Accelerated Field Tests

Leif G Wiman – VTI Sweden
Task 4.3 leader

Ljubljana, Slovenija
Content

Heavy Vehicle Simulator, HVS
HVS-transport
Test Procedure
Measurements (some example)
HVS Principle Layout
Loading wheel
Temperature control
HVS transport

Sweden-Slovenia-Poland-Sweden
Arriving to Germany and to the Test site
Test Procedure
3 Test Fields
Test Parameters

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

![Graph showing lateral load distribution with values and positions]
## Wheel loads during the tests

<table>
<thead>
<tr>
<th>Test</th>
<th>Structure</th>
<th>Number of passes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>60 kN</td>
</tr>
<tr>
<td>1</td>
<td>1 and 2</td>
<td>0-293000</td>
</tr>
<tr>
<td>2</td>
<td>3 and 4</td>
<td>0-49760</td>
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<tr>
<td>3</td>
<td>5 and 6</td>
<td>0-50000</td>
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</table>
Measurements during the tests

Performance measurements
Response measurements
Surface deformation (Rutting)

SPENS HVS Structure 4
Cross profile 42

Load repetitions

Profile (mm)

Section (mm)

Load repetitions
Installation of sensors (Nov 2007)
Instrumentation test field 1

Section 1
- 60 mm AC16 50/70
- Long. AC strain
- Inductive coils
- Temp sensor
- Cross profile
- Subgrade

Section 2
- 40 mm AC 11 50/70
- 40 mm AC 16 50/70
- 200 mm Unbound Base Layer

Tem11 Prof11 Tem12
Prof12 Prof13
Prof21 Prof22 Prof23
Prof21 Prof22 Prof23
Tem21 Tem22
Surface- and Base deformation

SP02, Structure 4

Passes

Surface deformation
Base deformation

mm
Asphalt Strain Signal

![Graph showing asphalt strain signal with time (ms) on the x-axis and microstrain on the y-axis. The graph includes a line labeled ASG52.](image-url)
Asphalt strain vs Load

SPENS HVS SP02 Structure 3
Longitudinal asphalt strain vs load

Dual wheel,
Lat.pos 15 cm,
800 kPa, 20°C