EFFECT OF ELECTRODES ON RUBBER INSULATING GLOVE

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ABSTRACT

This paper presents experimental procedures and data for comparative evaluation of the insulation value of the protective rubber insulation glove. This paper focused on the usage of Class 2 gloves. The objective of this research is to observe and analyze the characteristic of the rubber glove when it is given potential from different source of contact. The different electrodes used in this research were compared with each other in order to observe the breakdown voltage and also the tan δ. Experimental results for various types of electrode tested were analyzed. Collected results indicates that, different type of electrodes will yield different results of withstand levels for the gloves including the breakdown voltage and dielectric properties. This research only covers the experimental setup of normal test vessel due to the absence of the oil bath vessel. Hence the effects of corona and flashover have to be considered. This lead to conclusion that electrical performance of rubber glove will achieve breakdown voltage faster when it is in contact with flat circular electrode.

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INTRODUCTION

1.1 BACKGROUND OF STUDY

Electrical safety has been a rising concern of many parties nowadays ever since the cases could claim lives. Since then lots of safety manufacturer are trying to invent and produce equipment that can help the industry and electrician in order to reduce the amount of injuries and fatalities during conducting electrical work related. Among the regular safety equipment that should be acquired by employee is safety gloves, safety helmets, safety shoes and others. All these equipment can be classified as personal protective equipment (PPE). By definitions, process of minimizing or eliminating the risk of injury or fatality from electrical hazards is defined as electrical safety. According to survey which had been done on some sites, there are still employees did not concern on the importance of voltage-rated gloves and arc flash protection

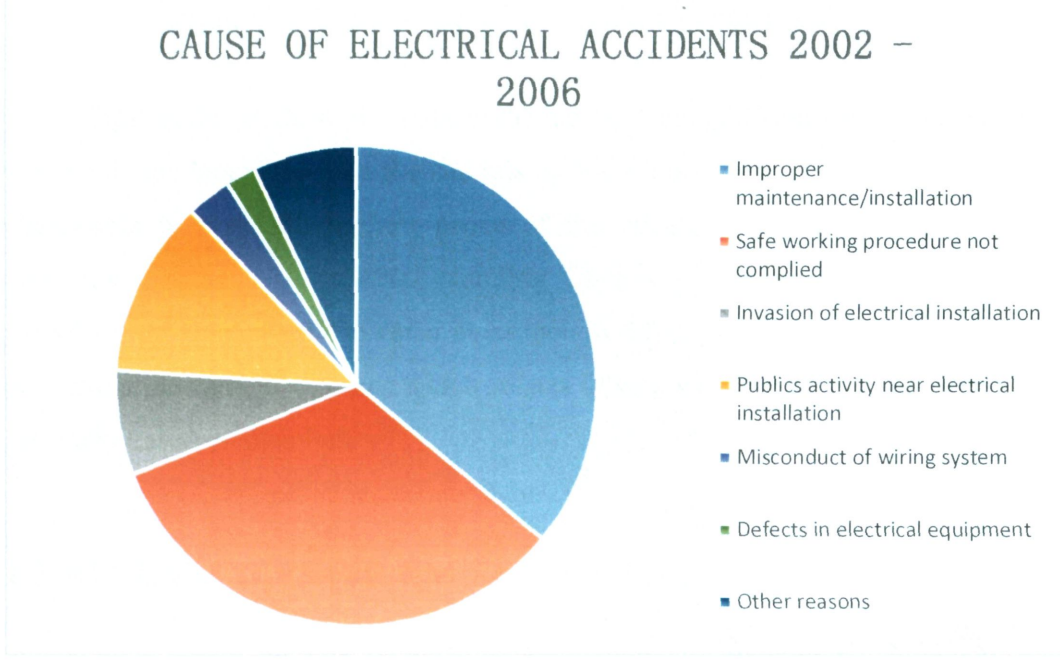

Figure 1.1 Causes of Electrical Accidents 2002-2006 Taken From Energy Commission