

Structural Reliability Assessment with Application of the New Digital Ground Snow Load Map

V. Křivý¹⁾, P. Konečný¹⁾ and M. Sýkora²⁾

¹⁾ Faculty of Civil Engineering, VŠB-Technical University of Ostrava, 708 33 Ostrava, Czech Republic, petr.konecny@vsb.cz

²⁾ Klokner Institute, Czech Technical University in Prague, 166 08 Prague, Czech Republic, Miroslav.Sykora@klok.cvut.cz

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Abstract

A new digital ground snow load map of the Czech Republic is utilized in the reliability assessment of roof structural elements exposed to the effects of snow load. This digital map of the Czech Republic, which can be used by structural designers, provides detailed information about the characteristics of snow load on the ground for arbitrary selected locality in the Czech Republic.

The database for the map was created in cooperation with the Czech Hydrometeorological Institute. Data describing stochastic character of snow load on the ground are provided for arbitrary locality in the Czech Republic. Presence of such a map partially contributes to solving the problem of absence of data describing stochastic character of input quantities.

Possibilities of utilizing the data from digital map are demonstrated in this paper using an example of selected roof structural elements. Partial Factors Method as well as probabilistic approach is used for design and assessment of selected example.

References

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