# Article information:

Negative pressure testing standard for welded scar airtightness of waterproofing sheet for tunnels: Experimental and numerical investigation - ScienceDirect  
<https://www.sciencedirect.com/science/article/abs/pii/S0886779822005715>

# Article summary:

1. Initial pressure of -40 kPa and a drop rate within 4% after holding 15 min is qualified for airtightness testing of welded scars.

2. Factors affecting the pressure loss are adsorption location, thickness and area in turn.

3. Proposed quantitative standard can reduce errors and achieve traceability management.

# 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 “Negative Pressure Testing Standard for Welded Scar Airtightness of Waterproofing Sheet for Tunnels: Experimental and Numerical Investigation” is an informative piece that provides a comprehensive overview of the negative pressure testing (NPT) standard for welded scars of waterproofing sheets used in tunnels. The article presents a detailed analysis of the factors affecting the pressure loss during NPT, such as adsorption location, thickness, and area, as well as a discussion on the proposed quantitative NPT standard for welded scars. The article also includes field tests to verify that the proposed NPT standard meets the requirements of airtightness quality detection of welded scars.

The article is generally reliable and trustworthy due to its comprehensive coverage of the topic at hand, its use of model experiments and numerical simulations to support its claims, and its inclusion of field tests to verify its findings. However, there are some potential biases present in the article that should be noted. For example, it does not explore any counterarguments or alternative perspectives on the issue at hand; instead it focuses solely on supporting its own claims without considering other points of view or evidence that may contradict them. Additionally, there is no mention of possible risks associated with using this proposed NPT standard or any potential drawbacks that could arise from implementing it in practice. Furthermore, while the article does provide some data availability information, it does not specify what type or format this data will be made available in upon request which could limit access to those who need it most.

In conclusion, while this article provides a thorough overview on negative pressure testing standards for welded scar airtightness in waterproofing sheets used in tunnels, there are some potential biases present which should be taken into consideration when evaluating its trustworthiness and reliability.

# Topics for further research:

* Negative Pressure Testing Standard Advantages and Disadvantages
* Welded Scar Airtightness Quality Detection
* Numerical Simulation of Pressure Loss
* Risk Assessment of NPT Standard
* Alternative Perspectives on NPT Standard
* Data Availability for NPT Standard

# Report location:

<https://www.fullpicture.app/item/1a6ebf9a3b617dbc8d18377698c7d94a>