



Tagkomponenter
Bestemmelse af modstandsevne
over for bløde stød

Roof components – Resistance to impact from
a soft body

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Denne standard er identisk (IDT) med NORDTEST metode NT Build 319.

Anneks A og B til denne standard er af vejledende karakter. De har ikke samme status som standarden.

This standard is identical (IDT) with NORDTEST method NT Build 319.

Annexes A and B in this standard are included for information only. The annexes does not form an integral part of the standard.

Tagkomponenter. Bestemmelse af modstandsevne over for bløde stød

Roof components – Resistance to impact from a soft body

1 Scope

This standard specifies a procedure for determining the resistance to deflection and damage of roof sheets and components, subjected to impact loads produced by human motion.

2 Field of application

The method has been developed primarily for prototype-testing of load-bearing roof sheets and boards for relatively small spans as well as sheets and boards of brittle materials but it can be used in other cases as well. The method is also applicable for roof components consisting of different materials, for testing the strength of load-transferring joints and for testing the effect of mutual deflections between roof components.

3 References

Background documents are listed under Literature in the Annex B of this standard.

4 Definitions

The span is the distance between the centrelines of the supports.

The set is the residual deflection of the test specimen after load application.

5 Sampling

Unless otherwise specified the sample shall represent the production or batch in question and the specimens shall be taken at random.

The sample size shall be sufficient to treat the results statistically and the inspection level which forms the basis for the design strength of the material shall be taken into account in the sampling plan.

6 Method of test

6.1 Principle

The roof segment to be tested shall be mounted horizontally on a rigid base. The impact load is applied by means of a drop bag simulating impact from human motion.

If the bag does not fall through, the impact is followed by a concentrated static load simulating the load from a person standing in the point of impact for a short time.

The type of motion to be simulated, the expected frequency of the occurrence of the load, the brittleness of the material and the level of safety must be taken into account, when determining the parameters of the test model. Parameters such as mass of bag, type of shock absorber, height of drop and magnitude of static load and loading time shall be as required in the performance specifications. Examples are given in Annex A.

6.2 Apparatus

The following equipment is used:

- A leather bag according to figure 1 containing a thin polyethylene bag of same form and size and filled with hardened solid glass marbles of 3 ± 0.5 mm diameter to the required mass of either 30 ± 0.2 kg or 50 ± 0.2 kg.
- A device for hoisting and instantaneous release of the bag.
- Measuring rods with lengths equal to the prescribed drop heights ± 1 mm.
- Discs of 19 mm plywood (density 550-600 kg/m³). The top disc having a diameter $D = 250 \pm 2$ mm and three subdiscs with $d = 100 \pm 1$ mm. The discs shall be glued together and the underside of the bottom disc shall be covered with 12 mm porous fiber board (density 250-300 kg/m³). See element A in figure 2.
- Shock absorber, with characteristics as specified in