



DLG e.V.
DLG Test Centre for Agricultural Machinery and Farm Inputs
Max-Eyth-Weg 1
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Groß-Umstadt, 21.08.13

DLG FokusTest

Geyer Hosaja Rubber Mat DB 1.4, Test-Nr.: 12-862



Registering company and manufacturer

Geyer & Hosaja Sp. z.o.o.

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Description

Black rubber mat for the resting area of high cubicles in cattle housing, thickness approximately 33 mm. Upper side with hammerstroke structure, drop in the end part of the mat with grooves.

Underside with baulks and knobs. Baulks ca. 17 mm high, width ca. 18 mm, length ca. 45 mm; knobs ca. 10 mm high, diameter ca. 14 mm. Shore A hardness: 65. Installation as a single mat.



Test results and detailed evaluations

Deformability and elasticity

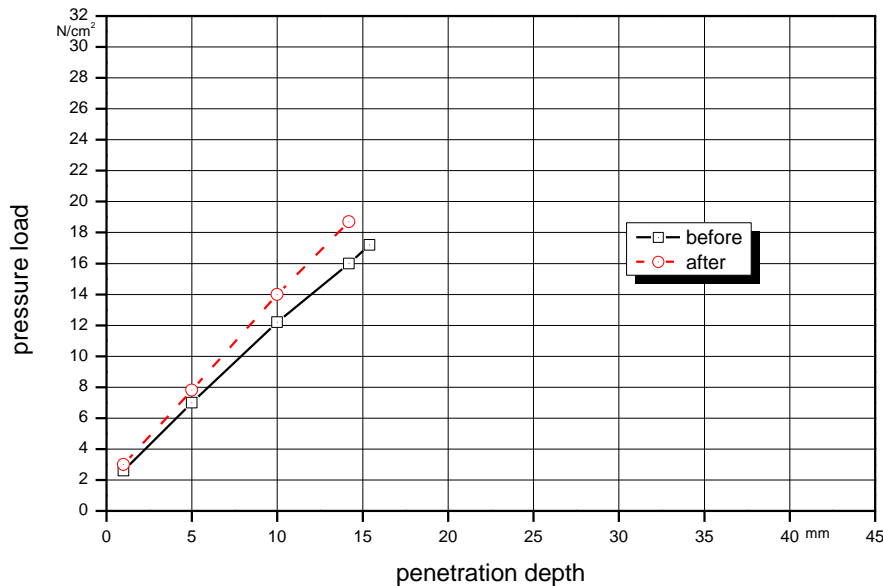
In ball penetration tests in new condition with a spherical cap ($r=120$ mm) and a penetration force of 2.000 N (corresponding to ca. 200 kg), penetration depth was 15.4 mm. The calculated bearing pressure of 17.2 N/cm² indicates a relatively small load on the carpal joints when lying down and getting up. Elasticity was measured after a permanent tread load exerted by the steel foot (100.000 alternating loads of 10.000 N) was carried out.

After the endurance test, the penetration depth of the calotte reduces from 15.4 mm to 14.2 mm. The calculated bearing pressure increases from 17.2 N/cm² to 18.7 N/cm². This means that deformability and elasticity reduces.

Evaluation: Deformability and elasticity:
In new condition **(++)**
After continuous tread load **(+)**

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Deformability: penetration depth of the spherical cap ($r=120$ mm) as a function of the bearing pressure before and after the permanent tread load



Picture 2: Deformability as a function of surface pressure

Permanent tread load

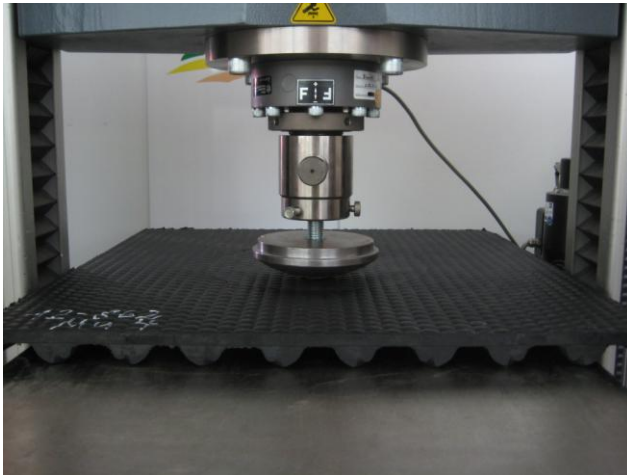
The rubber mat have been exposed to a permanent tread load exerted by a round steel foot (artificial cow´s foot) having a diameter of 105 mm (contact area 75 cm², with a 5 mm wide ring at the periphery of the sole, which projects 1 mm over the rest of the surface (carrying edge of the



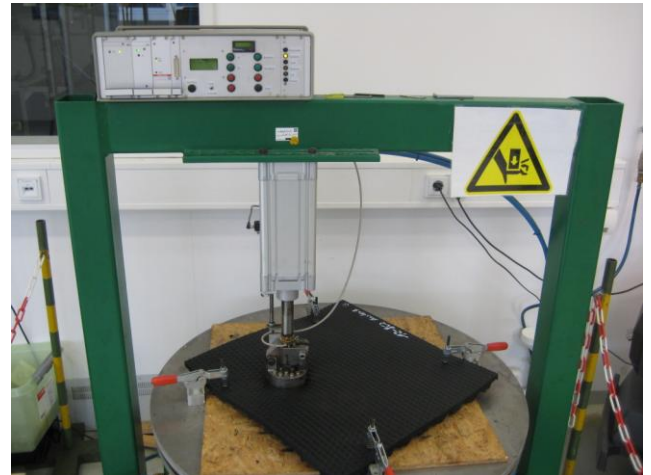
claw)) with alternating loads of 10.000 N (corresponding to ca. 1000 kg). After exposure to the permanent tread load test no appreciable wear and no lasting deformation was determined.

Evaluation: no lasting deformation (++)

no appreciable wear (+)



Picture 3: deformation measurement



Picture 4: permanent tread load test rig

Test

The DLG FokusTest included technical measurements on test rigs of the DLG test station. Deformability and elasticity were examined and a permanent tread load test was carried out.

Other criteria were not tested.

The test was done in accordance to the DLG test program for elastic floors for animals, version april 2010.

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i.O. i.O.

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