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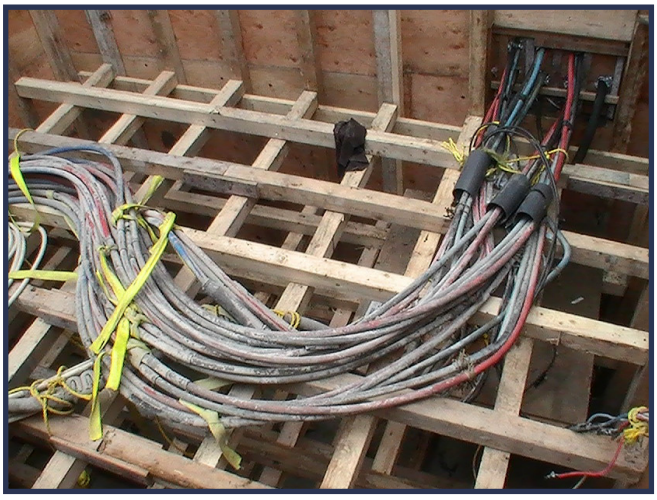
ToolboxTalk

Cable Chamber Rebuild Arc Prevention

The incident:
A 240 V cable arced to a bare ground inside a tied up bundle of secondary cables inside a rebuild cable chamber. There were two utility contractor's crew members placing the concrete form for the wall where the cable eventually arced. Fortunately there were no injuries as a result of the arc flash, possibly because the closest workers were behind the concrete form wall.

The damage

The Cause:
The cables were tied up allowing the upward facing bolts to rub on the insulation of the cables that were tied in the bundle. The vibration from the work taking place in the cable chamber and the traffic next to the chamber allowed the threads of the bolts to rub through the cable insulation.



The cables were tied in a bundle.

The bolts holding the grounds were facing up.

Preventing the incident:
The crew members were fortunate that they were not working on the recess pictured at the time of the arc flash.
If contractor's workers are on site when the utility secures the cables, they need to ensure that the grounds are secured separate from the cables and that the hardware is protected from damaging cables tied up next to them. If these ground clamps are noticed inside existing bundles of tied cables, contact the utility inspector to arrange for one of their crews to secure the ground separately from the bundle and protect the sharp edges from damaging adjacent cables.