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TERMINOLOGY AND DEFINITIONS IN SOIL MECHANICS TERMINOLOGIE ET DEFINITIONS EN MECANIQUE DES SOLS

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The chairman of the session was Professor J. Kérisel.
34 Persons were present.

Opening the session Professor Kérisel summarized his report to the Executive Committee on the work of the Sub-Committee on Symbols and Definitions. He paid a tribute to the work of the late Professor Brinch Hansen who had been a member of this committee. He thanked the committee members for their work and named the members of the new committee who would work under Dr. H. Q. Golder as chairman, as Professor Kérisel was retiring after serving for 12 years.

Professor Kérisel referred to the excellent work of Mr. Schnaerer and his colleagues in Switzerland in producing the eight language dictionary. He proposed to the new committee the adoption of further symbols which were given in his report, and suggested the need for rationalising the use of the symbols s_v and c_v . He said that where international standards existed they should be used in Soil Mechanics. Finally he said that he thought that some changes and additions were required in the lexicon and that this should be the task of the Sub-Committee in the next four years.

Dr. Golder as joint General Reporter with Dr. Jürgenson mentioned several points which had been raised in correspondence by members not present. Mr. Northey pointed out that several systems existed in the metric system and one should be chosen. Mr. Vogel made out a very good case for the standardisation of grain size diagrams. He then summarized the present position. We have the multi-language lexicon which is a very good start but which needs extension and improvement. The aim of terminology is to avoid misunderstanding. Translation is a major cause of misunderstanding, but it is not the only cause. Clarity of meaning in the original is required. Symbols words and definitions are all related in this question of understanding. Meanings of words can change with fashion or mis use. New words are created. Extension of meaning of an existing word is often bad. The purpose of the session is to decide the program for the Sub-Committee for the next four years. What needs to be done? How are

we to tackle it?

Dr. Jürgenson, General Reporter, expanded on many points made by him in a letter to Geotechnique, 1966, p.171. He favoured a definition in English to aid translation into other languages. Terms should be picked according to importance and frequency of use. Distinctions should be made between terms such as coefficient and modulus, deformation and strain, failure and rupture, and many others. Where possible terms used should be consistent with those used in related branches of science, e.g. coefficient of permeability should be hydraulic conductivity. Consolidation theory can be simplified by using modulus of compression instead of coefficient of compressibility, and ambiguous terms such as 'piping' and 'refusal' should be discouraged. The compilation of a list of basic terms in English, with definitions should be organised by a suitable scientific institution.

Dr. Pshebotarioff said that it was not enough to define the English terms. Another language, for instance Russian, might have subtler terms than English. He instanced a Russian word which meant settlement due to collapse of soil structure which was often incorrectly translated. He suggested that in future editions of the Lexicon, there should be added definitions and explanations of technical terms which have shades of meaning not conveyed by the relevant generalized English terms. He suggested that Dr. Jürgenson was eminently suited to this task. He appealed for a young engineer in North America, fluent in Russian to carry on the translation work which he was doing. In view of the fact that the next conference would be in Moscow he suggested that an exchange program for engineers be initiated with Moscow.

Mr. DeSalvo, speaking for the ASCE Committee on Information Retrieval said that they had found that the ISSMFE 'hierarchical' method of classification was unworkable, and they had gone to a system of 'descriptors' arranged in groups.

Professor La Rochelle instanced difficulties in teaching in French when using English units of measurement. He suggested

that 'poids volumique' should be used in place of 'poids spécifique' and 'poids spécifique absolu des grains' in place of 'densité relative des grains solides'.

Mr. Prazka suggested that the pronunciation of symbols should be given.

Mr. Smolczyk pointed out difficulties met with when using, for example, Q for transverse force, since it was the first letter of the German word 'Quer'. In reply to a question from Professor Kerisel he added that the Germans have changed from ρ to the internationally accepted ϕ for angle of internal friction.

Mr. Schockley, speaking on behalf of ASTM, said that they had some proposed definitions of particle size which were now available for comment.

Professor Richart mentioned that in view of the increasing use of photo-copying methods of reproduction from typed drafts it was important to decide how to write Greek letters in typescripts.

Mr. Aitcin pointed out that there was much

confusion in the use of the terms referring to density and porosity and suggested a method of improvement.

Dr. Golder summed up briefly. He thought that a symbol needed no pronunciation, it was immediately recognizable, that was its whole point. Further, symbols should not belong to a particular language, which was why Greek letters were so suitable, but we must be careful how we write them. Some of the points raised were quite subtle, but the subcommittee would consider them all. However it was not his intention, as chairman, to change anything which had already been agreed upon by the past committee. He hoped that anyone wishing to contribute ideas on the subjects of Terminology, Symbols, Definition or Units, would send them to him.

The Chairman, agreed with Dr. Golder, that nothing already accepted should be changed. He explained that long discussions had preceded agreement, and that even though not perfect, the end result was a satisfactory compromise. He thanked all who had taken part in the session, and wished the new committee luck in its efforts.