Behaviour of bridge bearings and expansion joints; state-of-the-art-report (AGB2000/405)

Fahrbahnübergänge aus Stahl und Brückenlager: Bericht zum Stand der Technik

Funding: National (Switzerland)
Duration: Apr 2001 - Dec 2003
Status: Complete with results

Background & policy context:
Expansion joints and bearings for road bridges must comply with strict requirements, which in practice are often underestimated. Any damage to these two components of a bridge structure immediately restricts its serviceability, so that immediate action is required in order to re-establish the capability of bridge to carry loads safely and be fit for normal use.

There are old standards SIA 160 and ASTRA for constructional details of bridges cover expansion joints and bridge bearings.

Objectives:
Determine the state of the art for steel expansion joints and bearings for road bridges.
Identify quality requirements and product characteristics of expansion joints and bridge bearings.

Methodology:
Survey involving 7 Departments of Public Works in various Swiss cantons and 7 manufactures and suppliers.
Discuss the problems in individual meetings.
Preparing conclusions in cooperation with stakeholders.
Preparation of final report.

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:
Switzerland
Swiss Federal Roads Office

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Key Results:
Final Report on expansion joints and bridge bearings (attached).

Revision of Directive ASTRA "Constructional details of bridges" (Chapter 1 and 2).

Other results

Current situation of steel expansion joints and bearings is not satisfactory in these ways:

- although the owners specify requirements for expansion joints and bearings, they are at the same time aware that these only cover certain individual aspects of both components;
- the manufactures/suppliers are confronted with requirements that are uncoordinated, liable to change and often not quantified.

Documents:
- Final report in German (Final report)

STRIA Roadmaps: Infrastructure
Transport mode: Road transport
Transport sectors: Passenger transport, Freight transport
Geo-spatial type: Other