

## عنوان مقاله:

Innovative approach to strata reinforcement in coal mines with reference to evaluation cable bolts shear strength

## محل انتشار:

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## خلاصه مقاله:

There is an increasing need to determine accurately the strength properties of tendons for an effective ground control on mines and underground structures as well as on modelling simulations. The strength properties of cables, used as cable bolts, have been evaluated mainly by their ultimate tensile strength, as this kind of test can be carried out in the field as well as in the laboratory. Only recently, there has been a growing interest in cable bolt failures in shear because of the documented field failure evidence. Accordingly, this paper reports various methods of shear testing of rock bolts and cables using different shear testing rigs, some have been developed by the rock bolting research team at the University of Wollongong. A programme of shear testing of a variety of cable bolts marketed in Australia was undertaken, the results of which were reported and conclusions were drawn. It was concluded that plain cable bolts were de-bonded during shearing when compared to spiral cables under the same testing conditions. In addition, both the single shear and double shear testing methodologies will result in the same outcome if there is no de-bonding, and a proper confinement is applied.

## کلمات کلیدی:

Tendon Technology, Cable Bolt, Shear Testing, Pretension Loads, Concrete Confinement

## لینک ثابت مقاله در پایگاه سیویلیکا:

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