



## 板岩流变特性试验与模型辨识

### Rheological Tests of Slate and Model Identification

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英文关键词: [rock](#) [rheological test](#) [modal identification](#) [rock grade](#)

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#### 中文摘要

针对江西武吉高速公路隧道的II~V级围岩,通过分级增量循环加卸载试验、剪切流变试验和双轴压缩流变试验研究围岩的流变具有过渡蠕变和定常蠕变过程,表现为脆性破坏;V级围岩则具有过渡蠕变、定常蠕变和加速蠕变过程,表现为塑性破坏。通过模态非线性流变元件NRC模型与西原模型的串联模型模拟V级围岩,可较好地模拟围岩流变特性;同时得到与应力水平有关的围岩流变力学参

#### 英文摘要

Circular increment step load and unload test, shear rheological test and two-axes compression test were carried on II-V grade surrounding rock of Wuji highway tunnels in Jiangxi Province. The test results showed that II-IV grade sections, namely transitional creep and stability creep, and the failure behavior of the rock is brittle fracture. V grade sections, namely transitional creep, stability creep and accelerating creep, and the failure behavior of the rock could be reasonably simulated with generalized Kelvin modal through the modal identification, while V grade surrounding rock modal. Rheological parameters related to stress level were also obtained by modal identification. The method of modal identification beyond slate.