

Standardisation work

As do many other laboratories and institutes of the two federal institutes of technology, the Soil Mechanics Laboratory (LMS) and the Rock Mechanics Laboratory (LMR) contribute actively to the standardisation of building methods, materials and test procedures. In 1995, the LMS and the LMR devoted approximately 1400 working hours (almost equivalent to a full-time position) to work linked to such standardisation.

This is an activity which is often unrecognised but very important for the general public. For example, if Switzerland has first class roads and motorways at its disposal, it is largely the result of standardisation work and the associated research which has been carried out in its laboratories and institutions.

The Swiss Association for Standardisation (SNV) is responsible for all Swiss standards, however, it delegates the writing of the standards in the building and civil engineering sectors to the Swiss Society of Engineers and Architects (SIA) and, in the roadway construction sector, to the Association of Swiss Road and Traffic Engineers (VSS).

Geotechnical engineering touches both of these sectors and the tasks are divided between these two associations.

The director of the LMR is the chairman of the SIA committee responsible for standardisation in the geotechnical sector (Figure 1). In addition, several members of the LMS and LMR are part of

committees or working groups of the SIA. One member of the LMS is responsible, in collaboration with the VSS, for all of Swiss standardisation concerning geotechnical laboratory testing and also participates in standardisation activities concerning in situ tests.

Many Swiss standards will be gradually replaced by European standards written by the European Committee for Standardisation (CEN). Switzerland is a part of this committee since 1961 and has to replace its own standards with those compiled by the CEN. A member of the LMS is a member of the CEN committee (project team) which is in the process of writing the European standards concerning geotechnical laboratory testing in soil and rock.

Most of the Swiss construction standards are based in part on research work carried out at the Swiss Federal Institute of Technology. For the engineer, the standards are a tool which represents the technical state of the art and which ensures a safe and economical design of structures.

One example: The current design standards for frost concerning roadway subgrade and pavement are, for the most part, the result of large-scale tests carried out in the "Halle fosses" of the LMS and the LMR. With respect to use of the previous standards in this sector, they lead to a savings of several millions of francs each year in Switzerland.

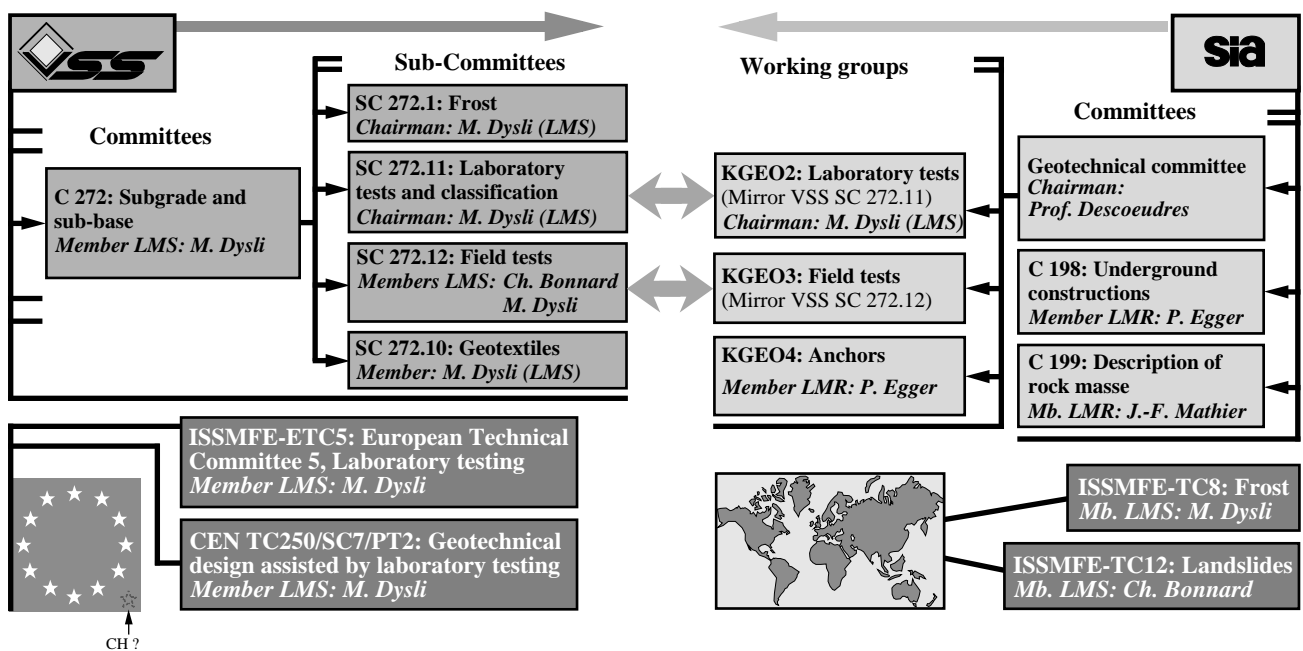


Figure 1: SIA, VSS and international committees linked to the LMS and the LMR in 1997