Ooms Producten

Direction Boerdonk

Direction Veghel

Long-term performance TEST SECTIONS - The Netherlands,

National Road N279 between Veghel and Boerdonk - Noord Brabant

Product: **Sealoflex® and GridSeal® asphalt reinforced overlay on top of the joints of a concrete pavement**

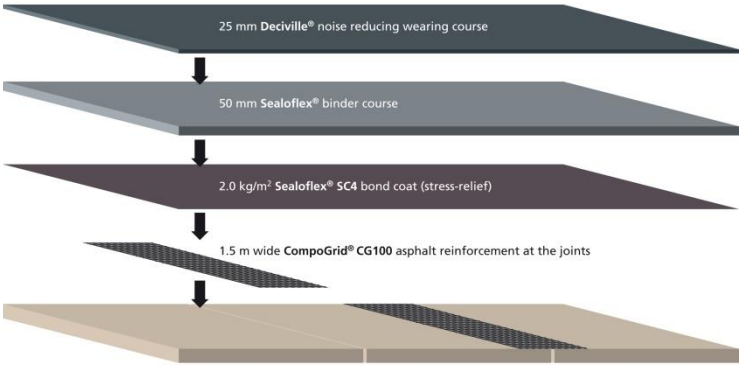
Survey performed: **1st June 2017 – visual inspection test sections N279**

Location: **National Road N279 between Veghel and Boerdonk, Noord Brabant**

Layer structure: **Sustainable noise reducing bituminous overlay for a concrete road with joints**

Background construction test sections: in spring 2007 noise-reducing maintenance measures were performed on the N279 between Veghel and Boerdonk. The N279 consists of an old unreinforced concrete pavement onto which a new asphalt overlay, including a noise-reducing surface course, was installed in 2007. Concrete slab size was 5 m.
The overlay solutions of the contractors Ooms and Bruil are shown below (both designed by Ooms R&D):

Noise reducing overlay for jointed concrete (N279)



Solution Ooms Construction

Noise reducing overlay for jointed concrete (N279)

Solution Bruil

High performance cost effective solutions for highways

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During the visual inspection, only the possible presence of reflective cracking from the joints has been evaluated.

According to the ARCDESO® calculations from November 2006, reflective cracking should not be present at the Ooms section until year 18. At the Bruil section the start of reflective cracking could be expected after 9 to 10 years. During the inspection on the 1st June 2017, no reflective cracking was observed. However, at a later inspection, performed at the 8th of October 2017, at the end of the Bruil section some (minor) reflective cracking was visible at the pavement surface, as was expected from the performed ARDESO® pavement analysis. Transverse cracks were observed in the Bruil section over approximately 30 meters. Given the length of the 2400 meter section, this means that 1.25% of the joints have been cracked.

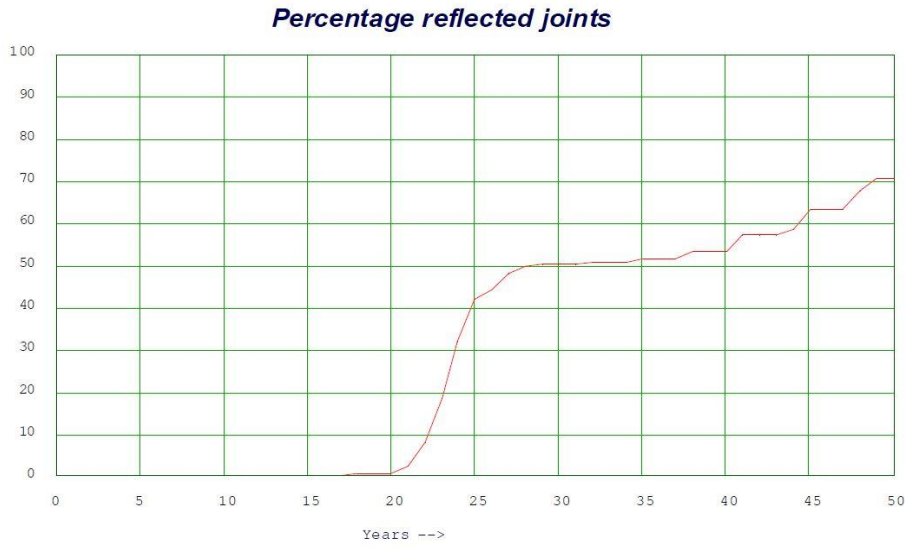
Conclusions and recommendations

The inspection has shown that 10 years after construction, no reflective cracking has occurred on the Ooms test section and hardly any reflective cracking on the Bruil test section.

The applied maintenance methods are very suitable for overlaying unreinforced concrete pavements for (heavily loaded) roads.

It also showed that the reflective cracking behavior during the first 10 years after construction has been correctly predicted by the ARCDESO® pavement design method. Further monitoring is recommended to see if the expected reflective cracking behavior during the period 10 to 20 years matches the ARCDESO model predictions.

ARCDESO - *Computations*



Predicted (computed) percentage of reflected joints vs years after construction – Ooms solution.

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