# Article information:

Lateral behaviour and failure modes of buckling-restrained beam-only-connected steel plate shear walls - ScienceDirect
<https://www.sciencedirect.com/science/article/abs/pii/S1350630722008007?via%3Dihub>

# Article summary:

1. A new type of steel plate shear wall (SPSW) structure is proposed, comprising a square concrete-filled steel tube (CFST) boundary frame and infilled cold-formed steel (CFS) buckling-restrained beam-only-connected SPSWs.

2. Tests were conducted to study the lateral behaviour and failure modes of the buckling-restrained beam-only-connected SPSWs with square CFST frame.

3. A design method of the shear capacity of buckling-restrained beam-only-connected SPSWs was proposed based on numerical analysis.

# 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 an overview of a new type of steel plate shear wall (SPSW) structure, which comprises a square concrete-filled steel tube (CFST) boundary frame and infilled cold-formed steel (CFS) buckling-restrained beam-only connected SPSWs. The article presents the results from tests conducted to study the lateral behaviour and failure modes of this structure, as well as a design method for its shear capacity based on numerical analysis.

The article appears to be reliable in terms of its content, as it provides detailed information about the tests conducted and their results, as well as a thorough numerical analysis that supports the proposed design method for the shear capacity of this structure. The authors also provide sufficient evidence to support their claims throughout the article, including references to relevant literature and figures illustrating their findings.

However, there are some potential biases in this article that should be noted. For example, while the authors do discuss some potential risks associated with this structure, they do not provide any counterarguments or explore alternative solutions that could address these risks. Additionally, there is no discussion about how this structure compares to other existing structures or how it might be improved upon in future research. Furthermore, while the authors do provide references to relevant literature throughout the article, they do not present both sides equally when discussing certain topics such as seismic performance or energy dissipation capacity; instead they focus mainly on supporting their own claims without exploring any opposing views or evidence that may exist in other sources.

In conclusion, while this article does appear to be reliable overall in terms of its content and evidence provided by the authors, there are some potential biases that should be taken into consideration when evaluating its trustworthiness and reliability.

# Topics for further research:

* Alternative solutions for steel plate shear wall structures
* Seismic performance of steel plate shear wall structures
* Energy dissipation capacity of steel plate shear wall structures
* Comparison of steel plate shear wall structures to other existing structures
* Improvement of steel plate shear wall structures
* Counterarguments to potential risks of steel plate shear wall structures

# Report location:

<https://www.fullpicture.app/item/2c9d7c1f89370bef8556fb1da919e495>