

SPENS Final seminar  
27 – 28 August 2009

## Accelerated Field Tests

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Leif G Wiman – VTI Sweden  
Task 4.3 leader

Ljubljana, Slovenija



# Content

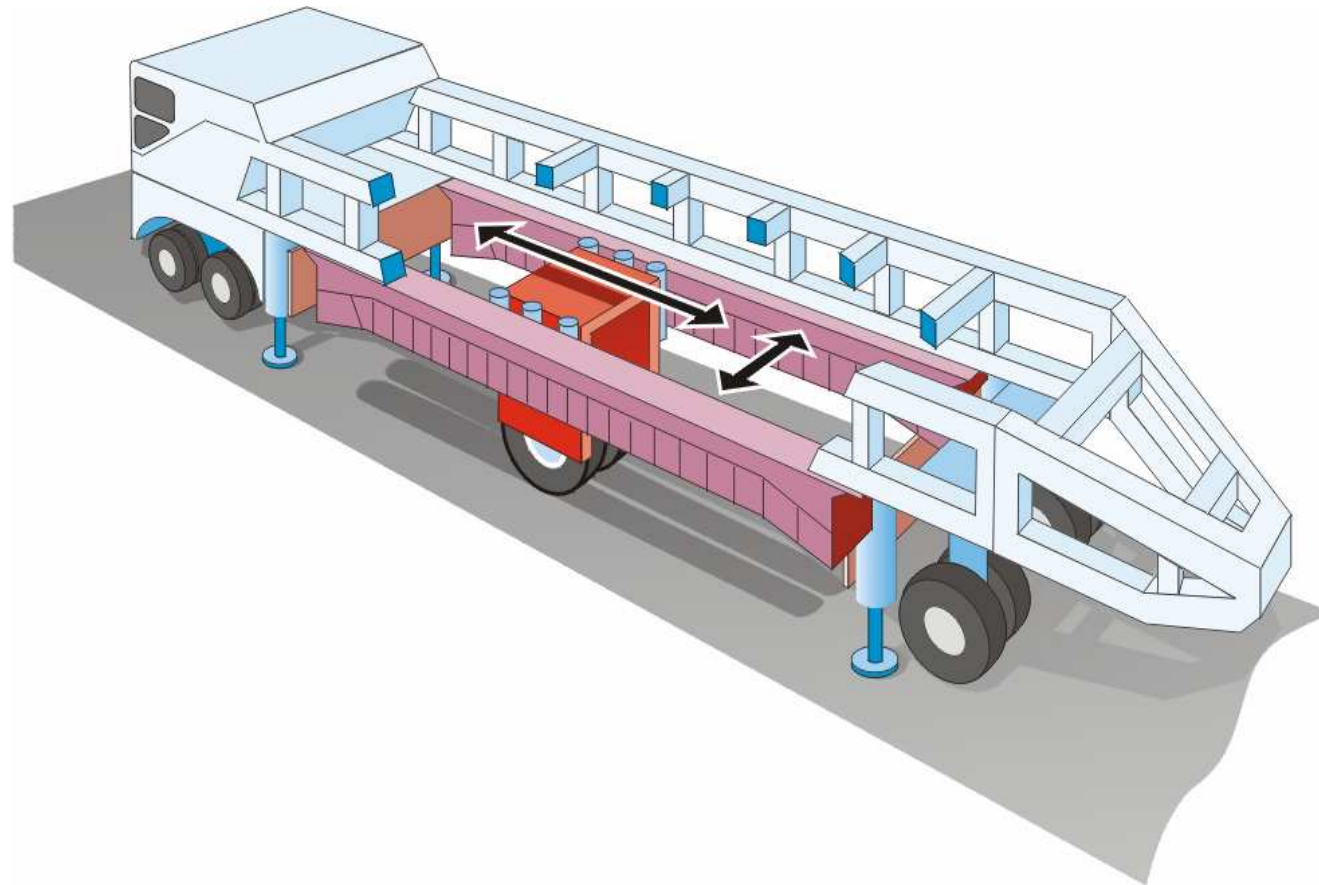
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- Heavy Vehicle Simulator, HVS
- HVS-transport
- Test Procedure
- Measurements (some example)



# HVS Principle Layout

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# Loading wheel



# Temperature control

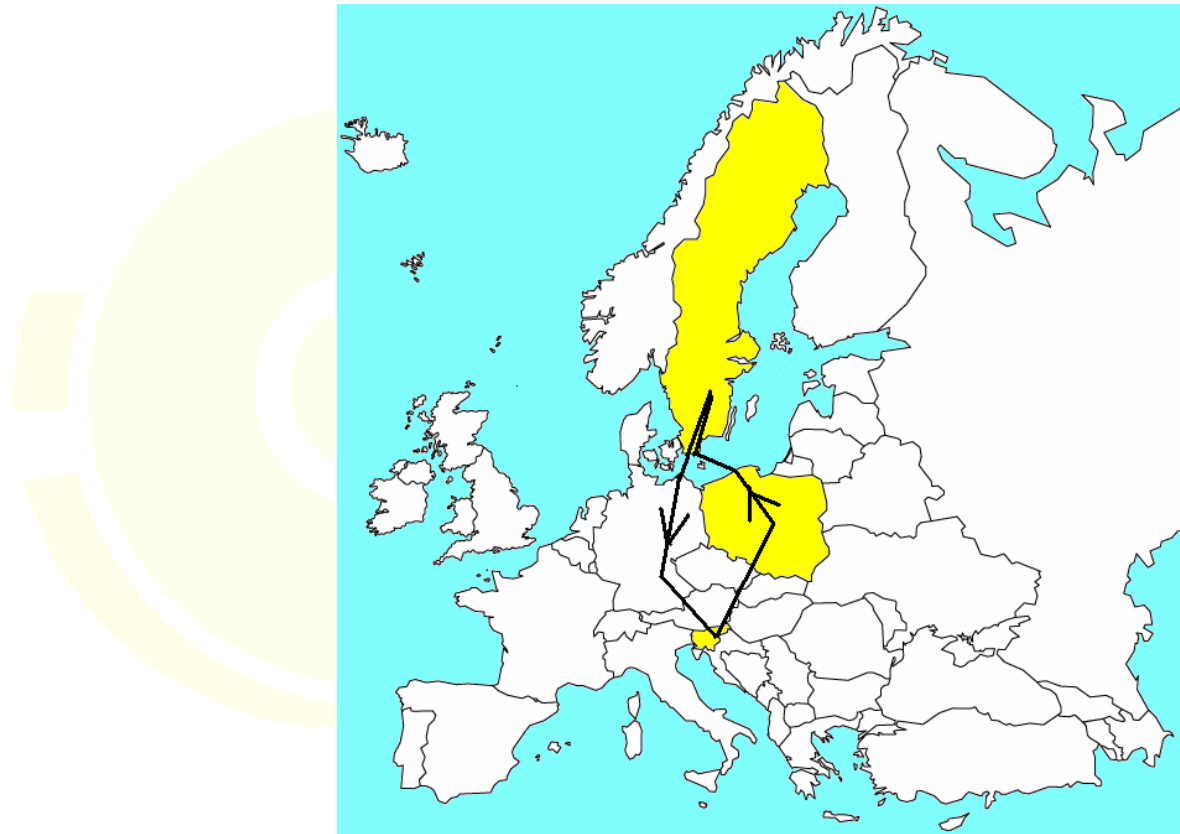
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# HVS transport

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Sweden-Slovenia-Poland-Sweden



## Arriving to Germany and to the Test site

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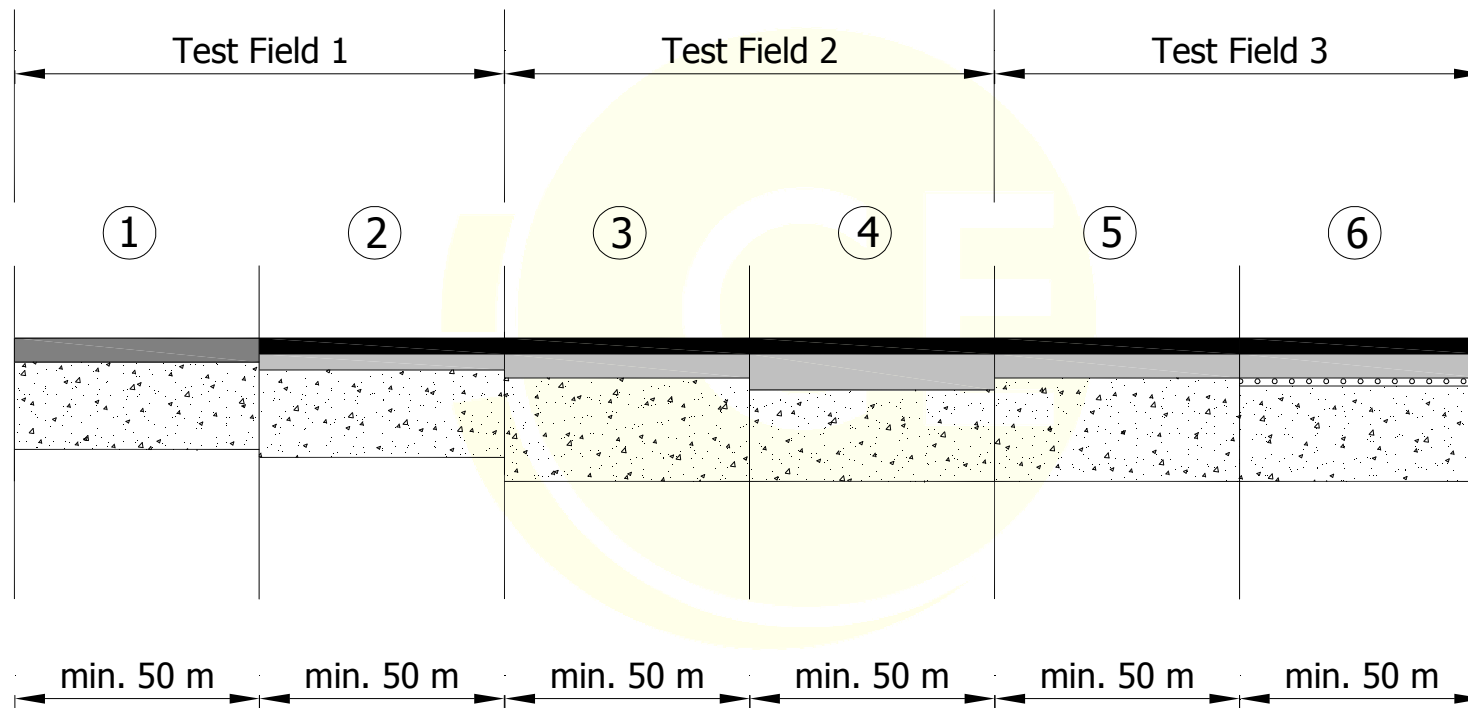
# Test Procedure

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# 3 Test Fields



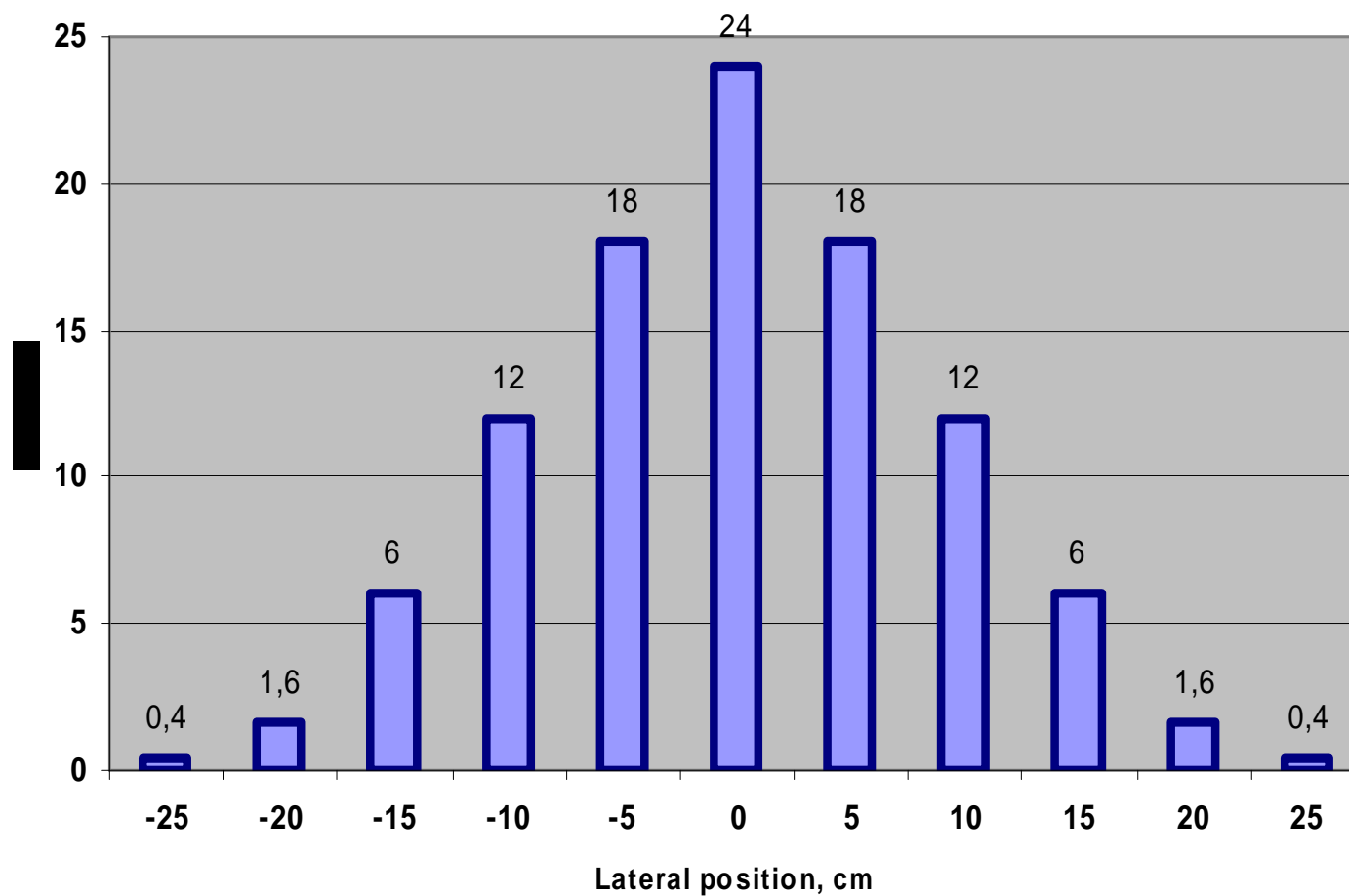
## Test Parameters

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Dual wheel load 60 kN (structure 1 and 2)  
Dual wheel load 60 and 80 kN (structure 3 and 4)  
Dual wheel load 60, 80 and 100 kN (structure 5 and 6)  
Tire pressure 800 kPa  
Tire size 295/80R22.5  
Wheel speed 12 km/h  
Loading in both directions  
Pavement temperature +20 °C  
Lateral load distribution



# Lateral load distribution



## Wheel loads during the tests

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Test	Structure	Number of passes		
		60 kN	80 kN	100 kN
1	1 and 2	0-293000		
2	3 and 4	0-49760	49760-208135	
3	5 and 6	0-50000	50000-173000	173000-190500

## Measurements during the tests

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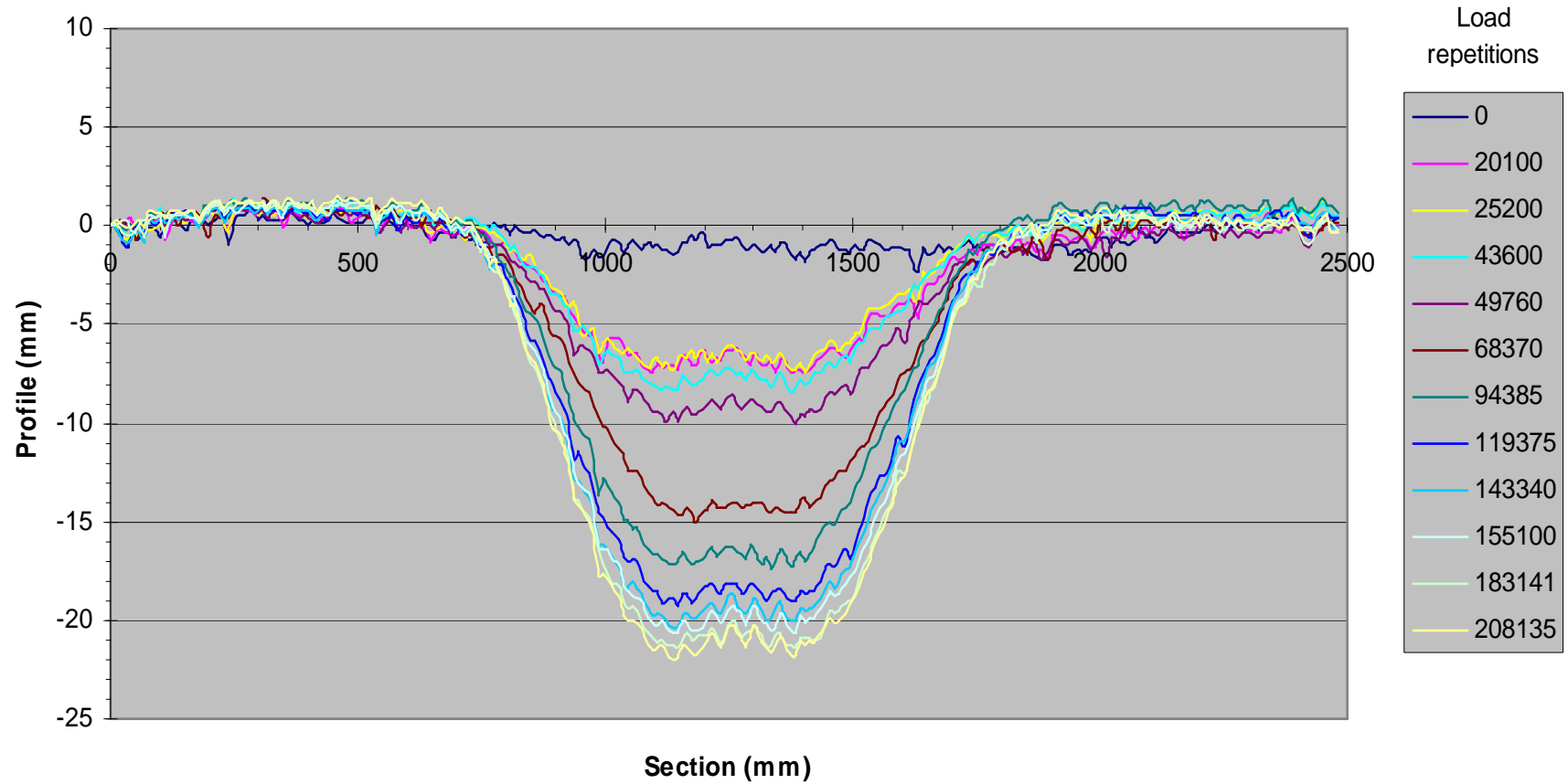
Performance measurements

Response measurements



# Surface deformation (Rutting)

SPENS HVS Structure 4  
Cross profile 42

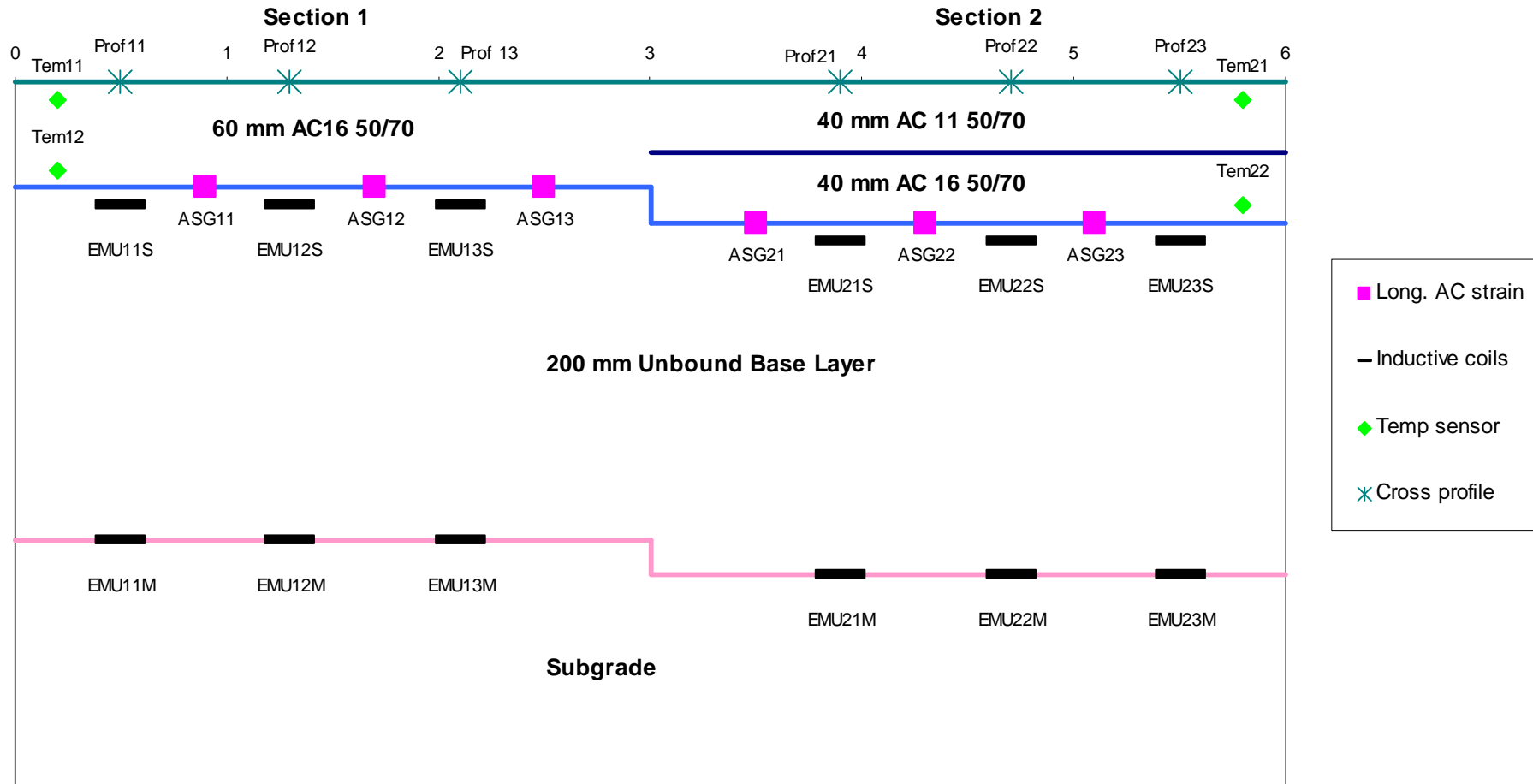


# Installation of sensors (Nov 2007)

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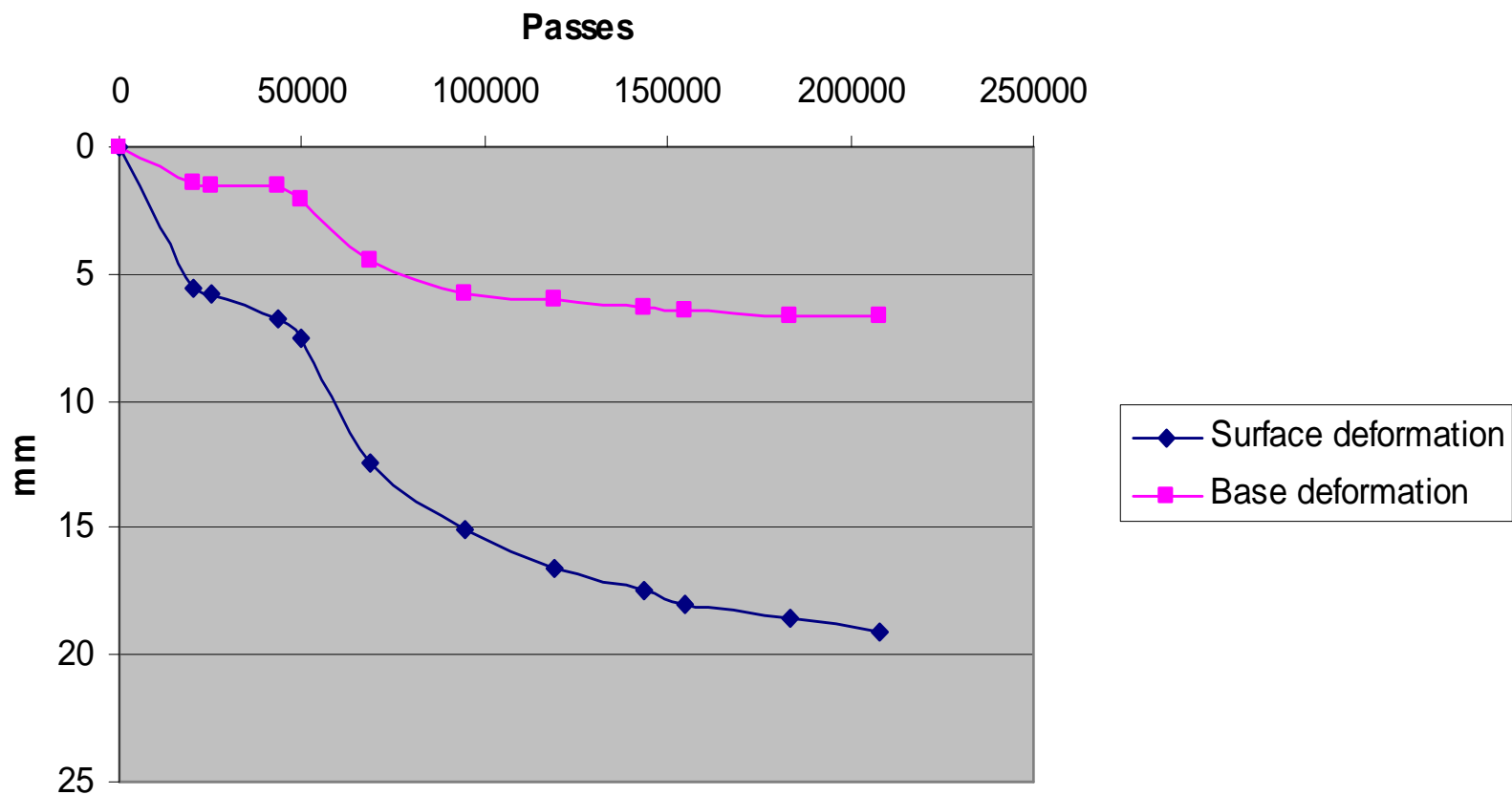
# Instrumentation test field 1



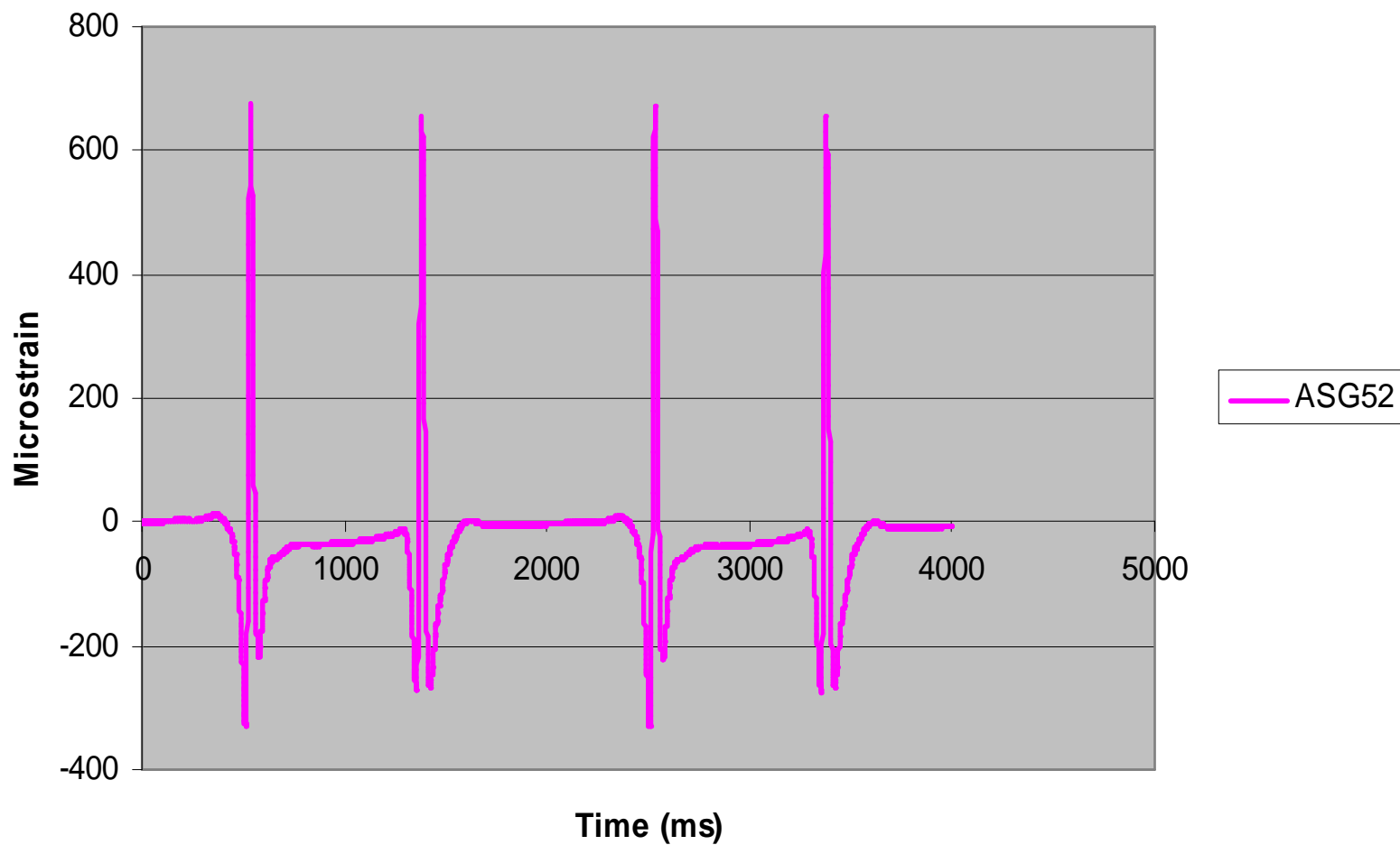


# Surface- and Base deformation

SP02, Structure 4



# Asphalt Strain Signal



# Asphalt strain vs Load

**SPENS HVS SP02 Structure 3**  
**Longitudinal asphalt strain vs load**

