



New ice warning system to increase safety on Swedish highway E4

The temperature can vary a full 7 degrees between Stora Essingen and Södertälje, a 30 kilometer stretch of highway close to Stockholm maintained by PEAB, one of Sweden's largest contractors of road maintenance. By installing weather sensors into the road surface PEAB will improve the quality of the road weather forecasts used for planning anti-icing work. Slippery roads may be prevented in time and safety could be increased by fairly simple means.

Vårby Backe, a slope on E4 highway just south of Stockholm, is one of Sweden's busiest and most dangerous traffic points. In icy and snowy weather trucks lose traction and slips, the traffic often come to a total standstill and the road section is very prone to accidents. This is where PEAB has installed their extra measuring equipment in order to improve traffic conditions.

- Since we know Vårby Backe is particularly vulnerable, we wanted measurements taken right there in order to improve safety and the quality of our work. As the TrackIce equipment requires no power or data cables we were able to install the sensors exactly where we wanted to. The installation is easy and quick, we just drill a small hole for each sensor, ensures it is aligned with the road surface and mold it into place, says Per Hallberg, operations manager at Peab district Western Södertörn.

The system named TrackIce is developed by the Swedish company Mowic. The focus has been to develop a system which should be quick to install without the need of cables to ensure the system could be installed in remote areas where no power is available. The TrackIce central unit can also - besides road sensors – handle information from other sensors such as wind sensors and snow depth sensors. The weather data from the TrackIce system is then analyzed and presented in the customers weather forecasting system, for example in MeteoGroup's service Roadcast which is used by many contractors.

TrackIce is currently in operation at several places in the Stockholm area, including Södertälje municipality where the system is placed in a sensitive location where icing occurs early.

-In Södertälje we have a known road section very prone to accidents. This is where we placed our TrackIce sensor. When the road surface is wet and we get a warning from the TrackIce system, we know that in about two hours' time, it is very likely there will be icy roads in the entire region. We will then begin anti-icing activities by spreading of salt and thereby prevent surprise black ice, says Jan Johansson, Operations planning manager in Södertälje.

With these simple means the safety and quality on our roads are increased – with fewer accidents and less traffic congestion as a result. It will also reduce the amount of environmentally harmful road salt, reduce corrosion damage on vehicles and help contractors ensure that their work is done at the right time at the right place.

More information

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