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## Concrete Model Code for Asia - Editorial Philosophy and Promotional Strategy



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### Summary

Since its inception in 1992, the Concrete Model Code for Asia has undergone 6 years of preparation and development work, culminating in the publication of the (incomplete) "First Draft" in 1998. This report summarises the progress made to date and underscores the principles underlying the editorial work and promotional plans for the Code. For promoting and further developing the Code, a schedule is suggested. Also proposed is the establishment of a Marketing Group to complement the existing technical and editorial Groups.

### 1. Introduction

It is generally accepted that the Asia-Pacific region has the fastest growing economy in the world. The recent setback is but a temporary phenomenon and the indications are that many national economies are on their way to recovery. The region is where construction and related activities are estimated to worth around USD 1 trillion per annum. Another estimate would put the worth of concrete and concrete related construction work to constitute 60% of the annual construction turnover. This enormous volume of work is undertaken in a time when national trade boundaries are breaking down and most of the projects of significance would have international involvements in their design, construction and maintenance. Many Asian countries already have their codes of practice or national standards for concrete design and construction which may be indigenous in their development or they may have been adapted from similar codes developed elsewhere. Needless to say, in a concrete engineering project which has input from and is managed by engineers from different countries, the use of multiple standards is highly undesirable. A unified code of practice is the pragmatic alternative.

The Japan Concrete Institute (JCI) set up a Research Committee in May 1992 whose members



were academics and practitioners drawn from most Asian countries including Australia. This Committee worked on the concepts of a "Concrete Model Code for Asia". A Code framework (1) was discussed and accepted in principle by the Research Committee in its meeting held in Tokyo in April 1994 (2). Subsequent meetings were conducted in Bangkok in December 1994 (where the Research Committee was reorganised and renamed the International Committee on Concrete Model Code); Tokyo, again, in March 1995; Gold Coast in July 1995; Jakarta in March 1996; Dalian, China in October 1996; Hyderabad, India in March 1997; Jakarta, again, in August 1997. These international discussions culminated in the publication of the "First Draft" of the Code at the Taipei meeting in January 1998. This was followed by a meeting in Singapore in August 1998 where discussions centred on the plan to update and enhance the "First Draft".

This report summarises the progress made to date and underscores the principles underlying the editorial work and promotional plans for the Code. For promoting and further developing the Code, a schedule is suggested. Also proposed is the establishment of a Marketing Group which is in addition to the 4 technical and editorial Groups already in existence.

## 2. Editorial Objectives

As the title would suggest the Code is developed for all Asia and one would suspect that when popularised within the intended region the document will be used in countries beyond Asia. Within each user country the Code is expected to be used, in one form or another, by teachers and practitioners alike of structural concrete design, construction and maintenance. In view of these objectives, the Research Committee agreed very early on to present the Code contents in 3 levels, viz Levels 1, 2 and 3.

It turns out that the Levels 1 and 2 documents generally cover the basic knowledge and fundamental provisions. The site-dependent recommendations and case-studies are presented as Level 3 works. Whereas the first 2 levels of contents are applicable in all countries, the Level 3 components may be country-specific or of a problem-solving nature.

Efforts will be continued to refine and upgrade the Levels 1 and 2 documents while new developments and practical experiences gained in the meantime will be published from time to time as Level 3 documents to enhance the universality of the Code. The document levels and the intended readership may be summarised in Table 1. To render the Code more readable, it was agreed to present the materials, at each level, under 3 major headings: Part I - Design; Part II - Materials and Construction; Part III - Maintenance.

*Table 1. Level of presentation and intended readership*

Level 1	Level 2	Level 3
Engineering managers; technicians; university and technical college students; architects	Technical college teachers; university lecturers and students; designers; construction engineers; architects	Researchers; designers; university lecturers and students; code writers; construction engineers

The International Committee recognised at the early stages of discussion (3) that the excellent Asia-wide efforts by academics and senior practitioners in producing the various components of the Code must not be tarnished as a result of an inadequate and poor presentation. To ensure that



the quality of presentation especially the use of the English language is up to a professional standard, an Editorial Group was appointed at the Singapore meeting in August 1998. It is with this mandate that this report is given at the present Colloquium (in Phuket in March 1999).

### **3. Peculiarities**

The 3 Parts of the Code have been written in English by 3 separate Working Groups (WG), viz

- WG1 on Design
- WG2 on Materials and Construction
- WG3 on Maintenance.

The first two Groups comprise mainly Japanese, Thai and other East Asian colleagues whereas the majority of the WG3 members are academics from the Subcontinent. Most of the time members of the Groups worked independently and might maintain irregular contacts via email where available with the Secretariat as well as with the Editorial Group. The Secretariat is located in Sapporo, Hokkaido while members of the Editorial Group are Australian, Malaysian and Philippino nationals scattered around the three named countries on two continents.

The technical materials presented in the Code are objective information the applicability of which may cross national boundaries. On the other hand, the writing style and standard of presenting these materials, in English, vary from country to country and even from person to person depending on the tradition and experience of the writer(s). On top of the language problems, there were matters concerning the format of presentation which would require harmonisation.

A unified format was discussed and adopted in Dalian in October 1996 to ensure that the three Working Groups would follow the same guidelines in styling the headings for chapters, sections, subsections and sub-subsections as well as the graph and table captions. While such a format was easily developed and adhered to, no quantity of guidelines can ensure the uniformity of the written presentation in English. Hence it was felt imperative to establish the Editorial Group whose function it is to organise the outcome of the international efforts into a readable, coherent and precise document.

### **4. Promotion as a Marketing Exercise**

Although financially supported by various Japanese establishments over the years, the efforts of the various Working Groups are strictly voluntary, with all the inherent drawbacks and inefficiency of a voluntary international body of academics. The members of the Groups being full-time working academics who met only infrequently tended to aggravate the situation. Thus the successful publication of the First Draft of the Code in January 1998 and the revised and expanded Second Draft in March 1999 is indeed an admirable achievement.

Being a non-government sponsored project, the outcome (in the form of the Code) does not carry any official status. Therefore its adoption for use in the various countries has to rely mainly on its relative merits. Despite its superior contents, the Code is a "new kid on the block" so to speak in the presence of many established national codes and standards. Consequently, considerable work will be required over a number of years to promote its use in the intended countries.



Currently generous funding is provided by Japanese establishments but one day the Code's upgrading and maintenance work will have to be self-funded. (It should also be remembered that the continuity of the quality efforts harnessed within the various Working Groups has to be maintained to prevent a possible loss of such international expertise and experience. However this matter is beyond the scope of this report and should be discussed by the International Committee in due course.)

In view of the above requirements, to promote the adoption of the Code may be treated as a marketing exercise. As such some basic specifications may be identified. They are enumerated below.

- (i) The target users of the Code include those listed in Table 1 with emphasis on selling the model code ideas to university academics and technical college teachers who would in due time impart the knowledge to their students, the future practitioners of concrete engineering.
- (ii) At an attractive price tag, distribute the Code via on and off campus book dealers. (It is believed that the Levels 1, 2 and 3 documents collectively are as good a reference work as any publication in concrete engineering practice.)
- (iii) Organise national and international seminars and workshops aimed at informing and educating civil engineering teachers, structural designers, construction engineers, engineering managers as well as practitioners in various government authorities whose work may cover design, construction and/or maintenance. This should be a continuing effort over at least a couple of years in various countries.
- (iv) To supplement the promotion efforts, technical papers should be prepared for publication in relevant regional and international journals.
- (v) A website should be developed to attract additional attention to the Code, the International Committee and its activities.

Then there is the question of recognition by national authorities of the region. The Code is the outcome of the voluntary efforts of an international group of academics and practitioners. As such it has no official status in any country. However with its all-encompassing and superior contents, the official recognition of the Code in the concerned countries, in one form or another, is a matter of time if the correct promotional strategy is followed. For consideration of the International Committee such strategy should comprise, *inter alia*, the following approaches:

- (i) For countries where there are no national standards, the relevant national authorities should be lobbied for and assisted in establishing the standards based on the Code provisions. As a first step such countries should be identified whose relevant national bodies should be subsequently convinced of the merits of adopting the Code. These efforts require at least some initial funding which may have to be, in part, provided by or sourced from the influential leading members of the International Committee.
- (ii) In countries where there are national standards or where a number of foreign codes are in use, the Code should be promoted as a superior "product" which can be applied initially as an alternative code. The long-term aim is for it to ultimately replace fully or partially whatever are in current use. As appropriate, the contents of the Code may also be incorporated into the national standards. Or, they may be used to complement the existing standards/codes.



In view of the many tasks that are required to be carried out in a planned manner, it may be necessary to set up a Marketing Group as a subcommittee of the International Committee.

## 5. Upgrading and Maintenance

In concrete engineering there are fundamentals that hardly change with time or locality; there are also the site-dependent knowledge and practical experiences that keep on growing which may vary across national and geographical boundaries. For the Code to gain and retain popularity as intended, it ought to contain all the necessary basic materials, as well as the most up-to-date technical information and Asian concrete engineering experiences.

The format adopted for the Code employs the Levels 1 and 2 documents to present the fundamental principles and theories. This enables the latest developments to be covered in the Level 3 presentation. This format is ideal since unlike other major national and international codes the Concrete Model Code for Asia does not have an accompanying journal for expounding the new information and new experiences.

The earlier drafts of the Code are but an assembly of the efforts of 4 different Working Groups doing their work thousands of kilometres from each other between Groups as well as between members within each Group! Recognising this handicap, the materials so produced and presented in the draft Code would need time to harmonise and to render it a readable, coherent and precise document. Adding to all this is the urgent effort required to promote its use and adoption. And hopefully the use of the Code will soon gain popularity which will in turn generate funds to perpetuate this very worthwhile project. For deliberation of the International Committee, the development and promotion schedule as summarised in Table 2 is proposed.

## 6. Conclusion

The Concrete Model Code for Asia is written as an all-encompassing code of practice which has an in-built growth mechanism in that the latest technical know-how and Asian experiences in concrete engineering are published as additional Level 3 documents.

The Code should be promoted as a superior product in Asian countries where currently national standards of practice may or may not exist. To this end some practical approaches are suggested. This would require the creation of a Marketing Group whose function it is to refine and implement the promotion strategy expounded herein.

## 7. References

- (1) Japan Concrete Institute (JCI) Research Committee. "A Framework for Concrete Model Code", Proceedings of JCI Symposium, Tokyo, April 1994, pp. 91-122.
- (2) Ueda, T. "Concrete Model Code for Asia - Notes of the Meetings and Panel Discussion on 25 & 26 April 1996, Tokyo", 6p.
- (3) Loo, Y.C. "Development and Propagation Strategy for the Concrete Model Code for Asia", Proceedings, JCI Bangkok Symposium, December 1994, pp. 97-101.



*Table 2. Code development and promotion schedule*

1992 - 1997	Preparation and individual drafting of Part I: Design; Part II: Materials and Construction; Part III: Maintenance.
1998	Assembling and presentation of the First Draft which includes for Parts I and III Levels 1 and 2 documents and for Part II Level 1 only.
1999	Assembling process continuing and presentation of the Second Draft which includes the revised Levels 1 & 2 documents for all the 3 Parts plus Level 3 documents on selected topics.
1999	<p>Presentation of the Third Draft which incorporates all revisions, refinements and additional Level 3 documents.</p> <p>Preparation of technical and promotional papers for publication in engineering journals.</p> <p>Development of a website to supplement the promotion efforts.</p>
2000	<p>Publication of the Concrete Model Code for Asia - 2000 (CMCA-2000).</p> <p>Presentation of small-scale trial promotional seminars and workshops in Australia and Japan.</p> <p>Lobbying of relevant national authorities with the aim of having CMCA-2000 adopted or otherwise recognised.</p>
2001	<p>Publication of amendments to CMCA-2000 and additional Level 3 documents.</p> <p>Presentation of seminars/workshops in China, India/Pakistan and Thailand for the benefit of potential users and national authorities in North and East Asia, Southeast Asia and the Subcontinent and Central Asia.</p> <p>Lobbying efforts to continue; assisting adoption of the Code by agreed national authorities.</p>
2002	<p>Publication of CMCA-2002 which incorporates all amendments, updates and Level 3 documents published to date.</p> <p>Promotional seminars/workshops in more selected centres.</p> <p>Assisting adoption of the Code in more countries.</p>
2003 and beyond	<p>Publication of Level 3 documents (on selected specialist topics), amendments and updates as necessary.</p> <p>As justified, presentation of seminars/workshops mainly on the new Level 3 documents.</p> <p>Publication of the updated version of the Code every 4 years incorporating the Level 3 documents previously published as monographs.</p>

NOTE: Subject to adequate financial returns, publication of the Code and relevant documents in electronic form should be encouraged.