

Wire Rope Warnings and Guidelines

- All operators must be **properly trained** in rigging and rope selection.
- The **Strength** of wire rope in catalog or website applies only to a new, unused rope.
- The nominal strength of a wire rope should be considered the straight line pull which will actually break a new, unused rope. The nominal strength of a wire rope should never be used as its working load.
- Government and industrial organizations such as OSHA, ANSI and ASME have established recommended practices and design factors for various types of operations. Wire rope should never be placed into service without an understanding of these requirements.
- **Wire rope will fail** if worn out, overloaded, misused, damaged or improperly maintained.
- In service, **wire rope loses strength** and work capability. Abuse and misuse increase the rate of loss.
- **Wire ropes wear out.** Nominal strength begins to decline the first day of service due to natural causes such as surface wear and metal loss and continues to decrease with each use.
- **Never overload a wire rope.** Do not exceed the Working Load Limit (WLL) of the rope. WLL equals nominal strength divided by the appropriate design factor.
- **Never "shock load" a wire rope.** A sudden application of force or load can cause both visible external damage and internal damage. There is no practical way to estimate the force applied by shock loading a rope. The sudden release of a load can also damage a wire rope.
- **Lubricant** is applied to the wires and strands of a wire rope when it is manufactured. If the rope is operated outdoors or in a corrosive environment, the lubricant is depleted and should be replaced periodically.
- Any fitting attached to a wire rope may reduce its working load limit depending on the **"efficiency rating"** of the specific fitting and/or method of assembly. Efficiency ratings must be identified and understood to ensure safe wire rope usage.
- Wire rope will be damaged by **extreme temperatures**. Fiber core wire rope should never be exposed to temperatures exceeding 200°F and IWRC wire rope should never be used at temperatures above 400° F or below -60° F.