

# Preface

The increasing amount of prematurely deteriorating concrete infrastructures worldwide, which is linked mainly to the effect of reinforcement corrosion, has resulted in significant efforts to develop technically sound methods for concrete durability design and specification. Performance-based approaches for concrete durability offer the advantage of providing relevant test parameters for the quantity and quality of the concrete cover, which are the main aspects to consider when designing concrete structures for prevention of reinforcement corrosion.

RILEM TC 230-PSC was established in 2008 with the main aim to provide useful guidance on suitable test methods and their application in performance-based specifications for concrete durability. The scope of the TC was limited to the following:

- In-situ durability assessment of concrete structures in view of reinforcement corrosion.
- Concrete penetrability properties such as permeability, conductivity, and sorptivity.
- Concrete cover thickness.

The committee came together for the first time in Varenna, Italy, in September 2008, with subsequent meetings held in Toulouse, Aachen, Leipzig, Amsterdam, Cape Town, Zurich, and Zagreb. In 2012, the TC organized and conducted Application Tests at BAS in Venlo, The Netherlands, during which several TC members used performance test methods to characterize the durability properties and make service life predictions for various concrete test panels. The final TC meeting in Zagreb, Croatia, in June 2014 was accompanied by the International Conference on Performance-Based Specifications and Control of Concrete Durability, which was attended by more than 150 delegates from around the world.

The main outcome of RILEM TC 230-PSC is this State-of-the-Art Report, which is divided into 12 chapters on various topics relating to performance-based specification and control of concrete durability. Each chapter had a coordinator, who was also the main author. All TC members who made contributions to the various

chapters were made co-authors in alphabetical order. The final chapter layouts and contents were discussed and approved in meetings and via email correspondence.

The editors thank all TC members who have actively contributed to this report through meeting attendance, discussions, participation in the Application Testing, and direct input to the various chapters.

South Africa

Hans Beushausen

Performance-Based Specifications and Control of  
Concrete Durability

State-of-the-Art Report RILEM TC 230-PSC

Beushausen, H.; Fernandez Luco, L. (Eds.)

2016, XVIII, 373 p. 155 illus., Hardcover

ISBN: 978-94-017-7308-9