1910.146
- b. NFPA 1006 & 1670
- c. Technical Rescue Field Guide 3rd edition
- d. CMC Rope Rescue Manual 3rd edition
- e. Confined Space Entry and Rescue Manual  
By: CMC Rescue Inc. ISBN 0-9618337-42

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