

浅埋隧道塌方处治方法研究

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摘要 根据工程塌方处治实例, 探讨了浅埋隧道塌方处治中超前支护系统的作用原理, 利用有限元手段分析了二次衬砌结构的内力情况, 给出了塌方处治方案, 根据处治效果可得出: (1) 管棚注浆法作为一种行之有效的辅助工法, 其力学效应是显著的; (2) 处于浅埋顺层围岩条件下的隧道, 围岩的变形往往带有突然性; (3) 施工中及时构筑二次衬砌, 早日形成封闭式支承体系, 加快围岩变形稳定过程, 可有效地抑制围岩过度变形及塌方事故。

关键词 [隧道工程](#); [浅埋隧道](#); [塌方处治](#)

分类号

TREATMENT METHOD FOR COLLAPSE TREATMENT OF SHALLOW-BURIED TUNNEL

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Abstract

Based on an engineering case, the mechanism of the pre-support system applied in treatment for the collapse of shallow-buried tunnel is discussed. Moreover, the internal force of the second lining is analyzed by means of FEM and the procedure to treat the collapse of shallow-buried tunnel is given. Some conclusions can be drawn based on the treatment effectiveness: (1) shed-pipe grouting technology is an effective assistant construction method, and the mechanical effect is significant; (2) the deformation of the tunnel bedding wall rock often has some abruptness; and (3) the second lining should be constructed in time so as to form the closed-end supporting system earlier, which can accelerate the stabilization process of the deformation of surrounding rock and prevent the excessive deformation of surrounding rock and tunnel collapse.

Key words [tunneling engineering](#); [shallow-buried tunnel](#); [collapse treatment](#)

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