THÈME: 04. GESTION DU SERVICE HIVERNAL

SOUS-THÈME: Stratégies de traitement

Séance: 06/02/2014 (17:00 - 18:30 h) **Affiche:** 07/02/2014 (09:00 - 11:00 h)

Salle: B

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Titre de la présentation:

MODÉLISATION DU SEL RÉSIDUEL POUR UNE APPLICATION QUOTIDIENNE DANS LA GESTION DU SERVICE D'HIVER

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Resumé (anglais)**:**

In an effort towards a more economic and effective use of salt in winter maintenance, a joint research and development project, MORS (Modelling Residual Salt), was initiated under the NordFoU framework, the common platform of the Nordic road administrations for research collaboration. The funding partners for the project, which runs in the period 2011-2013, are the road administrations of Denmark, Sweden, Norway and Iceland. The aim of the project is to develop a model to be implemented within present and future decision support systems for daily winter service management, which is capable of predicting the residual salt development on the road after spreading. The model predicts the durability of chemical de-icing actions, taking traffic, road and weather parameters into consideration. The model development is supported by intensive field measurements on the Bygholm test facilities in Horsens, Denmark, where the model parameters can be extensively studied and to a large degree controlled. Further description of the modelled processes and testing procedures can be found in another paper in these proceedings. In order to validate the model and calibrate it to different road and traffic classes, it will be implemented and monitored in a number of road sections with different pavement characteristics, local conditions and speed limits during the winter of 2012/13. Implementation of the model will be made possible in a range of different complexity levels from including comprehensive algorithms into existing advanced decision support systems, in the one end, to the use of simple printed graphical nomograms, describing the same processes, at the other end. With aid from the model, decision makers have a better possibility of assessing the current and required salt amount on the road surface and planning future operations. It is expected that the model may contribute to a more precise and sound use of salt application rate, without compromising traffic safety and road network accessibility. Future development opportunities of the model include refined physical interpretation of the individual processes, input from automatic sensors, both in-vehicle mobile sensors and mounted on-site and direct input from weather forecast and observation systems.