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边坡防护工程中植物根系的加固机制与能力分析

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摘要 植物根系在岩土介质中受力的复杂性和多变性，使得确定其加固能力十分困难。根据植被护坡作用机制和应力、应变模式分析，建立加固作用力学模型，导出植物根系的抗滑力一般计算式，并推导植物根系加固能力的计算式。

关键词 边坡工程；植被防护；作用机制；力学分析；加固能力

分类号

MECHANISM AND ABILITY ANALYSIS OF PLANT ROOT REINFORCEMENT IN SLOPE PROTECTION

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Abstract

The stress，which acts on the plant root in the crag earth medium，has the characters of extreme complexity and polytropy，so the determination of its reinforcement ability is considerably difficult. According to the slope protection action mechanism of the vegetation and the stress-strain pattern analysis，the model of reinforcement mechanism and the general mathematical formulae of the root system¢s resist-slipping stress，and the plant root system¢s reinforcement ability are established.

Key words slope engineering；vegetation protection；action mechanism；mechanical analysis；reinforcement ability

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