# Article information:

Punching shear strength of steel fibre reinforced concrete flat slabs: a literature review and design codes evaluation - IOPscience  
<https://iopscience.iop.org/article/10.1088/1757-899X/1067/1/012061>

# Article summary:

1. This paper presents a comprehensive literature review of experimental investigations conducted to study the behaviour of steel fibre reinforced concrete (SFRC) flat slabs.

2. The punching shear calculations of the ACI-318-19, the EC2, and the BS8110 codes were evaluated using the test results for SFRC flat slabs reported in the literature to determine their applicability in practice.

3. These codes do not consider the strength contribution of steel fibres, and thus these comparisons with the test results revealed that the punching shear calculations of the above codes consistently underestimate the shear capacity of SFRC flat slabs.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is generally reliable and trustworthy as it provides a comprehensive literature review on experimental investigations conducted to study the behaviour of steel fibre reinforced concrete (SFRC) flat slabs. The article also evaluates the punching shear calculations of three design codes - ACI-318-19, EC2, and BS8110 - using test results for SFRC flat slabs reported in literature to determine their applicability in practice. The article does not present any biases or one-sided reporting as it objectively presents both sides equally and does not make any unsupported claims or missing points of consideration. Furthermore, it provides sufficient evidence for its claims made by comparing test results with design code calculations which reveals that these codes consistently underestimate the shear capacity of SFRC flat slabs due to lack of consideration for steel fibre strength contribution. There is no promotional content or partiality present in this article as it is purely based on scientific research and evaluation. Additionally, possible risks are noted as it mentions that these design codes may underestimate shear capacity which could lead to structural failure if not accounted for properly during design process. All in all, this article is reliable and trustworthy as it provides an objective overview on its topic without any bias or promotional content present.

# Topics for further research:

* Steel fibre reinforced concrete flat slab design
* Punching shear capacity of SFRC flat slabs
* Design codes for SFRC flat slabs
* Steel fibre strength contribution to shear capacity
* Experimental investigations of SFRC flat slabs
* Structural failure due to underestimation of shear capacity

# Report location:

<https://www.fullpicture.app/item/16e1873577be73023abc3eb774c5a079>