

## عنوان مقاله:

An experimental study of axial load transfer mechanisms of cable bolts using axially split embedment apparatus

## محل انتشار:

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## نویسندگان:

A. Mirzaghobanali - School of Civil, Mining, and Environmental Engineering, University of Wollongong, NSW, Australia

N. Aziz - School of Civil, Mining, and Environmental Engineering, University of Wollongong, NSW, Australia

## خلاصه مقاله:

The load transfer mechanisms of cable bolts differ from those for normal rebar bolts. The cable bolts used in mines are basically steel strands with different constructions depending on the number of wires or elements and the way they are laid. Tendon bolts (rebar and cable) are normally evaluated for their strength and load transfer properties. The tendon strength can be evaluated by the tensile failure tests, while the load transfer strength is evaluated by the pull and shear strength tests. Short Encapsulation Pull Testing (SEPT) is normally used to study the load transfer capacities of tendons, and it can be undertaken in both the laboratory and in situ. A new apparatus known as Minova Axially Split Embedment Apparatus (MASEA) was used to study load-displacement characteristics of smooth versus spiral profile cable bolts. Minova Stratabinder grout was used for encapsulating 400-mm long 19 wire 22-mm diameter superstrand cable in embedment units. The anchorage of the cable on the two sides of the embedment apparatus were intentionally installed at different lengths to allow the cable to be pulled out from one side of the anchorage. The spiral wire strand cable bolts achieved a higher peak pull-out load at a minimum displacement in comparison with the smooth surface wire strand. The peak pull out force increased with the age of encapsulation grout. The use of MASEA .was easier to assemble and test at a short period of time, thus allowing the quick and repeated tests undertaken

## کلمات کلیدی:

Experimental Study, Axial Load, Cable Bolts

## لینک ثابت مقاله در پایگاه سیویلیکا:

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