



INTERNATIONAL COUNCIL FOR RESEARCH AND INNOVATION IN BUILDING AND CONSTRUCTION

INFORMATION

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Around the Task Groups and Working Commissions

W080 – Prediction of Service Life of Building Materials and Components (Joint CIB-RILEM Commission)

Meeting Report Brisbane – March 2002

Christer Sjöström & Michael Lacasse

by

Per Jernberg

Introduction

The meeting had 21 attendees in Brisbane, Australia. The Co-coordinator, Michael Lacasse, discussed how the present work programme is close to an end and a new programme 2003 – 2005 is will be prepared. The compatibility between the CIB W80/RILEM and the PeBBu D1 work programmes was underlined and it is emphasised that both activities will benefit from a close relationship and co-operation. During the meeting the areas of PeBBu, Factor Method, and Service Life Data was discussed in preparation of creating the new W080 work programme.

PeBBu

Dr. Sims explained the goal (scope and objectives) and programme organisation of PeBBu. He pointed at the generation of generic (pre-) standards as an important part of the goal. Areas and items that were especially commented were the terminology problem, the review process of PeBBu results by user groups, a comment that ISO should be asked for their needs, the concept of open programme and meetings in PeBBu, the need of guidelines/a white paper (comment by GFo) on the area, dissemination of the important steps, the emphasis on user group meetings

Christer Sjöström presented briefly the PeBBu Domain 1 "Construction materials and components" and concluded that the D1 programme in essence connects/relates to the W80/RILEM work programme and ambitions, and that positive synergistic effects will come out from a close relation. Questions that were especially brought forward to and discussed by the workshop were the idea of issuing a questionnaire to materials and building products producing companies, test training of practitioners, and the use/adaptation of the factor method not only for new buildings.

Greg Foliente presented the CIB work on performance based building, headed by him, which preceded and partly laid the foundation for the PeBBu programme. He drew the attention to the fact that prioritised work items pointed out in this CIB report did not appear in the PeBBu programme. He also made reference to the CIB Compendium of models, operated by CSIRO, and urged that this should be utilised by PeBBu.

Factor Method

Per Hovde presented the state-of-the-art and experiences of the Factor Method. He concluded that the most limiting (critical) issue is the Reference Service Life (RSL) and availability of such data, even if much work is needed on the different factors and on

scientific and engineering models. It was suggested that the Estimated Service Life (ESL) be presented in e.g. five-year intervals. Reference was made to the papers 130, 218 and 232 in the 9DBMC proceedings.

A broad discussion on the Factor Method took place and seemingly a general opinion was the positive possibilities of the approach.

Service Life data

Per Jernberg presented the ideas behind and aim of the new work item on a standard describing Reference Service Life (quality requirements, format, use etc.) started by ISO TC59/SC14 at its most recent meeting in Noosa.

Geoffrey Frohnsdorff addressed some of the market needs and issues in connection to production and format of RSL. Reference was made to the idea of a Standard RSL as discussed in e.g. Japan. Reference was also made to the Standard Reference In-Use Conditions employed in the area of atmospheric corrosion.

Greg Brunton, James Hardie, Australia, stated in his presentation that James Hardie considered the whole chain corresponding to the factors, that they make heavily use of accelerated tests and stressed the need of development/validation of such methods. He also pointed at the apparent various definitions of service life depending of angle of view, which causes confusion. He also underlined the importance of credibility in any statement of service life for this to be useful in the market situation.

Jerome Lair presented the engineering possibilities offered by FMEA (Failure Mode Effect and Criticality Analysis) when handling service life predictions for constructed assets in general, and hence also in connection to the Factor method. His presentation also dealt with Data Fusion, or how to assess the reference service life from various types of service life information. Reference was made to paper 032 in the 9DBMC proceedings and to paper 176 in the proceedings of the CIB World Building Congress 2001, Wellington, NZ.

Summary and Future Meetings

In the attempt to summarise the workshop Christer Sjöström concluded that the PeBBu D1 work programme sets a focus on the Factor Method and the issues embedded in the Reference Service Life concept. But this should not exclude other important aspects on the performance of materials and products; an example might be environmental labelling of products. Comments and suggestions on the D1 programme are most welcome and can be addressed to christer.sjostrom@hiq.se or robert.cope@cstb.fr

The First Official PeBBu D1 Workshop will be held in Stockholm, 20 September 2002, and the participants

of this workshop will be invited. Those interested are advised to contact Christer Sjöström.

Future Meeting

The next W080 meeting will occur in Italy during 2003.