Sustainable Bridges – Past and Future
Reflections on a European Project 2003 - 2007

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Abstract

Twenty years ago, in 2003, a European project was started to increase the sustainability of existing railway bridges. This paper summarises what was achieved and looks ahead. Nine Working Packages were organized: (1) Background material; (2) Guidance by stakeholders; (3) Condition Assessment and Inspection Guidelines; (4) Loads, Capacity and Resistance Guidelines; (5) Monitoring Guidelines; (6) Repair and Strengthening Guidelines; (7) Demonstration with Field testing of Bridges; (8) Demonstration on Monitoring on Bridges; and (9) Training and Dissemination

Some of the main results (from 4 Guidelines and 47 Background documents) are highlighted and some experiences, conclusions and thoughts about the future are given. Hidden strengths and weaknesses are discussed, analyses and codes for assessment can be improved, new monitoring and strengthening methods are available and life length can be prolonged.

Keywords: Bridges, Management, Assessment, Modelling, Monitoring, Testing, Codes, Load-carrying capacity, Strengthening, Life-length