Issues on the Malaysian Effort in Updating the Malaysian Standard Based on the Eurocodes

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1.0 INTRODUCTION

A circular on the date of implementation of the structural codes BS EN was issued by the Department for Communities and Local Government on 29 January 2010 (refer to www.communities.gov.uk). A total of 57 documents were withdrawn on 31 March 2010 due to the implementation of the structural Eurocodes. Prior to this withdrawal, many other British Standards have been withdrawn and replaced by the respective EN. In this article, we will highlight part of the list of the withdrawn BS, the Malaysian effort in updating the relevant Malaysian Standard due to the withdrawal of the British Standards and also issues relating to the implementation of the Eurocodes.

2.0 STRUCTURAL EUROCODES AND WITHDRAWAL OF THE RESPECTIVE BRITISH STANDARD

A total of 58 parts of the Eurocodes have been published by CEN and the list is as follows:

i)	EN 1990: Basis of Structural Design	1 part
ii)	EN 1991: Actions on Structures	10 parts
iii)	EN 1992: Design of Concrete Structures	4 parts
iv)	EN 1993: Design of Steel Structures	20 parts
v)	EN 1994: Design of Composite Structures	3 parts
vi)	EN 1995: Design of Timber Structures	3 parts
vii)	EN 1996: Design of Masonry Structures	4 parts
viii)	EN 1997: Geotechnical Design	2 parts
ix)	EN 1998: Design of Structures for Earthquake resistance	6 parts
x)	EN 1999: Design of Aluminium Structures	5 parts

The withdrawn BS include BS 8110 (Concrete design), BS 5950 (structural steel design), BS 8100 (lattice tower and masts design), BS 5268 (timber design), 8004 (foundation design), etc.

Besides the structural design codes, many other British Standards for the specification of material and workmanship have been withdrawn quite some time ago. These include BS 5328 (Specification of concrete), BS 6089 (Concrete structure assessment) and BS 4360 (Specification of the weldable structural steels).

3.0 THE MALAYSIAN EFFORT IN UPDATING THE MALAYSIAN STANDARD IN LINE WITH EUROCODES

As reported earlier, we have completed drafting four documents (i.e. MS EN 1990, MS EN 1991-1-1, MS EN 1992-1-1, MS EN 1993 – 1- 1) out of 58 documents. Besides that, we have completed MS 523 part 1: 2005 (corresponds to EN 206 -1, specification of concrete) and MS 522: 2007 (based on BSEN 197 standards for common cements). Furthermore, MS EN 1998 and MS EN 10025 part 1 (Hot rolled products of structural steels. General technical delivery conditions) are in the drafting stage. A technical committee was formed to look into the wind load design codes for Malaysia as part of the effort to update MS 1553 (Code of Practice for wind load).

4.0 ISSUES RELATING TO MS EN

There are various issues related to the adoption of the Structural Eurocodes for Malaysia. Some of the issues are as follows:

i) Schedule of implementation – we have barely published less than 10% of the document. Even though we may use the national annex of BS EN, is it fair to the local industry if the documents are not even available to Malaysians? If we choose not to implement EN, we may loss our competitiveness in terms of globalisation.

ii) Legal requirement – the UBBL needs to be amended to include the mandatory usage of the Eurocodes, the responsibility of the industry players and to harmonise the loading and structural requirements.

iii) Cost of training and retraining – Extensive training is needed for the industry to be ready to adopt the Eurocodes. Interested parties can refer to the article published by the New Civil Engineer (ref 1) on "costs undermine Eurocode switchover".

iv) Local research and participation – More research is needed to address issues affecting local practice.

v) Consistency – In the article 'Eurocodes in Britain: the questions that still need answering' (ref: 2), Alasdair N Beal raised many issues on the consistencies of the

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Eurocodes. Dr. Peter Gabor, in his two-day course organised by the IEM Civil and Structural Engineering Technical Division, has also raised his concern on the loading combination for prestressing force for both ultimate and serviceability limit states.

vi) Related Eurocodes – Many related Eurocodes have not been studied by local practitioners.

These are part of the issues related to local practice. There will be more issues related to the implementation of these structural Eurocodes once it is implemented.

5.0 CONCLUDING REMARKS

In view of the above, IEM has allocated this special column for the intellectual exchange of ideas on the Eurocodes. Naturally, some parts of the codes are universally accepted whereas some are not. A suitable platform is very important to achieve a better understanding of the codes and to reach a consensus among the practitioners. This column is, in fact, open to all members to share their opinions and comments and also to raise queries. ■

REFERENCES

[1] New Civil Engineer (www.nce.co.uk), *Cost undermine Eurocode switchover*, 11 Feb 2010.

[2] Alasdair N Beal, *Eurocodes in Britain: the questions that still need answering*, Proceedings of ICE, Civil Engineer 163, Feb 2010.

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