MNM Fatal 2007-04

- Machinery Accident
- March 23, 2007 (Ohio)
- Industrial Sand Operation
- Tramway Maintenance Man
- 44 years old
- 26 years experience

Overview

A maintenance crew was adjusting a cable for an aerial tram. A tension jack was being used to tighten the cable when the cable anchorage point failed. The victim was in a man basket, looking down the cable line, and was fatally injured when he was struck by the tension jack or cable. A co-worker was also injured.

Root Causes

- Management did not have policies, procedures, and controls in place so persons could safely tension cables on the aerial tram. No assessment of the risk involved in this work assignment was completed. The pressure gauge and relief valve were non-functional on the hydraulic power supply used to complete the task.
- Management did not ensure that the tramway was adapted to support all loads imposed on the tramway components. The anchor arms used to secure the cable were stressed beyond their yield point. The ends of the anchor arms had been cut to clear the cable grips.

Best Practices

- Identify inspection criteria and maintenance procedures for carriers (including loading and unloading mechanisms), ropes and supports, and brakes according to the recommendations of the manufacturer.
- Identify potential hazards for each step of the task, establish written procedures, and train persons conducting the task of aligning cable lines.
- Ensure that competent persons address hazards associated with and the uncontrolled release of stored energy.

Best Practices

- Ensure that persons are not positioned within the recoil zone of tensioned cables.
- When using hydraulic systems, ensure that the maximum allowed pressures and the settings of the relief valves are established by a qualified individual.
- Before any work is performed on a tension linkage assemblage, ensure that all connection points of the linkage assemblies have been examined for signs of excessive deformation, signs of distress such as cracking, distortion of holes, warping, out of plan lateral movements.