

**INTERNATIONAL COMMISSION ON LARGE DAMS
AUSTALIAN NATIONAL COMMITTEE ON LARGE DAMS**



**INTERNATIONAL SYMPOSIUM ON
SAFETY AND REHABILITATION OF
TAILINGS DAMS**

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Presented Papers Volume 1



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FOREWORD

A number of factors has focussed world attention on Tailings Dams in recent years. These include:

- . several catastrophic failures causing significant loss of lives
- . rapid increase in dam heights and volume of waste materials stored
- . society's awareness of the huge potential for extensive environmental damage by the escape of hazardous and frequently toxic materials.

Recognition of these matters and that tailings structures have long been designed by empirical means with less than satisfactory performance led to ICOLD's interest and the formation in 1976 of the Technical Committee on Mine and Industrial Tailings Dams. This Committee and its successor from 1983 to 1989 have been responsible for several important publications including a State-of-the-Art Manual, and World Register of Tailings Dams and a report on Tailings Dams Safety Guidelines. A third Committee was appointed by President Veltrop in 1989.

In the absence through sixteen congresses of a question dealing with the topic of Tailings Dams, ICOLD and ANCOLD considered it to be an appropriate topic for the Symposium to be held in Sydney in conjunction with the 58th Executive Meeting.

The Symposium subject was decided to be SAFETY AND REHABILITATION OF TAILINGS DAMS.

Because of the broad theme it was further decided to invite authors to submit papers covering three sub-themes, namely:

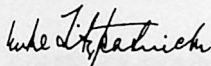
- . stability under earthquake loading
- . static stability including seepage pressures and properties of deposited tailings
- . rehabilitation and environmental effects.

The response to the announcement and call for papers confirms the importance of work in this field by dam engineers.

Seven papers were received on earthquake loading, eighteen on static stability and three on rehabilitation and environmental effects. Four papers on static stability also cover the theme of rehabilitation and environmental effects. We wish to thank the authors of the papers and the National Committees for their work and important contribution to the subject.

In this volume we are publishing the presented papers. A second volume will be published after the symposium and will contain the papers by the General Reporter for each sub-theme and an account of the discussion at the symposium.

We sincerely hope the ICOLD Symposium in Sydney in May 1990 will benefit the dam engineering profession and particularly those involved in the field of tailings dams.



Mike Fitzpatrick
Chairman ANCOLD

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