

Experimental Study on Zonal Disintegration of some kinds of Layered Similar Material Model

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Summary

It is known from experimental studies that a zonal periodic structure in the form of alternated regions of fractured and relatively intact rock appears around rock workings. It is impossible to describe the occurrence of such a structure on the basis of the classical continuum model, so it attracted the research's wide attention. In order to know the crack distribution and its change along the axial direction, and this phenomenon may take place in which kinds of material, four kinds of layered similar materials blocks are used to establish a barrel model. The crack distribution and its change along the axial direction of the barrel model are observed experimentally. It is found out that there are some common characteristics when they are under high axial and confining pressure , but they also have their own features .The law of deformation and failure can be observed clearly if the surface is covered with speckle.

