

**Zeitschrift:** IABSE congress report = Rapport du congrès AIPC = IVBH  
Kongressbericht

**Band:** 13 (1988)

**Artikel:** Guidelines for loading and safety regulations for structural design

**Autor:** The joint group for structural matters of the nordic committee on  
building regulations

**DOI:** <https://doi.org/10.5169/seals-13166>

### **Nutzungsbedingungen**

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

### **Conditions d'utilisation**

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

### **Terms of use**

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

**Download PDF:** 16.01.2026

**ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>**



### **Guidelines for Loading and Safety Regulations for Structural Design**

Directives pour les règlements de charge et de sécurité des structures de génie civil

Richtlinien für Belastungs- und Sicherheitsvorschriften im konstruktiven Ingenieurbau

The Joint Group for Structural Matters  
of the Nordic Committee on Building Regulations

The Nordic Committee on Building Regulations - NKB - is a joint committee for the national building authorities in Denmark, Finland, Iceland, Norway and Sweden. One of the most important aims of the committee is the coordination of the building regulations in the five countries.

The authorities represented in the committee are:

Denmark: The National Building Agency

Finland: The Ministry of the Environment

Iceland: The Directorate of Town and Country Planning

Norway: The National Office of Building Technology and Administration

Sweden: The Swedish National Board of Physical Planning and Building

The first edition of the guidelines for loading and safety regulations for loadbearing structures appeared in 1978 and laid the foundations for the national safety codes which were drawn up in the Nordic countries in the following years.

These guidelines were prepared in cooperation with international bodies on structural safety and have later set the pattern for other international recommendations regarding safety issues.

Somewhat differing practice in the five Nordic countries has led to the national codes deviating on some points from the guidelines. The Joint Group for Structural Matters made a comparison of the national codes and came to the conclusion that a minor revision of the guidelines would promote the harmonization of these codes.

The Joint Group also considered that the guidelines should be supplemented in view of the international development in the area of structural safety and the Nordic Committee on Building Regulations recommended that a revision be carried out.

The new edition of the guidelines appeared in 1987 as NKB-Report No. 55E entitled "Guidelines for Loading and Safety Regulations for Structural Design" (1)

#### SPECIAL FEATURES OF THE GUIDELINES:

Structures are assigned to one of three safety classes - low, normal and high - on the basis of consequences of failure in terms of personal injuries and public loss.

Distinction is made between three different types of failure - ductile with capacity reserve, ductile and brittle.

Inspection shall be carried out on design, materials, construction and condition according to one of three inspection classes - moderate, normal and stringent.

Requirements regarding the safety of a loadbearing structure are expressed in terms of the safety index  $\beta$ . The formal probability of failure is a function of the safety index.

Action, defined as causes which may give rise to changes in stresses, strains, strength or stiffness of a structure, are classified into loads, induced deformations and environmental actions.

Actions which occur simultaneously are combined according to rules that take account of the temporal variations of the individual actions and the probability of one or more actions occurring simultaneously with high values. The combinations are considered in the ultimate limit state and in the serviceability limit state.

In the ultimate limit state, the partial coefficient  $\gamma_m$  by which the material parameter is divided, is a product of five subfactors. When the serviceability limit states are investigated,  $\gamma_m$  is normally put equal to unity.

The probabilistic method described in Appendix B may be used directly in designing loadbearing structures, however, the essential significance of the method is that it constitutes a logical and consistent instrument for calibrating other methods, for instance the method of partial coefficients.

The "Comments"-section of the Report describes how values of the partial coefficients for loads and strength and the safety index may be determined.

#### REFERENCE

- (1) Guidelines for Loading and Safety Regulations for Structural Design. The Nordic Committee on Building Regulations-NKB, Report No 55E. June 1987.

Leere Seite  
Blank page  
Page vide