A Big Earth Data Platform for Three Poles

**Demonstration monitoring data for disease treatment of permafrost project in South Asia Channel - long-term monitoring demonstration for subgrade stability of chumar river of Qinghai Tibet Railway (2003-2021)**

1、Description

The monitoring section is located in the high plain of chumar River (dk1043 + 500-dk1067 + 022). The frozen soil under the subgrade at the section is mainly multi frozen soil, ice saturated frozen soil and thick underground ice, belonging to the low-temperature basically stable multi-year frozen soil subregion (zone III). A total of 5 monitoring sections are arranged in this section, including 2 plain soil subgrade sections, 1 block stone subgrade, 1 block stone slope protection subgrade and 1 U-shaped block stone subgrade section respectively. 4-5 test holes are arranged in each section, with a test depth of 15 ~ 20m, and the deepest hole in the section is 40m. The main element of monitoring is permafrost ground temperature, and the monitoring period is from 2003 to 2021. This data is based on Permafrost Engineering The temperature measuring probe made by the State Key Laboratory was obtained through field monitoring. Every year, the monitoring data of each monitoring section is collected on site through cr3000 data acquisition instrument. Through certain quality control, including eliminating the data when the sensor does not fully adapt to the soil environment and the systematic error caused by sensor failure. The corrected final data is stored in Excel file. The field data obtained has been reviewed by many people, and the data integrity and accuracy have reached more than 95%. The data can provide a reference for the long-term stability evaluation of block stone subgrade.

2、Keywords

Theme：Ground temperature,Frozen Ground  
Discipline：Cryosphere  
Places：the Qinghai-Tibet Railway, Zhiduo County, Qinghai Province  
Time：2003-2021

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：0.17MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：35.42 | - |
| west：93.4 | - | east：93.58 |
| - | south：35.36 | - |

5、Time frame:2002-12-31 16:00:00+00:00--2021-12-30 16:00:00+00:00

6、Reference method

References to data:

NIU Fujun. Demonstration monitoring data for disease treatment of permafrost project in South Asia Channel - long-term monitoring demonstration for subgrade stability of chumar river of Qinghai Tibet Railway (2003-2021). A Big Earth Data Platform for Three Poles, doi:10.11888/Cryos.tpdc.2719332021

References to articles:

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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