

Physical simulation of ground fissures triggered by underground coal mining

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Abstract

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Protocol

Material mixture experiments,standard specimens were made with different proportions of materials.

Step 1.

Material mixture experiments,test the strength of the standard specimens.

Step 2.

Material mixture experiments,get the proper material mixture ratio.

Step 3.

Similar simulation experiments, material preparation and model building.

Step 4.

Similar simulation experiments, mounting the artificial pressure devices.

Step 5.

Similar simulation experiments, set slots on the right side of the models.

Step 6.

Similar simulation experiments, set the hydraulic support in the coal seam.

Step 7.

Similar simulation experiments, set load on the top of the model and then excavate from the right of the model by the step of 10cm.

Step 8.

Similar simulation experiments, observe and record the data of rock breakage and the the stress of the hydraulic support during the caving process.

Step 9.