

论文

万福井田深部黏土微观特性试验研究

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摘要:

对山东巨野万福井田深部黏土工程地质特性进行了研究。电镜扫描(SEM)表明: 深部黏土具有显著的二维定向结构, 发育有微观裂隙, 与浅部黏土相比其黏土矿物成分含量较高, 孔隙率低, 在加、卸载压缩和浸水膨胀后, 原有的二维定向结构受到明显破坏, 黏土裂隙宽度和裂隙数量明显增加, 从变形破坏特征上深部黏土有成岩倾向性。同时, 根据孔隙水赋存状态特征, 建立了分析深部黏土饱和度异常的黏土结合水含量定量计算模型, 揭示了深部黏土饱和度测试异常的内在机理。

关键词: 深部黏土; 微观特性; 加、卸载试验; 饱和度异常

Study on deep clay of Wanfu Mine based on micro characteristics

Abstract:

It was studied engineering characteristics of deep clay of Wanfu Mine, Juye. The SEM of deep clay indicate that microstructure of the samples is planar directional and fracture developed universally in it. After load unload compression and swelled, the original structure is destroyed obviously, the fracture is developed, width and number of these fracture increases distinctly, which indicate loading and immerging can destroy the structure of samples clearly. The deep soil has a tendency of diagenesis based on deformation characteristics. Furthermore, the saturations abnormal of deep clay which is caused by the water existing state of clay was analyzed. It is founded that a computing model of bound water which is illustrated the intrinsic mechanism of saturation abnormal.

Keywords: deep clay; micro characteristics; load unload compression test; saturation abnormal

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