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# Field experimental study on long-term cooling and deformation characteristics of crushed-rock revetment embankment at the Qinghai–Tibet Railway

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## Highlights:

- Long-term monitored data are presented for a crushed-rock revetment embankment along the Qinghai-Tibet Railway
- The variations of ground temperature, permafrost table and embankment deformation are analyzed
- Long-term thermal and mechanical stability of crushed-rock revetment embankment is evaluated and discussed

**Abstract:** Crushed-rock revetment embankments (CRRE) were the most commonly used structure in the construction of the Qinghai–Tibet Railway, and also is a main strengthening measure at the later period's maintenance. Numerical and short-time field monitoring results have confirmed the cooling effects of CRRE, but studies regarding the long-term embankment thermal regime and deformation are still required to fully evaluate their performance. This paper discusses the cooling effects and

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