

# *High Voltage Engineering*

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# Preface

This book has arisen out of the need to include many of the major aspects of high voltage engineering in a single volume. The book is intended primarily as a basic text book in high voltage engineering at the Final Year level of a four year undergraduate course specialising in Electrical Engineering, with emphasis on heavy current engineering. It is also expected to be of immense value to practising electrical engineers, especially to those in the electricity supply industry.

The substance of this book is organised in the following major sections. (i) Review of breakdown of insulating materials, (ii) Surge phenomena and their analysis, (iii) Generation of high voltages for testing purposes, (iv) measurement of high voltages and testing procedure, and (v) Co-ordination of insulation in a power system.

A prior knowledge of basic electrical engineering theory and electric power system analysis has been considered as a pre-requisite in writing this book. However, important background material is reviewed as a refresher where ever considered necessary.

Information for this book has been collated over a period of over 25 years from various sources, a record of which has not been maintained, during the teaching of high voltage engineering as a subject to electrical engineering undergraduates at the University of Moratuwa and its predecessors. The author is grateful to each of these sources, but regrets his inability to thank them individually.

This book, although it has not come out as a complete text book before the 1995 edition, it has nevertheless come out in parts, mainly as lecture handouts over the period of time. In fact, the original complete edition in cyclostyled form came out during the period July-September 1971 and has undergone continuous revisions.

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