

DEVELOPMENT OF HIGH CURRENT SOURCE

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MOHD.SALEH BIN SHAMLANI
Department of Electrical Engineering
INSTITUT TEKNOLOGI MARA
46450 Shah Alam, Malaysia
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Abstract

The development of high current source with the combination of theoretical and practical aspect of simple transformer. The main idea behind the development of this project is initially to cater for the requirement of the water absorption and Ac load cyclic test of high voltage cable jointing and termination . Results of the proposed prototype and the problem arise in the laboratory are explained briefly for future improvement.

With basic design and availability of the basic components, an initial desired value had been achieved.

Acknowledgement

With the blessing of Allah Subhanawataala and well dedicated and frequent advice from En.Ngah Ramzi as the project advisor and En.Mustafar Kamal Hamzah as the initiator to establish the research activities, means had been develop to cater at least part of the high voltage testing equipment . Hoping that this effort could be continued to improve the basic design which had been developed.

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CHAPTER 1

1. INTRODUCTION

In view of the requirement to justify as part of the performance of the high voltage equipment and accessories such as cables, switchgears, transformers, joints, terminations and others with respect to cyclic load and temperature changes, the need of high current source for ranges above 1200 amperes is necessary as the heater circuit.

Basically the design of the current source is taken into account of the availability of locally manufactured current transformers. In normal practice it is used whenever the values of current in a power circuit are too high to permit convenient direct connection of measuring instruments or relays with measuring instruments or protection relays.

Such measuring transformers are required to produce a scaled down replica of the input quantity to the accuracy expected for the particular measurement. It serves two main functions, one being to operate accurately indication and summation-metering equipment and the other is to feed power system protective equipment with respect to the desired system design.

Current transformers are basically identical to two windings voltage transformers, in that they possess a pair of mutually coupled windings placed around magnetic cores [4] .