

## Introduction

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The world wide shortage of energy has focused new attention on the generation of electrical power from nuclear reactors. This volume directs its attention to some of the serious problems associated with the design, construction, and operation of nuclear reactors. It provides an exchange of current scientific and technical information from the view points of the producers of zirconium and its alloys, the fabricators of components and systems of nuclear reactors, the operating electrical utilities, and the regulatory government agencies.

Among the broad topics covered are: test methods and specifications; plastic deformation; texture phenomenon; irradiation effects on structure and creep; irradiation effects on strength and fracture behavior; and corrosion.

Papers have been contributed by authors throughout the world by those knowledgeable in the metallurgy of zirconium and its alloys and by those concerned with the materials aspects of nuclear technology. The papers were presented at the Symposium on Nuclear Applications, Portland, Oregon, 21-24 August 1973.

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