

# Typical Examples of Wire Rope Deterioration

*Fehr*

This rope was subjected to repeated bending over sheaves while under normal loads. Fatigue breaks in the individual outer wires resulted. The wire breaks are square-end and the majority are found on the crown of the strands.



An example of fatigue fractures in a wire rope that was subjected to heavy loads while over small sheaves. Most wires are breaking in the valleys between the strands. These valley breaks are a result of strand-to-strand nicking.



A typical example of localized wear. The cumulative effect can be minimized and the rope life extended if a suitable cut-off practice was employed.



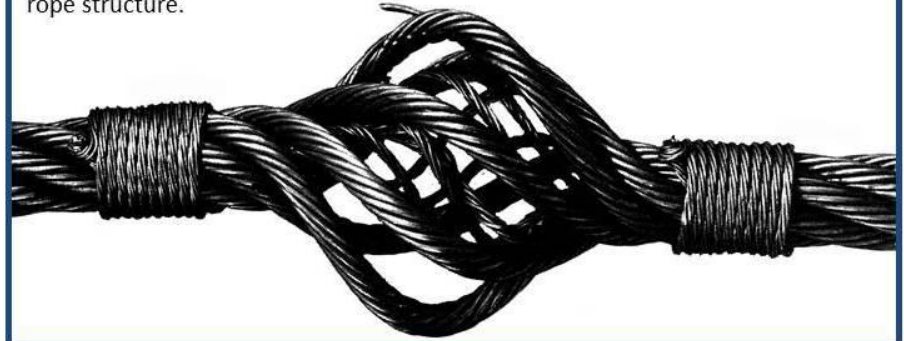
Wire Rope with a high strand. In this condition, one or two strands are worn before adjoining strands. This is caused by improper socketing or seizing, kinks or doglegs.



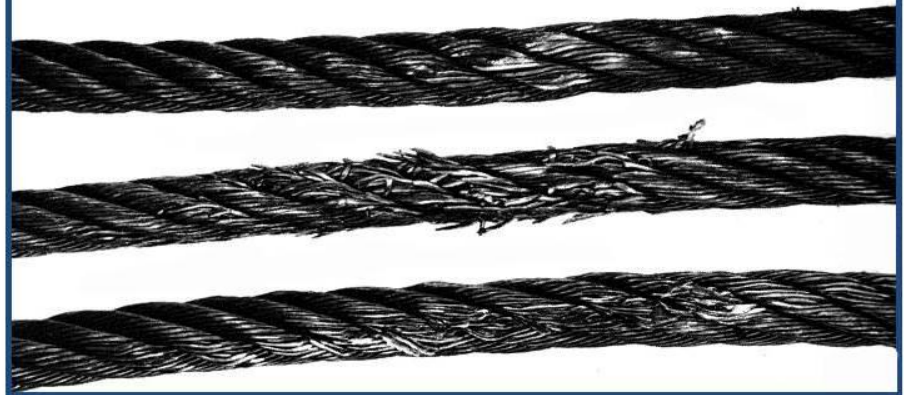
This rope was damaged on the reel by a sharp object.



A 'birdcage' resulting from a sudden release of the load causes damage to the rope structure.



These ropes are damaged from improper or bad drum winding.



Improper handling, rope rotation or sudden release of a load can cause a 'popped core'.

