

## عنوان مقاله:

Bolt Surface Profile and Load Transfer Mechanism

## محل انتشار:

سومین کنفرانس مکانیک سنگ ایران (سال: 1386)

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## خلاصه مقاله:

The influence of surface profile configuration on load transfer mechanism of bolt has been examined under both constant normal stiffness (CNS) and constant normal load conditions (CNL). The study under CNS conditions were undertaken in a specially constructed normal stiffness apparatus, whereby the flattened surface of a bolt section was pulled against the image of cast resin sample under constant stiffness conditions. The tests under CNL conditions included the conventional pull testing of an encapsulated section of a bolt anchored in a borehole, as well as pull and push testing of bolts in a short steel sleeve. tests were also carried out in the field in an underground coal mine. Two parameters were investigated, both in the field and in the laboratory. They were the bolt-surface profile and the resin encapsulation annulus thickness. The second experimental study examined the credibility of short encapsulation push testing in short steel tubes. The effect of pulling the bolt out of the steel sleeve was compared with the commonly practiced push test. Three popular bolts were tested in both experimental studies. The short encapsulation pull testing of the first experimental study showed that the load transfer capacity of the bolt was influenced by the bolt profile configuration. However, the influence of increased annulus thickness was dependent on the degree and quality of resin mixing and gloving elimination. Also, the push / pull test in steel tube showed that the load transfer mechanism .was influenced by the methodology of bolt removal from the steel tube

## کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/25064>

