

## **ABSTRACT**

The Thesis deals with the critical state strength of Brno Clay. The critical state strength is an important input parameter in many geotechnical analyses. Further it is used in determining the at-rest coefficient  $K_0$  of normally consolidated clays using the Jáký formula. The Thesis first briefly describes the concept of strength for soils and the  $K_0$ . The critical state strength of the particular soil is then determined by using triaxial conventional and frictionless specimens, and two types laboratory direct shear measurements, namely in the translational and ring shear boxes. The obtained results are discussed and compared with previous published data.