## Informal Meeting of RILEM TC-TDC in Beijing

# Nov. $28^{th}$ and $29^{th}$ , 2012

### Minutes

Time	13:30-17:30, Nov. 28 <sup>th</sup> , 2012		
Time	08:30-12:30, Nov. 29 <sup>th</sup> , 2012.		
Manua	Meeting room at State Key Laboratory of Green Building Materials, China		
venue	Building Materials Academy		
	Tasks of Group A:		
	1. Deadline for collection of papers.		
	2. The annotation of the bibliography.		
Main	3. Next steps of Group A.		
Subjects	ts Tasks of Group B:		
	1. Comparative test methods		
	2. Sketch and processing of test rigs		
	3. Next steps.		
	All together 7 persons attended the meeting:		
Participants	Prof. Yao Yan, Prof. F. H. Wittmann, Prof. Wang Ling, Dr. Wang Zhendi, Ms. Tan Li,		
	Zhou Chunying, and Cao Yin		
Moderator			

1. Opening of the meeting

Prof. Wang Ling, the secretary of RILEM TC-TDC, introduced the agenda at the beginning of this informal meeting.

Next, Dr. Wang Zhendi outlined the progress of the compilation of annotated bibliography, the main task of Group A during the first year.

2.Conclusions of Group A

2.1 Collection of publications

Group A will stop collecting papers by Mar. 31, 2013. Then the draft version of the "Annotated Bibliography" will be sent to all TC members for comments. The final version will take the comments into consideration.

2.2 The annotation of the bibliography

Introductory remarks for the 10 subchapters will be prepared by experts (See Table 1). Selected TC members will be asked to write the introductory remarks.

(1) As an example introductory remarks of section 1 and section 2 will be provided by Prof. Wittmann before Dec. 20, 2012. At least one example will be sent to the selected experts with an invitation to write their introductory remarks in the similar way.

(2) All the introductory remarks should be written and sent to the secretary of the TC before the end of March 2013.

2.3 Next steps

(1) CBMA will print 20 copies (working documents) of the annotated bibliography (References

and abstract) to be distributed at the Qingdao Meeting in May 2013.

(2) CBMA will make 50 printed copies and CDs of the final annotated bibliography after approval by the TC members by May 2013.

Chapter	Person in charge			
1.1 Chloride penetration and mechanical load	Prof. Wittmann F.H.			
1.2 Carbonation and mechanical load	Prof. Wittmann F.H.			
1.3 Chloride penetration and Freeze-thaw attack	Dr. Zhang P.			
1.4 Carbonation and freeze-thaw attack	Dr. Jiang FX.			
1.5 Thermal action and mechanical load	Prof. Khelidj A.			
1.6 Sulfate attack and mechanical load	Prof. Xing F.			
1.7 Cracks and accelerated migration	Dr. Zhang P.			
1.8 Corrosion under combined actions	Prof. Weiss W. J.			
1.9 Leaching and mechanical load	Prof. Wittmann F.H.			
1.10 Other load combinations	Prof. Glinicki M.			
PART II : THESES	Prof. Schlangen E			
PART III: BOOKS AND REPORTS	Prof. Schlangen E.			
Deadline: End of March, 2013				

Table 1 Selected candidates for writing introductory remarks

#### 3. Conclusions of Group B

3.1 Comparative test methods

Three Combinations of mechanical load and environmental actions shall be investigated:

(a) Compression + chloride penetration and carbonation,

(b) Tension + chloride penetration and carbonation and

(c) Bending + chloride penetration and carbonation.

3.1.1 Mechanical load and chloride penetration				
Preparation of the specimens				
Dimension	100*100*400mm			
Curing	Under water for 28 days			
Chloride	Exposure to 5% NaCl solution, chloride diffusion for 7 and 28 days, determination of chloride profiles by grinding and chemical analysis			
	Compression: 0, 30%, 50% and 80% of the ultimate load			
Loading conditions	Tension: 0, 50% and 80% of the ultimate load			
	Bending: 0, 30% 50% and 80% of the ultimate load			
Based on the results obtained:				

- determination of apparent chloride diffusion coefficient and
- correction factor as function of load.

#### 3.1.2 Mechanical load and carbonation

Preparation of the specimens			
Dimension	100*100*400mm		
Curing	7 days humid curing + 21 days laboratory atmosphere (approximately 20 °C and 60 % RH)		
Carbonation	Exposure to an atmosphere with 2 % $\rm CO_2$ and 75 % RH for 7 and 28 days, determination of carbonate profiles by grinding and chemical analysis		
	Compression: 0, 30%, 60% and 80% of the ultimate load		
Loading conditions	Tension: 0, 50% and 80% of the ultimate load		
	Bending: 0, 30% 50% and 80% of the ultimate load		

- Based on the results obtained:
  - determination of carbonate profiles and
  - correction factor as function of load.

3.2 Details of test rigs

3.2.1. Design of test rigs

Test rig	Sketch	Deadline
Compression	Dr. Wang, F. H. Wittmann and E. Schlangen	Dec. 31, 2012
Tension	Dr. Wang F. H. Wittmann and E. Schlangen	Dec. 31, 2012
Bending	СВМА	Dec. 31, 2012

3.2.2 Processing of test rigs

(1) Distribute the sketch of the rigs + the minutes of meeting by Dec. 31. Collection of the comments on the test rigs until Jan. 31, 2013.

(2) CBMA will finish all the three test rigs before May 2013.

(3) CBMA plans to offer 2 to 5 test rigs to selected laboratories, one in Europe, one in Japan or the US, the other in China. More test rigs can be built according to the design.

#### 4. Plan for the next meeting (Qingdao Meeting)

(1) Qingdao Meeting shall be held at May 23 to 24, 2013. The meeting room shall be arranged at Qingdao Technological University by Prof. Zhao. For accommodation Shangri-La Hotel is recommended.

(2) At Qingdao Meeting, the three test rigs and test methods will be introduced to all the members of TC-TDC.

(3) If the test rigs are generally accepted the detailed plan for the comparative test series shall be fixed.