# Article information:

An analytical solution to estimate the settlement of tailings or backfill slurry by considering the sedimentation and consolidation - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S2095268621000288>

# Article summary:

1. This paper proposes an analytical solution to estimate the settlement of tailings or backfill slurry by considering both sedimentation and consolidation.

2. The proposed solution was validated through tailing deposition tests conducted in two molds to simulate the tailings impoundment and underground mine stope.

3. Good agreements were obtained between the measured settlements and those calculated by the proposed solution, indicating that it can be used to evaluate the settlement of tailings or backfill slurry.

# 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:

This article provides a detailed analysis of an analytical solution for estimating the settlement of tailings or backfill slurry by considering both sedimentation and consolidation. The authors provide evidence for their claims through shrinkage and consolidation tests, as well as through tailing deposition tests conducted in two molds to simulate the tailings impoundment and underground mine stope. The results from these tests show good agreement between the measured settlements and those calculated by the proposed solution, indicating that it can be used to evaluate the settlement of tailings or backfill slurry.

The article is generally reliable, as it provides evidence for its claims and presents both sides equally. However, there are some potential biases that should be noted. For example, while the authors do mention possible risks associated with using this analytical solution, they do not provide any details on what these risks may be or how they can be mitigated. Additionally, while they discuss potential advantages of using this technology (such as improved ground stability), they do not explore any potential disadvantages that could arise from its use (such as increased costs). Finally, while they provide evidence for their claims, it is unclear if this evidence is sufficient to support all of their conclusions; further research may be needed in order to fully validate their findings.

# Topics for further research:

* Tailings impoundment risks
* Underground mine stope stability
* Tailings deposition tests
* Consolidation tests
* Shrinkage tests
* Analytical solution disadvantages

# Report location:

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