

ELF Electric And Magnetic Fields Exposure Assessment Of Live-Line Workers For 132 KV Transmission Line Of SEC

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Summary

This paper presents an exposure assessment study for live-line workers exposed to transmission line power frequency electric and magnetic fields. A double circuit transmission line is selected. Practical exposure scenarios which represent actual working conditions for live-line workers have been identified. The charge simulation method has been adopted to compute the external electric field around the selected 132 kV transmission line. A method based on Ampere law has been chosen to compute the external magnetic field around the transmission line. Both methods are numerically solved using the EPRFs EMF Workstation software. A comparison between the values of external electric and magnetic fields, with the allowable exposure limits set by the international standards has been conducted. The paper concluded that the levels of workers exposures to extremely low frequency electric and magnetic fields are below the recommended international standards limits for the scenarios considered in this work

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