# Article information:

Deformation control method of a large cross-section tunnel overlaid by a soft-plastic loess layer: a case study | SpringerLink
<https://linkspringer.53yu.com/article/10.1007/s10064-021-02239-w>

# Article summary:

1. This paper presents a case study of a large cross-section high-speed railway tunnel overlaid by a Q2 soft-plastic loess layer, which experienced two unexpected collapses due to its poor engineering properties.

2. The deformation control methods are studied through numerical simulations and field tests, with the results showing that the curtain grouting scheme can effectively control the deformation of surrounding rock.

3. It is proposed to use advanced drainage in combination with advanced small pipe grouting as a follow-up construction scheme, which was proven effective through successful completion of the whole tunnel.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article “Deformation Control Method of a Large Cross-Section Tunnel Overlaid by a Soft-Plastic Loess Layer: A Case Study” provides an overview of the challenges faced when constructing tunnels in soft plastic loess layers and proposes solutions for controlling deformation. The article is well written and provides detailed information on the research conducted, including numerical simulations and field tests. The authors provide evidence for their claims and cite relevant sources throughout the article.

However, there are some potential biases in the article that should be noted. For example, while the authors discuss various methods for controlling deformation, they do not explore any counterarguments or alternative solutions that may be available. Additionally, while they provide evidence for their claims, it is unclear if they have considered all possible risks associated with these methods or if they have presented both sides equally. Furthermore, there is no discussion of any promotional content or partiality in the article which could potentially influence readers’ opinions on the topic at hand.

In conclusion, this article provides an informative overview of challenges faced when constructing tunnels in soft plastic loess layers and proposes solutions for controlling deformation. However, there are some potential biases that should be noted such as lack of exploration into counterarguments or alternative solutions and lack of discussion regarding promotional content or partiality which could potentially influence readers’ opinions on the topic at hand.

# Topics for further research:

* Tunnel construction in soft plastic loess layers
* Alternative solutions for deformation control
* Potential risks associated with deformation control methods
* Promotional content in tunnel construction
* Partiality in tunnel construction
* Counterarguments to deformation control methods

# Report location:

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