

Suggested digging practices for draglines

First, follow a proven method of drilling and blasting. If you leave the breakup of a rock formation to the bucket, the rope's life will suffer.

When digging, the fundamental rule is the same as shovels. Always dig as near the optimum position as possible. Position the bucket directly in line with the axis of the boom and as near the boom point as possible. This position places less load on your hoist and drag ropes, and makes the most of their service life.

Your wire ropes' service life will suffer, however, when you dig at less optimal angles. A wide angle, for example, that

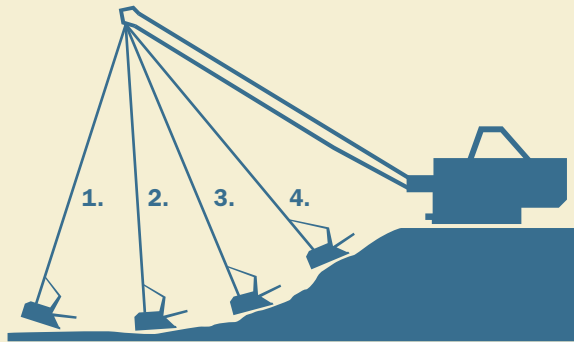
involves overcasting of the bucket will cause undue stress on the bucket, rope and rigging. A narrow angle can put more stress on your rope, requiring more power to lift the same load. Up to 42% more power for the "poor" digging position as shown here.

Operator technique is also very important to your ropes' service life. By overloading the bucket or increasing the stall amperage or clutch pressure to allow larger-than-recommended loads, you can overload the rope and increase downtime for rope replacement. Ideally, the bucket should fill in a relatively short distance – approximately two bucket lengths.

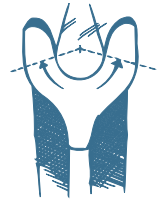
DIG AS NEAR THE OPTIMUM POSITION AS POSSIBLE

As the angle of digging moves closer to the dragline, you need more power to lift the same load.

1. Avoid **casting** of the bucket. Undue stress and unequal load is put on the rope.
2. The **best** digging zone – requires 3.5% more power than needed to lift the same load vertically.
3. **Good** digging zone – requires 15% more power to lift.
4. **Poor** digging zone – requires 42% more power to lift.



SHEAVE GROOVE SIZE, CONTOUR AND SMOOTHNESS SHOULD BE MONITORED



- > When a "minimum for worn" sheave gauge does not reach the bottom of the groove, the sheave should be replaced for maximum rope life.



- > Grooves that are too small or tight can cause pinching and increased rope wear.




- > Grooves that are too wide can cause flattening of the rope.

Warning

In a perfect world, nothing ever goes wrong with wire rope. No injuries. No damages. No problems, period. But we all know there's no such place. In the real world, accidents do happen, and

that's why you need to take special precautions. Before installing wire rope in your surface mining applications, always read and follow the warning label attached to each product.



WARNING

Wire rope **WILL FAIL** if worn-out, overloaded, misused, damaged, improperly maintained or abused.

Wire rope failure may cause serious injury or death!

Protect yourself and others:

- ALWAYS INSPECT wire rope for WEAR, DAMAGE or ABUSE BEFORE USE.
- NEVER USE wire rope that is WORN-OUT, DAMAGED or ABUSED.
- NEVER OVERLOAD a wire rope.
- INFORM YOURSELF: Read and understand manufacturer's literature or "Wire Rope and Wire Rope Sling Safety Bulletin".*
- REFER TO APPLICABLE CODES, STANDARDS and REGULATIONS for INSPECTION REQUIREMENTS and REMOVAL CRITERIA.*

* For additional information or the *BULLETIN*, ask your employer or wire rope supplier.

©1993, Wire Rope Technical Board Form No. 193

WARRANTY

Any warranty, expressed or implied as to quality, performance or fitness for use of wire rope products is always premised on the condition that the published strengths apply only to new, unused rope, that the mechanical equipment on which such products are used is properly designed and maintained, that such products are properly stored, handled, used and maintained, and properly inspected on a regular basis during the period of use.

Seller shall not be liable under any circumstances for consequential or incidental damages or secondary charges including but not limited to personal injury, labor costs, a loss of profits resulting from the use of said products or from said products being incorporated in or becoming a component of any other product.