



Product BULLETIN

Wire Rope Corporation of America

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Traction Drive Powered Scaffold Hoist Ropes — End Treatments

The primary purpose of the core of a wire rope, whether it be an Independent Wire Rope Core (IWRC) or a Fiber Core (FC), is to provide support for the outer strands of the rope. Without this support the rope is susceptible to distortion from strand displacement which can cause a reduction in rope breaking strength, an unbalance in the rope, and unpredictable service life.

Wire ropes used with traction hoists frequently have their ends brazed or welded into a “bullet” to allow automatic reeving of the traction drive. This is necessary to keep wires and strands from being pushed apart. Most other wire rope applications, to facilitate the movement of the strands and core, do not have brazed or welded ends at the time a rope termination is made or the rope is operated. Because of the need to have the rope ends brazed or welded for traction hoists, special preparation of the end is required.

When preparing the rope for brazing or welding, the core should be cut back about 1/2” so that only the rope strands are brazed or welded together (the end of the core should be close to the “bullet” but not attached). This accomplishes two important things: 1) the rope strands are supported by the core effectively to the rope end; 2) the rope strands are allowed to slide and adjust around the core.

Because most traction hoists grip the rope by applying radial pressure to the rope, cutting out too much core can cause the strands to be pushed out of position from the radial pressure as the end is inserted into the machine. This can begin a “milking” action of the strands which can eventually lead to a “birdcage.” The presence of the core in all but the last 1/2” of the rope greatly reduces the possibility of this occurrence.

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