

### Purpose

To review key safety precautions and best practices for **line handling during mooring and offloading operations** of ships carrying **liquid asphalt**, a hot, viscous, and hazardous cargo requiring careful control and coordination.

### Why this matters:

- Mooring operations involve high-tension lines, moving equipment, and close coordination between deck crew, terminal personnel, and tugboats. One wrong move can result in severe injury, line snapback, or cargo spill.
- Liquid asphalt presents additional hazards due to its high temperature (typically 275°F–375°F / 135°C–190°C) and fume exposure risks, which make communication and preparedness even more critical.

### Mooring line hazards:

- **Snapback Zones:** If a mooring line parts under tension, it can recoil violently.
- **Line Surge or Slippage:** Incorrect winch control or vessel movement can cause sudden jerks.
- **Crushed or Pinched Hands:** During heaving or securing lines.
- **Poor Communication:** Between ship and shore can lead to timing errors or unsafe line loads.



### Safety Precautions:

1. Pre-Arrival Briefing
  - a. **Review mooring plan and line configuration.**
  - b. Confirm communication protocols: hand signals, radios, and backup channels.
  - c. Inspect PPE: hard hats, gloves, safety boots, eye protection, life vests.
2. Line Inspection
  - a. **Inspect all mooring lines for wear, chafing, or kinks.**
  - b. Check heaving lines and messenger lines for damage or knots.
  - c. Confirm winch brakes and controls are working.
3. Designate Snapback Zones
  - a. Clearly mark snapback danger zones on deck.
  - b. **Never stand in the bight** of a line under tension.
  - c. Keep bystanders and unauthorized personnel away from line areas.
4. Heaving and Securing Lines
  - a. Use proper hand signals and clear communication.
  - b. Avoid wrapping lines around hands or body.
  - c. Keep hands clear of chocks, bits, and rollers.
  - d. Use line-handling tools (e.g., hooks or sticks) where possible.

5. Offloading Preparation
  - a. Ensure vessel movement is fully stopped and all lines are secure before connecting cargo arms/hoses.
  - b. Monitor mooring lines regularly during offloading — asphalt vessels may experience thermal expansion or load shifts.
  - c. Adjust lines as necessary to prevent tension spikes.

**Asphalt-Specific Considerations:**

- **Thermal Hazards:** Hot asphalt may affect nearby line handling stations. Avoid touching hot surfaces or hoses.
- **Fume Exposure:** Stay upwind of asphalt vapors. Use respiratory protection if needed.
- **Emergency Procedures:** Know the location of emergency shutdown systems (ESD) and eyewash stations.

**If Something Goes Wrong:**

- **Line Snap or Injury:** Immediately alert bridge and terminal. **Do not attempt rescue alone.**
- **Spill or Hose Leak:** Activate ESD, evacuate area, and notify response team.
- **Loss of Tension or Excess Movement:** Stop transfer until mooring is re-secured.

**Remember:**

- **Stay alert**, especially during vessel movement and line tensioning.
- **Never shortcut procedures** — especially when handling heavy lines.
- **Your situational awareness is the best defense against injury.**

**Questions For Crew:**

- Where are the snapback zones on this vessel?
- Who is in charge of line handling today?
- What's the emergency signal for a line parting or fume leak?



