

TEST SCHEME OF FROST HEAVE FORCE DISTRIBUTION OF FRACTURED RED SANDSTONE

PROJECT INTRODUCTION

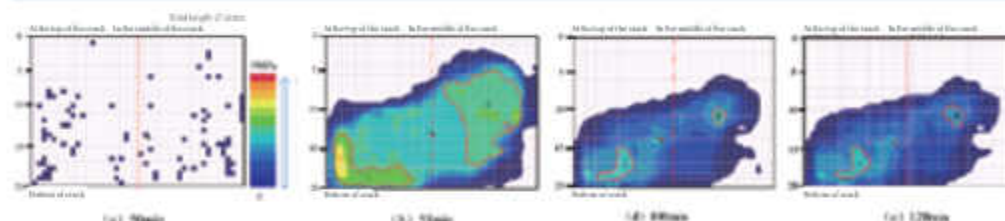
Rock bodies in most areas of western China have been subjected to long-term freezing and thawing, and many of them have been damaged by rock engineering. A research institute of Chinese Academy of Sciences used our pressure distribution measurement system to test the freezing expansion force of red sandstone in the process of freezing and thawing, and to analyze the change of the freezing expansion force of fissured rock.



MEASUREMENT PROCESS

A large red sandstone specimen was selected with a through fissure machined in the center, and the sensing area of the thin-film pressure sensor was placed inside the specimen fissure by covering it with a sealed bag. The specimen was placed in a constant temperature box at -25°C , and the equipment was connected to monitor the distribution of changes in freezing and thawing forces during the freeze-thaw process.

MEASUREMENT RESULT



Through the test of our pressure distribution measurement system, we can visually monitor the distribution of the change of freezing and expansion force within the red sandstone fissure, and the data is more intuitive and dynamic, which meets the test requirements.

USE

Similarity Simulation Experiments
Data Model Validation

ADVANTAGES

Clear analysis of fissured rocks
Freeze-up force changes

EQUIPMENT: D2

General Purpose
Distributed Pressure
Measurement System
DPM-G



MODEL	CN5027
Sensing area	26.6mm*26.6mm
No. of sensing points	1936, 44rows*44columns
Point density	278points/cm ²
Pressure ranges	50/500/1000psi