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Keynote

80 year of Accelerated Pavement Testing in Sweden – Historical overview and new prospect

Abstract
Accelerated Pavement Testing (APT) in Sweden goes back to 1943 when an indoor road simulator (RS) was built where four wheels rotate on a circulator track. The purpose was to improve the performance of Swedish roads. Today the RS is still in use and is used both for pavement wear studies and for studies on wear particle and microplastic emissions. In the year 2000 VTI possessed a Heavy Vehicle Simulator (HVS) of type Mark IV. It has extensively been used for full scale AP testing of broad range of pavements suitable for cold climate regions. Some examples of test results from both devices will be given. The findings of the HVS testing have recently been used for calibrating a new Mechanistic-Empirical (M-E) pavement design software that is under development. The HVS activities has further been used as a springboard for a development of an approach for instrumentation of in-service roads for further enhancing our understanding of the complex behaviour of pavements response and performance due to the interaction of heavy vehicles and the ambient climate. Findings from recent projects will be presented. Further will information be given about new initiatives of test sites such as the testing loop at the motorway E-18 and the new instrumented test arena Amsberg at the motorway E-16.

Fig. The RS, HVS and new test site under construction along motorway E-18.