A Big Earth Data Platform for Three Poles

**Test data of debris flow abrasion of concrete materials for drainage channel in strong earthquake areas in China (2019-2022)**

1、Description

The abrasion characteristics of debris flow are the key parameters for the durability design of prevention and control engineering. In this project, 44 working conditions of 5 kinds of gravel gradation, 4 solid ratios, 3 kinds of slurry viscosity of debris flow, 2 kinds of debris flow velocity and 2 kinds of concrete strength are selected. The debris flow abrasion test is carried out with the self-developed debris flow abrasion test device to examine the concrete loss rate Changes of abrasion rate and surface morphology. The experimental results show that the loss rate and abrasion rate of concrete increase with the grading number of gravel (the content of large particle gravel increases), the solid ratio of debris flow and the viscosity of debris flow. According to the developed debris flow abrasion test device, the debris flow abrasion test of concrete materials is carried out, the debris flow abrasion test results are obtained, and the debris flow abrasion coefficients of different concrete materials are obtained

2、Keywords

Theme：Engineering Geology,Debris Flow,Geologic Hazard  
Discipline：Solid earth  
Places：laboratory model experiments  
Time：post-seismic

3、Data details

1.Scale：None

2.Projection：

3.Filesize：650.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：31.71 | - |
| west：102.85 | - | east：103.73 |
| - | south：30.75 | - |

5、Time frame:2018-12-31 16:00:00+00:00--2021-12-31 03:59:59+00:00

6、Reference method

References to data:

JIAO Pengpeng , SU Na , XU Linrong . Test data of debris flow abrasion of concrete materials for drainage channel in strong earthquake areas in China (2019-2022). A Big Earth Data Platform for Three Poles, doi:10.11888/SolidEar.tpdc.2721342022

References to articles:

7、Supporting project information

Dynamic characteristics of wide gently-channelized and narrow steeply-channelized debris flows in strong earthquake area

8、Data resource provider

name: JIAO Pengpeng   
unit: Zaozhuang University  
email: mr.jiaopeng@163.com  
  
name: SU Na   
unit: Central South University  
email: 82289112@qq.com  
  
name: XU Linrong   
unit: Central South University  
email: lrxu@csu.edu.cn