

Improving Electrical Safety through Enhanced Work Permits

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Abstract : Distribution Utilities inherently present electrical hazards for their workers in addition to the general public especially due to bare overhead lines spreading out over a large geographical area. Therefore, certain procedures such as; de-energization, verification of de-energization, isolation, lock-out tag-out and earthing are carried out to ensure safe working conditions when conducting maintenance work on de-energized overhead lines. However, measures must be taken to coordinate the above procedures and to ensure successful and accurate execution of those procedures. Issuing of 'Work Permits' is such a measure that is used by the Distribution Utility considered in this paper. Unfortunately, the Work Permit method adopted by the Distribution Utility concerned here has not been successful in creating the safe working conditions as expected which was evidenced by four (4) number of fatalities of workers due to electrocution occurred in the Distribution Utility from 2016 to 2018. Therefore, this paper attempts to identify deficiencies in the Work Permit method and related contributing factors through careful analysis of the four (4) fatalities and work place practices to rectify the short comings to prevent future incidents. The analysis shows that the present level of coordination between the 'Authorized Person' who issues the work permit and the 'Competent Person' who performs the actual work is grossly inadequate to achieve the intended safe working conditions. The paper identifies the need of active participation of a 'Control Person' who oversees the whole operation from a bird's eye perspective and recommends further measures that are derived through the analysis of the fatalities to address the identified lapses in the current work permit system.

Keywords : authorized person, competent person, control person, de-energization, distribution utility, isolation, lock-out tag-out, overhead lines, work permit

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