INTERNATIONAL STANDARD

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Bases for design of structures — Determination of snow loads on roofs

Bases du calcul des constructions — Détermination de la charge de neige sur les toitures

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Contents

Page

Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 98, *Bases for design of structures*, Subcommittee SC 3, *Loads, forces and other actions*.

This third edition cancels and replaces the second edition (ISO 4355: 1998), which has been technically revised.

Introduction

The intensity and distribution of snow load on roofs can be described as functions of climate, topography, shape of building, roof surface material, heat flow through the roof, and time. Only limited and local data describing some of these functions are available. Consequently, for this International Standard it was decided to treat the problem in a semi-probabilistic way.

The characteristic snow load on a roof area, or any other area above ground which is subject to snow accumulation, is in this International Standard defined as a function of the characteristic snow load on the ground, s_0, specified for the region considered, and a shape coefficient which is defined as a product function, in which the various physical parameters are introduced as nominal coefficients.

The shape coefficients will depend on climate, especially the duration of the snow season, wind, local topography, geometry of the building and surrounding buildings, roof surface material, building insulation, etc. The snow can be redistributed as a result of wind action; melted water can flow into local areas and refreeze; snow can slide or can be removed.

In order to apply this International Standard, each country will have to establish maps and/or other information concerning the geographical distribution of snow load on ground in that country. Procedures for a statistical treatment of meteorological data are described in Annex A.