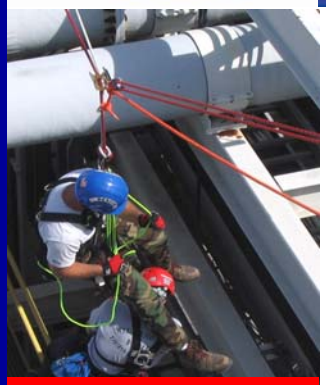
D2000 SAFETY

YOUR ANSWER TO SAFETY & RESCUE CHALLENGES!



RESCUE TRAINING

Rescue Technician > Advanced Training

Advanced Horizontal Rope Systems

Complex rescue systems often require the use of horizontal rope systems. Horizontal rope systems include highlines, offsets and similar rope systems designed to raise and lower loads when anchors are not overhead. This class combines both lecture and whiteboard analysis with a series of extensive field exercises to ensure understanding of the key concepts.

Pre-requisites: Students who attend this class must have basic rope skills including knot-tying, constructing anchors, and operating mainlines and belay lines.

Course Outline

Introduction to Horizontal Rope Systems

- Types of Horizontal Systems
- Common Applications
- Limitations
- Incident Management

Force Calculations

- Vector Analysis
- Fall Factors and Forces
- Compression and Elongation
- Friction Factors

Safety Factors

- Force Multipliers
- Static System Safety
- Dynamic System Safety

System Setup and Operation

- Taglines
- Dynamic Directionals
- Tensioning Systems
- Reeve Line Systems
- Sloping Highlines

Training Objectives

At the completion of this class, the students should be able to:

1. Describe the incident management of highlines, offsets, taglines, and similar systems and components.
2. Calculate the approximate force multiplication associated with commonly-used horizontal systems.
3. Calculate the expected edge friction based upon load, materials, system design, and resulting vectors.
4. Construct a variety of systems that are capable of safely lifting/hauling the load and remaining within the safety factors.
5. Tension a horizontal system.
6. Demonstrate the use of floating bipods and monopods.
7. Develop horizontal systems suitable for use in a steep angle environment.

Other Programs in this Series:

Managing the Rescue Incident: Two Days
Advanced Rigging Concepts: Three Days
Elevated Anchors: Three Days
Force Multipliers– Rope Physics: Three Days
Confined Space Rescue Technician: Four Days

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