TECHNICAL UPDATE

CONCRETE LINTELS FACED WITH BRICK SLIPS

Concrete lintels faced with brick slips

This technical update provides additional guidance relating to how the Functional Requirements in the Technical Manual may be satisfied. This article covers the following:

- Executive summary
- The product
- Warranty position

Executive summary

The industry is looking to alternative solutions to constructing traditional brick arch and soldier course detailing on steel lintels over external openings and has moved to using various products including the application of brick slips applied to concrete lintels.

The following identifies our warranty position and that unless sufficient proof of design and quality processes are in place, these products will not satisfy our standards.

The product

These products may arrive on site in a multitude of shapes and sizes, with decorative slip facings adhered to a concrete lintel or cast into part of the concrete lintel manufacturing process. The slips themselves can be cut from facing bricks or from other products e.g. concrete bricks, artificial stone or even natural stone.

Some concrete lintel products use steel tangs, either flat plate or angles, projecting beyond the concrete component to act as the structural supporting mechanism - cast into to the concrete backing.

These products are typically produced by a concrete lintel manufacturer or brick cutting companies, who either buy in the concrete lintels or manufacture them, and then adhere brick slips.

Warranty position

The lintels should be tested as a whole product and not in isolation.

Evidence of design testing and quality management processes must be provided for the whole assembly.

Manufacturers of these products, must be able to provide evidence to the warranty provider that their product meets one of the following options:

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Either:

1. Provide a third party 'product conformity certification' (BBA, BDA KIWA, BRE or similar organisation acceptable to the Warranty provider) for the product as a whole.

Or:

2. The product manufacturer or distributor must provide evidence to demonstrate the product (as a whole) meets the following:

- CE / UKCA Marking: Construction products must be supported by evidence of testing carried out on the product. A copy of the 'CE / UKCA' marking and 'Declaration of Performance' will be required to be provided to the warranty surveyor
- Lintel: Concrete structural lintels must be proven to conform with BS EN 845-2/ BS 8297
- Structure: The manufacturer must be able to provide a copy of structural design for the lintels using BS EN 1996, clearly indicating the maximum span, section, profile including reinforcement details and cover, minimum end bearing and maximum permitted loadings and confirming a 60 year life expectancy will be achieved
- Test Evidence: The manufacturer must be able to provide test evidence to demonstrate the lintels will be able carry the loads as per their design
- Adhesive: All adhesives must hold valid third-party accreditation (BBA or similar) and be suitable for the substrate. A minimum period of 15 years must be confirmed for the durability of the bond between the slip and the concrete lintel
- Slip Facings: The performance standards for the slip facing product (to be adhered to the lintel) must be confirmed and be appropriate for the exposure location
- Evidence of a quality management process for the manufacture of the lintel an slip facings application must be provided that satisfies ISO 9001 or equivalent
- Structural steel: Where a lintel includes structural steel which requires to be embedded in the supporting masonry, evidence must be provided that the steel is adequately protected against corrosion to a minimum rate of 450g/m2 or Austenitic stainless steel is used for sites in a coastal locations

Every care was taken to ensure information in this article was correct at the time of writing (July 2021). Guidance provided does not replace the reader's professional judgement and any construction project should comply with the relevant building regulations or applicable technical standards. For the most up to date LABC Warranty technical guidance please refer to your risk management surveyor and the latest version of the LABC Warranty Technical Manual.