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预应力锚索框格梁体系加固破碎岩质边坡合理间距研究

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摘要　　摘要：以金丽温高速公路K81边坡为例，建立分析计算的力学模型，根据现场试验数据，通过数值模拟的方法，研究预应力锚索张拉在破碎岩质边坡坡面的压缩变形和附加应力规律，并以此为依据探讨了预应力锚索合理间距的问题。研究结果表明：对于破碎岩质边坡锚固工程，考虑到边坡岩体变形模量小，应采用小张拉力的预应力锚索，以500～750 kN张拉力为宜；为减少相邻锚索张拉的影响，锚索间距不应太小；为避免锚索之间出现应力跌落，锚索间距也不能过大，以4～6 m为宜。

关键词　　关键词：边坡工程　滑坡加固　预应力锚索　破碎岩质边坡　数值模拟　锚索间距

分类号

STUDY ON PROPER INTERVAL OF PRESTRESSED CABLES IN REINFORCING CRUSH ROCK SLOPE

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Abstract

Abstract：Based on a case of crush rock slope K81 in Jinhua－Lishui－Wenzhou Highway，an analytical mechanical model was developed. According to field testing data，the compression deformation and subsidiary stresses of the crush rock slope under prestressed cables anchorage forces were analyzed by numerical simulation. The results are shown as follows：(1) it is suggested that light-tonnage cables should be employed in crush rock slope reinforcing engineering in consideration of low deformation modulus of the slope. The tensile force of 500–750 kN can be adopted；(2) the range interval of the cables should not be too small for the reduction of adjacent cable stretch-draw influence. On the other hand，the interval should not be too large to avoid subsidiary stresses looseness. The proper interval between cables in crush rock slope should be 4–6 m.

Key words　Key words：slope engineering　landslide reinforcement　prestressed cable　crush rock slope　numerical simulation　cable interval

DOI:

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