

Introduction

A few years ago subcommittee E04.11 on Electron Microscopy and Diffraction of ASTM Committee E-4 on Metallography initiated a project of preparing recommended procedures for experimental techniques relating to electron metallography. It was intended to provide a concise but practical manual of "how-to" for a nonbiological laboratory involved in various disciplines relating to electron metallography. To accomplish this objective, four task groups were formed.

This special technical publication is a culmination of efforts not only of the members of the task groups and the subcommittee but numerous other contributors. The procedures are written to provide an elementary approach and are intended to be an aid to laboratory personnel with a limited background or expertise in electron metallography. Even though the manual is addressed to a novice, it is believed that some of the material including the exhaustive bibliography appended to each procedure will prove equally useful to those whose interest lie beyond the basic.

The last few years have seen an increased number of publications and textbooks on this and similar subjects. It was felt, however, that all these assumed a certain educational and experimental background on part of the readers. This manual, we believe, fulfills the need in that it is addressed to someone who is just starting out in this field. Therefore, we hope that this special technical publication will not be just an addition to a long list of literature available on the subject but will find its rightful place as a practical manual for years to come.

The list of contributors is acknowledged in the beginning of each chapter. We would like to express our gratitude to B. R. Banerjee and G. E. Pellissier, the past chairmen of the subcommittee, under whose leadership the project was initiated and flourished. Our sincere appreciation to the many contributors for

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