SYMPOSIUM ON ELECTRICAL INSULATING GASES

INTRODUCTION

By V. R. MULHALL[1]

This symposium, the ninth in a series sponsored by ASTM Committee D-27 on Electrical Gases and Liquids and its predecessor -- Subcommittee IV of Committee D-9 -- emphasizes a new direction in committee activities and confirms the wisdom of the decision to broaden the committee scope from liquids to fluids. This extension, encompassing the electrical insulating gases and volatile liquids, is a natural one because it reflects the expanding field of interest of many of our manufacturing and utility members.

It has become evident during the past several years that the use of gases and volatile liquids as the major electrical insulation in apparatus and equipment is rapidly expanding. The inevitable problems have indicated the need for better information and a common language of test methods and specifications. Committee D-27 is attracting new members who are expert in these materials and has undertaken programs to prepare new standards. This symposium constitutes one aspect of this over-all endeavor.

The first paper, by M. L. Manning, emphasizes the attitudes and needs of the electrical designer and utility operator and presents an argument for accelerated effort and continued cooperation between materials specialists, equipment designers, and users. The author poses a number of unanswered questions for our serious consideration.

The next three papers, presented by representatives of three manufacturers of insulating gases and volatile liquids,

---

[1]Engineer, insulations and resins, engineering laboratory, Canadian General Electric Co., Peterborough, Ont.

describe the properties and characteristics of eight different materials. E. C. Coyner and D. Hanesian discuss the properties of hexafluoroethane and octafluorocyclobutane. J. W. Sargent and J. D. LaZerte review the properties of certain members of the fluorocarbon family ranging from one to twelve carbon atoms. J. A. Brown describes the properties of sulfur hexafluoride.

The last paper, by T. W. Liao and G. L. Shombert, Jr., reviews the need for and purpose of an interlaboratory test program on dielectric strength testing of insulating gases recently conducted within the committee and presents the conclusions derived from a detailed statistical analysis of the test data.

On behalf of the officers and members of ASTM Committee D-27, I wish to express sincere appreciation to the authors for their excellent participation in this symposium and to all those who assisted in its promotion and presentation.