KNOTS AND ROPE MANAGEMENT
HIE002
Overview

• Terms used in rope work
• Four classes of knots
• Knots and their uses
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Terms Used in Rope Work

- Bight
- Loop
- Half-Hitch
- Running End
- Standing End
- Lay
- Pigtail
Four Classes of Knots

- **Class I** - End of the Rope Knots
- **Class II** - Anchor Knots
- **Class III** - Middle of the Rope Knots
- **Class IV** - Special Knots
Knots and Their Uses

- End of the Rope Knots
  - Square Knot
  - Tape Knot
  - Double Fisherman
Square Knot

• Used to tie ends of two ropes of equal diameter together.
• Secured by over hand knots.
Tape Knot

- Used to tie secure webbing or tape runners.
Double Fisherman’s Knot

- Used to tie two ropes of equal diameter together.
- Self-locking.
Knots and Their Uses

- Anchor Knots
  - Round Turn and Two Half Hitches
  - Bowline
  - Clove Hitch
Round Turn and Two Half Hitches

- Used to distribute a load over a small diameter anchor.
- Loop that runs around an object, providing 360° contact.
Bowline

• Used to tie a fixed loop in the end of a rope.
• Secured with an overhand knot.
Clove Hitch

- Adjustable hitch.
Knots and Their Uses

• Middle of the Rope Knots
  – Figure 8 Loop
Figure 8 Loop

- Strong knot.
- Can be readily untied.
Knots and Their Uses

• Specialty Knots
  – End of the Line Prusik
  – Directional Figure 8 Loop
  – Around the Body Bowline with Figure 8 Loop
  – Military Rappel Seat
End of the Line Prussik

• Created with the standing end of the rope.
• Two outboard and inboard wraps are put over a line.
• Finished with a bowline.
Directional Figure 8 Loop

• When pressure is applied, the knot will not pull apart.
Around the Body Bowline

• Used as a safety line during SPIE operations.
Military Rappel Seat