

TECHNICAL GUIDANCE

PERFORATED PADSTONES

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(First issue)

QUESTION

Can perforated brick(s) be used as a padstone for the support of structural members such as steel beams?

CONSIDERATIONS

- Padstones must be capable of supporting the loads imposed upon them and transmitting those loads to the supporting wall without cracking or crushing.

The total load bearing capacity of a padstone is the product of the crushing strength of the padstone material and its bearing area.

- Perforations will reduce the amount of padstone material available for support and therefore lower the padstone's load bearing capacity
- The number size and direction of perforations i.e. vertical or horizontal, will affect the overall strength of the padstone.

ANSWER

Solid padstones are preferred. However, perforated padstones are acceptable provided their bearing capacity can still safely carry the loads placed upon them.

Perforations should be vertical and when laid the bedding mortar should fill the perforations to increase the bearing surface.

Bricks installed with the perforations laid horizontally (brick on edge) should be rejected unless calculations can be provided to prove the arrangement is satisfactory.

The supported ends of the structure member e.g. steel beam, should be bedded on mortar to ensure a full bearing is achieved.