

## Foreword

The first edition of the CICIND Model Code for Concrete Chimneys published in October 1984 presented the combined views of acknowledged international experts in the specialist field of concrete chimneys and represented a valiant attempt to combine the best features of the various and disparate national codes. At that time all concrete chimney codes were based on elastic theory and the CICIND Code reflected this to some extent. Subsequently both DIN and ACI made progress in introducing a more consistent limit state approach making it desirable for CICIND to follow suit. This Second Edition is the result.

This Model Code was accepted by the General Assembly of the CICIND Association in April 1998.

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there are still significant differences between European and North American codes which are not going to be reconciled by CEN.

## 0 Introduction

### 0.1 General

The International Symposium on Chimney Design held in Edinburgh in 1973 highlighted common problems in existing industrial concrete chimneys. It also identified significant differences between the requirements of the various national codes covering chimney design. As a result, a committee was founded with the aims of improving the knowledge of chimney design and harmonising the various national chimney standards. This committee took the name "Comité International des Cheminées Industrielles" (CICIND).

Following many years of study, the committee published in 1982 a report entitled "Proposal for a Model Code for the Design of Chimneys". This admirable document contained the committee's model codes for the design of concrete chimneys and their lining systems. Unfortunately the code was not acceptable to the Comité Euro-International du Béton (CEB) because it was not based on limit state analysis. On the other hand the changes resulting from a true limit state code were not at the time acceptable to many chimney experts, so a compromise was sought. This was found in the so-called 'gliding material law' which is at the heart of the 1984 CICIND code.

The subsequent publication of two more consistent limit-state codes, namely DIN 1056(1984) and ACI 307-88(1988) left CICIND in an isolated position which was felt to be untenable. Further investigation having shown the conservatism of the First Edition to be somewhat exaggerated, the Second Edition is much more in line with current thought. Nevertheless,

This Second Edition is intended to present the current state of the art of the design of reinforced concrete chimney shells in as simple manner as possible given the complexity of the subject, and to make recommendations on aspects which are not satisfactorily covered by existing national codes.

CICIND will continue to try to improve the understanding of the behaviour of chimneys. Further revisions of this Model Code will therefore be published from time to time.

### 0.2 Commentary

The Model Code is accompanied by rather extensive commentaries. The Commentaries have the following objectives:

- Justification of the regulations of the Model Code
- Simplification of the use of the Model Code
- Understanding of the meaning of the regulations of the Model Code
- Documentation of the areas in the Model Code where the present knowledge is sparse so that the regulations are possibly or probably not optimal

The following items are **not objectives of the CICIND Commentaries**: