

## Appendix A

### Overview of HVS tests in Finland and Sweden 1997–2004

Test	Start, yy/mm, duration	Total number of loadings ( $10^3$ )	Description	Reference
FIN01	97/	1,710	Base course test with low quality base	Finnra report 30/2001 Matti Huhtala, Jari Pihlajamäki and Janne Sikiö
FIN02	97/	170	Base course test with high quality base	
FIN03	97/	1,400	Loading mode test, single wheel, bi-directional	
FIN04	97/	318	Loading mode test, single wheel, uni-directional	
FIN05	97/	Not started	Loading mode test, dual wheel, bi-directional	
FIN06	98/04 1 month	4.9	Thawing test, frost-susceptible subgrade	Finnra report 31/2000 Heikki Kangas, Heikki Onninen and Seppo Saarelainen
FIN07	98/05 1 month	8.1	Thawing test, frost-susceptible subgrade	
FIN08	98/05 1 month	6.5	Thawing test, frost-susceptible subgrade, steel grid in base course	
FIN09	98/06 2 months	130	Heavy traffic road, traditional structure	Finnra reports 29/2001 Jari Pihlajamäki and Janne Sikiö
FIN10	98/08 2 months	500	Heavy traffic road, high resistance to fatigue structure	
SE01	98/12 6 months	2,296	The first test in a series of three with gradually increasing bearing capacity. SE01, SE02, SE06	Accelerated load testing of pavements VTI Report 477A Leif G Wiman, 2001
SE02	99/06 2 months	1,135	The second test in a series of three with gradually increasing bearing capacity. SE01, SE02, SE06	
SE03	99/09 2 months	800	Maintenance treatment on SE01. "Milling and filling".	
SE04	99/12 1 month	165	Maintenance treatment on SE02. "Milling and filling".	

Test	Start, yy/mm, duration	Total number of loadings ( $10^3$ )	Description	Reference
IS02	00/03 1 month	480	Surface treatment (double) on unbound base and sub-base material from Iceland	HVS-testing of Icelandic low volume road structures Thorir Ingason Leif G. Wiman Hreinn Haraldsson ISAP 2002, Danmark
IS03	00/04 1 month	475	Surface treatment (double) and bituminous base layer on unbound base and sub-base material from Iceland.	
RX01	00/06 0.1 month	39	Flow rutting test. Effect of steel mesh on pavement deformation at high AC-layer temperature	REFLEX Final Report T4:02 Full Scale Accelerated Tests Jari Philajamäki, Leif G Wiman, Kent Gustafson EU Brite/Euram III RTD Programme, 2002
RX02	00/08 3 months	852	Bearing capacity test. Effect of steel mesh in bituminous base on bearing capacity at "normal" temperature (10 °C)	
FIN11 (Reflex03)	01/ 1 month	111	Bearing capacity test. Effect of steel grid #75/75 in crushed rock at "normal" temperature (10 °C)	
FIN12 (Reflex03)	01/ 1 month	111	Bearing capacity test. Effect of steel grid #150/150 in crushed rock at "normal" temperature (10 °C)	
FIN13 (Reflex03)	01/ 1 month	68.8	Bearing capacity test. Unreinforced reference structure	
FIN14	01/ 1 month	23.1	EPS-structure. Effect of lightweight material	
FIN15	01/ 1 month	23.1	EPS-structure. Effect of lightweight material + steel grid in crushed rock	
FIN16 + FIN17	01/08 0.5 month	16.1	Sloped structure (reference structure no slope)	Finnra report 19/2003 L. Korkiala-Tanttu, P. Jauhiainen, P. Halonen, R. Laaksonen, M. Juvankoski, H. Kangas and J. Sikiö
FIN18	01/09 0.5 month	17.9	Sloped structure slope 1:3	
FIN19 + FIN 20	01/11 0.5 month	17.9	Sloped structure slope 1:1.5	

Test	Start, yy/mm, duration	Total number of loadings ( $10^3$ )	Description	Reference
FIN21	02/03 0.5 month	70	Low-volume road, high level of ground water, load 70 kN	Finnra report 22/2003, L. Korkiala-Tanttu, R. Laaksonen and J. Törnqvist
FIN22	02/02 0.5 month	70	Low-volume road, high level of ground water, load 50 kN	
FIN23	02/04 0.5 month	70	Low-volume road, lower level of ground water, load 70 kN	
PL01/02	02/07 2 months	1,200	Verification of an alternative semi-rigid pavement structure and comparison with Polish standard design.	Verification of Pavement Structure Design on A2 Toll Motorway in Poland using Heavy Vehicle Simulator (HVS NORDIC) Ao. Univ. Prof. Dipl.-Ing. Dr. Ronald BLAB o. Univ. Prof. Dipl.-Ing. Dr. Johann LITZKA Dipl.-Ing. Peter GIRKINGER STRASSENBAU DER TECHN. UNIVERSITÄT WIEN
FIN24	02/10 0.5 month	39	Steep reinforced slope rehabilitated structure, reference structure without reinforcement	Finnra report 38/2003, L. Korkiala-Tanttu and R. Laaksonen
FIN25	02/10 0.5 month	39	Steep reinforced slope rehabilitated structure, steel grid B500H - 5/6 - 200/150	
FIN26	02/11 0.5 month	39	Steep reinforced slope rehabilitated structure, steel grid B500H - 5/8 - 200/150	
FIN27	02/11 0.5 month	39	Steep reinforced slope rehabilitated structure, fibreglass grid	
FIN28	02/11 0.5 month	39	Steep reinforced slope rehabilitated structure, steel grid B500H - 5/6 - 200/150	
FIN29	02/11 0.5 month	39	Steep reinforced slope rehabilitated structure, reference structure without reinforcement	

<b>Test</b>	<b>Start, yy/mm, duration</b>	<b>Total number of loadings (10<sup>3</sup>)</b>	<b>Description</b>	<b>Reference</b>
SE05	03/01 2 months	613	Unbound base layer study. Crushed rock material compared to natural gravel	Accelerated load testing of pavements VTI Report 544A Leif G Wiman, 2006
SE06	03/04 and 04/03 4 months	1,000	The third test in a series of three tests with gradually increasing bearing capacity. SE01, SE02, SE06	
SE07A	03/06 1 month	400	Different Mica content in unbound base layers. 4 tests at a construction site in the west of Sweden (E6 Uddevalla).	Provväg E6, glimmerrika bärlager och vägkonstruktioner med lättklinker. Provsträckor och mätresultat. Vägverket Publ. 2004:84
SE07B	03/08 1 month	366	Different base layer thickness on light fill material. 4 tests at a construction site in the west of Sweden (E6 Uddevalla).	
SE08	03/09 and 03/12 3 months	800	Different particle size distribution in crushed rock material in sub-base. Test sections at a construction site in the south of Sweden (E4 Markaryd).	
DK01	03/11 1 month	388	Semi-rigid pavement design tests. Different quality of the cement bound base layers. Danish test sections at a construction site in the south of Sweden (E4 Markaryd).	Mechanistic Design of Semi-Rigid Pavements - An Incremental Approach Road Directorate, DRI Report 138, 2004 www.vejdirektoratet.dk