Recommendation for Water Repellent Treatment of Reinforced Concrete Structures

Empfehlung für die Hydrophobierung von Stahlbetonbauwerken

**Funding:** National (Switzerland)
**Duration:** Jun 2003 - Jun 2006
**Status:** Complete with results

**Background & policy context:**
Durability of reinforced concrete structures can be considerably improved by appropriate surface technologies. Three different surface technologies are available at present, namely surface impregnation, sealing and coating. It is of utmost importance to make a clear distinction between these protective measures, as each one serves a distinct purpose. Water repellent surface impregnation of concrete is an efficient method to prevent chloride penetration into concrete. In this way service life of reinforced concrete structures in aggressive environment can be extended significantly. To achieve this goal it is mandatory to follow strict rules.

**Objectives:**
The main aim of the project was to formulate recommendations for water repellent treatment of reinforced concrete structures.

**Methodology:**
The following steps took place:
- Literature review and analysis of the existing European standards and recommendations
- Draft Recommendation
- Interviews to find out opinions of practicing engineers
- Review by the company of a practice object
- Final formulation of recommendations

**Parent Programmes:**
[ARAMIS - ARAMIS information system](#)

**Institute type:** Public institution
**Institute name:** Swiss Government: State Secretariat for Education and Research
**Funding type:** Public (national/regional/local)

**Partners:**
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**Key Results:**

The aim was to summarize the progress made in recent years in the research of new knowledge for water repellent treatment of reinforced concrete structures in a user-friendly and practical recommendations. Recommendation for planning, application and quality control were compiled, which have been used on several occasions successfully, therefore the aim of the project was achieved.

**Publications:**


**Related Projects:**

Project number: AGB1998/098

Project title: Anforderungsprofil und Qualitätskontrolle einer hydrophobierenden Massnahme

Project title in English: Requirements for and quality control of a water repellent treatment

Research organisation: Swiss Federal Roads Office; Research Roads-Bridges-Tunnels

Project title: Hydrophobierung von Betonoberflächen – Empfehlung für Planung und Applikation

Project acronym: AGB2002/029

**STRIA Roadmaps:** Vehicle design and manufacturing

**Transport mode:** Road transport

**Transport sectors:** Passenger transport, Freight transport

**Geo-spatial type:** Network corridors