ABSTRACT

DESIGN AND IMPLEMENTATION OF FIRE PROTECTION SYSTEMS FOR POWER POLE TRANSFORMERS

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Power pole transformers, essential components in electricity distribution, face significant fire risks due to high electrical loads, short circuits, and environmental factors. Developing effective fire protection systems for these transformers is critical to preventing power outages and minimizing fire hazards. This study explores the design and implementation of advanced fire protection strategies, including the use of fire-resistant materials, automated fire detection, and suppression systems.It also emphasizes the importance of regular maintenance and real-time monitoring to identify early signs of overheating or failure. By integrating these systems, the risk of transformer fires can be significantly reduced, ensuring greater reliability and safety in power distribution networks. This research further evaluates the economic and environmental impacts of implementing such systems, advocating for enhanced safety standards in utility infrastructure.

Keywords : *Power Pole Transformers,Protection Systems,Design,System Analysis*