

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

Band: 5 (1956)

Artikel: Slabs and curved structures: experimental methods: discussion

Autor: Haas, A.M.

DOI: <https://doi.org/10.5169/seals-6096>

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: 02.10.2025

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

II 1

Slabs and curved structures — Experimental methods

Discussion

Flächentragwerke — Experimentelle methoden

Diskussion

Placas, lajes e paredes delgadas — Métodos experimentais

Discussão

Voiles minces, dalles, parois minces — Methodes expérimentales

Discussion

PROF. DR. A. M. HAAS

Gravenhage

As Prof. Lardy has pointed out in his General Report, experimental methods are valuable contributions to our general calculations. The papers presented show that there is a tendency to use materials which enable us to investigate the behaviour in the elastic range. If this is done in the analysis of models we should be very careful to interpret the results in relation to the real reinforced concrete structure. The latter consists of a non-homogeneous material and may be defined to behave elastically and plastically as well.

There are two problems to be solved; that of strength and that of stability. The strength problem may only be solved correctly if we pass in our tests through the stage of elasticity into plastic deformations to the final rupture.

A research which confines itself to elasticity will be of great value in order to know the qualitative behaviour (f. i. elastic stability) and also to check on elasticity-theories. To that end a material as proposed by Prof. Benito which has been called «litargel» may successfully be applied. As has been stated by him it has a low modulus of elasticity and the deadweight already creates large deformations. As a rule reinforcement is not put into the material. If this is done it should be such a kind of steel that its modulus of elasticity is related to that of the material of which the model is made and which enables the steel to have proportionally large deformations.

To me it appears to be essential to raise this point. If we should try and extend by extrapolation the test results found in the elastic stage to the strength at failure we may be seriously wrong and mistakes might be the result.

SUMMARY

Research on models made of materials with a low modulus of elasticity will enable to know the elastic behaviour of real structures. One should be very cautious when extrapolating the test-results.

RÉSUMÉ

Les essais sur des modèles construits avec des matériaux à faible module d'élasticité pourront permettre de connaître le comportement élastique des structures réelles. Il faut être prudent lors de l'extrapolation des résultats d'essais.

RESUMO

Os ensaios efectuados em modelos construídos com materiais de módulo de elasticidade fraco, poderão permitir conhecer o comportamento elástico das estruturas reais. Convém ter muito cuidado quando se extrapolam os resultados de ensaios.

ZUSAMMENFASSUNG

Untersuchungen an Modellen, die aus einem Material mit niedrigem Elastizitätsmodul bestehen, dienen der Erforschung des elastischen Bereiches der wirklichen Konstruktionen. Bei der Übertragung der Versuchsergebnisse auf die Wirklichkeit sollte sehr vorsichtig vorgegangen werden.