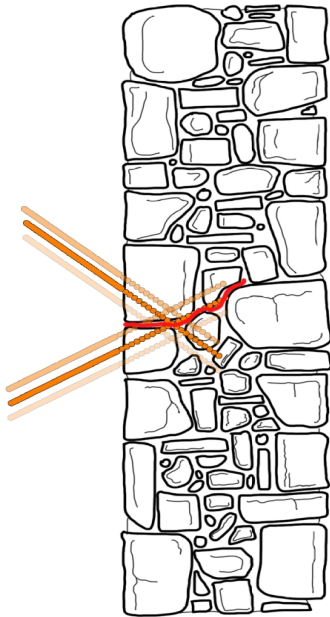


Filling of cracks in brick masonry structures, unfired clay, tuff

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APPLICATION DATA SHEET

Filling of cracks in brick masonry structures, unfired clay and tuff, by inserting helicoidal bars through:

1. drilling of holes;
2. insertion of bars and grouting;

1) DRILLING OF HOLES

Drilling of pilot holes on either side of the crack, with a suitable inclination with respect to its profile (such as to avoid the slipping off helical bars), to be carried out in compact areas of the masonry, for a depth equal to or greater than the length of the bar and in the number planned by the project.

The holes will be made with a smaller diameter than that of the bar; in particular, the hole must have a diameter smaller than about two millimeters (for example, for a ϕ 10 bar a hole with a diameter of 8 mm will be made). The holes will be tilted alternately upwards and downwards with a scheme studied in the design phase.

2) INSERTION OF BARS AND GROUTING

Installation of **Kimisteel INOX X-BAR** of appropriate diameter and length, inside the hole with chuck **Kimisteel SDS DREEL** installed on a hammer drill (combined or pickaxe) with SDS Plus connection, with a minimum stroke

of 3 J and a minimum wattage of 700W .

As an alternative it is possible to install the bars with manual pusher **Kimisteel MANUAL DRILL**.

After installing the Kimisteel SDS Drill on an SDS Plus plug-in drill, install the bar inside the pre-hole, with only percussion until it is completely inserted.

If there is a need to use **Kimisteel INOX X-BAR** in lengths greater than 50 cm, the bar may bend and can make it difficult to apply; in order to reduce this phenomenon, we recommend the use of suitable extensions for chucks or the use of steel hollow tubes. Once the bars have been inserted, fill the hole with suitable resins of the Kimitech line or mortars of the Betonfix, Limepor or Tectoria lines.

In the case of pass-through cracks, before the insertion of the helical bars, it is advisable to proceed with the grouting of the lesion with appropriate mortar depending on the substrate, and the injection of a suitable grout to restore the material continuity of the masonry.

POSSIBLE ALTERNATIVES

Kimisteel INOX X-BAR is available in the diameters $\phi 6$, $\phi 8$ and $\phi 10$.

The bars with a diameter of 6 mm are recommended for making reinforced paints. Furthermore the bars are available in the INOX AISI 304 or INOX AISI 316 variants.