Zeitschrift: IABSE reports of the working commissions = Rapports des commissions de travail AIPC = IVBH Berichte der Arbeitskommissionen

Band: 4 (1969)

Artikel: Free discussion

Autor: Paloheimo, E.

DOI: https://doi.org/10.5169/seals-5919

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: 12.12.2025

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

Free Discussion / Discussion libre / Freie Diskussion

E. PALOHEIMO
Dr.-Ing.
Helsinki

Professor Lind says in his contribution that the total safety factor could be represented as a product of three different partial safety factors.

As I understand it, this is not possible, but the partial safety factors have very different weights depending on the form of the formula representing the capacity of the structure.

As a simple example I am here writing the equation representing the resistance of a rectangular reinforced concrete section which is first loaded by a moment and then by a normal force..

(1) $R = Z\left(h - \frac{\alpha \cdot Z}{\sigma_b \cdot b \cdot \beta}\right)$

(2) $R = (\sigma_Z \cdot A_Z + \sigma_b \cdot A_b)$ $\leftarrow$ $(\sigma_b \cdot A_b \gg \sigma_z \cdot A_z)$

We may notice that in the second case the resistance of the section is directly dependent on the variation of the strength of the material (concrete) but in the first case the importance of the variation of the strength of concrete is strongly dependent on the relation of h and the other factor in brackets, the height of the compressed zone.

I do not consider it possible to study the safety problem with sufficient accuracy without taking the type of structure and the type of failure into consideration, simply the equation which gives the resistance of the structural element.