

Summary

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Summary

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Prof. C. V e d e r from Austria introduced the subject of the meeting by illustrating a number of interesting foundation solutions for various large building projects, such as the World Trade Centre in New York, arch-shaped bridges in the Taunus Mountains, Germany, the tower of the Latino Americana in Mexico City with its partly compensated foundation and the new UNO-City in Vienna. Although the subsoil conditions at the location of the last mentioned project are far from unfavourable, settlements have been observed close to 50 mm and the differential settlements amounted to nearly 25 mm. Especially the difference in loading by the high-rise and the low parts of the building have led to differential settlements of 26 mm. The building has behaved as expected and no damage was observed.

Prof. Y. Y o s h i m i emphasized the importance of the soil consultants contribution in the initial stages of a project design. He made his point clear in explaining the reclamation and preparation of the building site for the new Disney Land near Tokyo. The soilconditions below this site are very unfavourable so that piles of over 40 metre length would be required unless the compressible substrata could be improved. The latter solution was chosen and carried out in the mean time, by preloading the surface, in combination with vertical drainage. The time required for this solution, was incorporated right away in the overall planning of the project. The result obtained proved to be successful and has led to a considerable saving.

In the seminary seven contributions were presented from different parts of the world. Among them were purely theoretical approaches to the subject under discussion as well as results of field observations of structural behaviour.

Mr. T h o r b u r n of the U.K., who had been asked to present the concluding remarks, congratulated the authors on augmenting our stock of technical knowledge. He wanted to stimulate activities in order that new experiences and ideas can be presented during future conferences by drawing the audience's attention to:



- the real behaviour of structures,
- the real behaviour of soils.

He felt that there is still a lack of detailed information as to how the structural behaviour is influenced by the response of the completed structures to its environment and function.

Studies of structural behaviour over long periods of time are certainly fraught with difficulties (such as malfunction of instrumentation) but the information gathered is so important that further research in this direction must be encouraged.

Regional geological studies and the publication of information on the performance of particular structures present valuable design guides for designers. According to Mr. Thorburn, it is likely that in future greater emphasis will be laid on in-situ testing of soils.

It should be realized that the actual behaviour of a structure is what is to be predicted during the design stage and that as accurately as possible. In order to do so, a great many simplifications in the design considerations, in the soil profile and in the way of load distribution and load transfer has to be made. This is also the case when the help of a computer is obtained. Too often computer analysis is used to give the results a distinction of accuracy which in foundation engineering however hardly exists.

Accuracy is only reserved for the structure itself! But its actual behaviour is the clue to our better judgement of the theoretical models as well as to the better selection of soil parameters. Mr. Thorburn's suggestions are therefore to be taken serious by all of us who attended this interesting specialty session on soil-structure interaction.