

In cooperation with: BME Faculty of Civil Engineering
Department of Construction Materials and Technologies
Department of Structural Engineering
Department of Structural Mechanics
In cooperation with: BME Faculty of Architecture
Department of Mechanics, Materials and Structure
Közlekedéstudomány Egyesület (KTE):
Mérnöki Szervezetek Szakosztállyal

Az ülés helye (PLACE): **BME Building Kmf Room 87**
1111 Budapest, Műegyetem rkp. 3.
Az ülés kezdete (DATE): **12 (Thursday) October 2023, from 14.15 to 15.30**

INVITATION - MEGHÍVÓ

Performance based concrete design: Actual and future situation in Switzerland with a focus on carbonation

Short summary of presentation:

Over the last 20 years, various durability tests have been gradually introduced in Switzerland. This had become necessary because, in contrast to the last century, the requirements for minimum cement content and w/c ratio hardly allow any reliable statements on the durability properties of concretes (reasons: cements with lowered clinker content, use of mineral additions). Based on the experience gained, it is now possible to dispense with such specifications and use performance-based concrete design methods. With an addition to the Swiss concrete standard SN EN 206, this will become the standard procedure in the next few years.

Following the positive formal vote on the new revised Eurocode 2 (2nd generation), the task in the near future will be to implement in the individual countries the new durability classes ("exposure resistance classes") developed by CEN/TC 250/SC2/TG 10 and included in the revised Eurocode 2 (2nd generation). This requires expertise.

In the presentation, the status of the work in Switzerland will be presented and, using the example of carbonation resistance, it will be shown which conflicts of objectives can arise if, for example, the CO₂ footprint of a concrete is also to be taken into account in the concrete design.



Fritz Hunkeler – Curriculum vitae

2021- Hunkeler Ingenieurberatung, Möriken, Senior Consultant (concrete, corrosion, durability)
2019-2020 Merz Ingenieurberatung GmbH, Möriken, Senior Consultant (concrete, corrosion, durability)
2011-2019 TFB AG, Wildeg, Senior Consultant (concrete, corrosion, durability)
1994-2011 TFB AG, Wildeg, CEO and Co-owner, Senior Consultant (concrete, corrosion, durability)
1984-1994 Swiss Society for Corrosion Protection (SGK), Member of the Executive Board, Consultant
1988-2002 Lectureship at ETH Zurich for civil engineers: "Corrosion and Corrosion Protection in Civil Engineering" and "Protection of Reinforced Concrete Structures"
1981-1986 ETH Zurich, Institute for Building Materials, Senior Assistant (Prof. Dr. H. Böhni)
1981 MIT Cambridge, Boston/USA, postdoctoral study
1976-1980 ETH Zurich, IBWK, Assistant and PhD thesis (Prof. Dr. H. Böhni)
1975 ETH Zurich, Degree as dipl. Ing. ETH
In his work, he deals primarily with issues of durability of concrete, including corrosion of reinforcement and prestressed concrete structures.

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