

25 August 2005

To : All Authorized Persons  
Registered Structural Engineers  
Registered Geotechnical Engineers

Dear Sir/Madam,

### **Code of Practice for Structural Use of Steel 2005**

I have great pleasure to announce the publication of the Code of Practice for Structural Use of Steel 2005 (the Code). The Code may be used with immediate effect.

Following the publication of the Code, PNAP 160 is now withdrawn.

#### **Special Features of the Code**

The Code provides guidance on the design, analysis and construction of steel and steel-concrete composite structures. It adopts the limit state design approach, which should in general provide a more rigorous and economical design than the conventional permissible stress design method. The preparation of the Code has taken into account the local conditions, work practices and development of new technologies. A comprehensive and thorough review of international standards, codes of practice and published literature has been conducted prior to drafting of the Code.

Special features of the Code include:

- (a) Use of steel materials that conform to recognized international standards;
- (b) Use of high strength steel materials with design strength up to 690 Mpa;
- (c) Limited use of uncertified steel that are not traceable with mill certificate for minor structures;
- (d) Robustness requirement;
- (e) Rigorous and innovative 'second order' analysis to simulate member imperfection and actual structural behaviour;
- (f) Guidance on the design and construction of tall buildings, glass supporting structures, temporary structures and long span structures;
- (g) Criteria for dynamic analysis for tall buildings under wind;
- (h) Comprehensive design and testing guidelines on steel-concrete composite structures; and
- (i) Guidelines on welding design, fabrication and control of workmanship.

## **Application of the Code**

The Code provides full guidance on how the requirements of the Buildings Ordinance may be complied with as far as steel and steel-concrete composite design is concerned. In applying the Code you should, however, pay particular attention to the following:

- (a) The characteristic dead and imposed loads referred to in clause 2.5 of the Code shall be taken as the loads stipulated in the Building (Construction) Regulations 16 and 17.
- (b) The Code should be used in its entirety. Selective deviation from the Code is not permitted.

## **Transitional Arrangements**

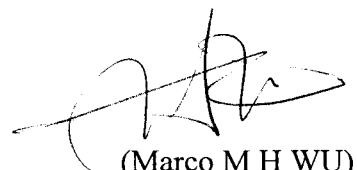
To allow sufficient time for transition to the Code, a 2-year phasing-out period for the use of the Code of Practice for Structural Use of Steel 1987 (the 1987 Code) will be introduced. Commencing from 1 September 2007, the Building Authority will need to be satisfied that the structural performance of any structure designed to the 1987 Code is not inferior to that stipulated in the Code before approval to such structure is given.

However, for any new building development or alteration and addition (A&A) proposal, if the application for approval of the structural plans or foundation plans was made on or before 31 August 2007, the design in any subsequent structural plan submissions may continue to adopt the code used in the original application.

## **Access for the Code**

The Code is available for viewing in the Buildings Department website <<http://www.bd.gov.hk>> under the “Codes of Practice and Design Manuals” page of the “Publications” section. The document may be downloaded subject to terms and conditions stipulated in the website.

Yours sincerely,



(Marco M H WU)  
Building Authority