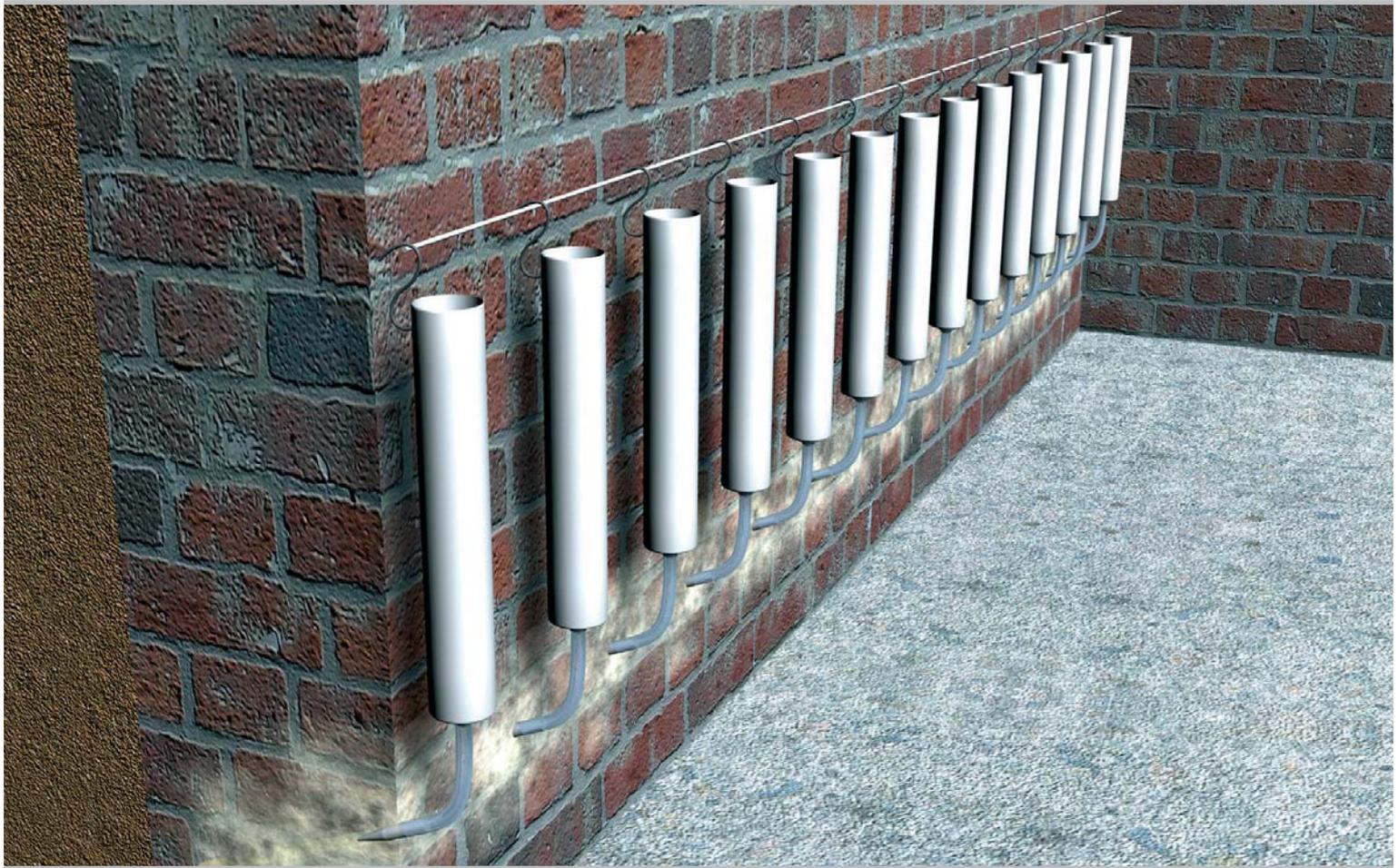


THE ART OF BLOCKING RISING DAMP PERMANENTLY

Masonry injection against rising damp (capillary moisture)





MASONRY INJECTION – GRAVITY-FED AND LOW-PRESSURE INJECTION

Simple methods for difficult situations

Gravity-fed injection with Kiesol is applied through holes drilled at an angle or horizontally using Injection Cartridges for the material or directly injecting it into the holes using extension tubes with a low-pressure gun. This typical method of capillary impregnation by injection,

works where the accessible substrate void volume is sufficient to seal the substrate, producing an effective moisture barrier. Alternatively, for weaker substrates and where there are more extensive voids in the masonry, Injection Cream can be used. This cream formulation can be used

where there is capillary moisture penetration of up to 60 %.

Where there are very high levels of moisture penetration, it can also be used in combination with masonry pre-drying techniques.

THE SEQUENCE OF OPERATIONS

First 'plug' then 'seal'



PRIMING WITH KIESOL

The prepared substrate is primed with Kiesol before 'plugging'.



BOND COAT WITH SULFATEX GROUT

Within the Kiesol open time, the Sulfatex Grout is applied by brush.



LEVELLING WITH WATERPROOFING FILLER

The Waterproofing Filler is applied directly onto the wet bond coat to 'plug' the injection areas.



DRILLING THE HOLES

After 'plugging' the injection area, the 30 mm diameter injection holes are drilled at maximum 12.5 cm centres, at an angle of up to 45°.



BLOWING OUT THE HOLES

Carefully blowing out the holes before injection/impregnation is necessary to ensure all of the drilling dust is removed.



APPLYING KIESOL WITH INJECTION CARTRIDGES

The use of Injection Cartridges ensures that Kiesol can be effective by fully penetrating the wall over a long period.



APPLYING INJECTION CREAM BY LOW PRESSURE INJECTION

Injection Cream is applied by low pressure Injection as an alternative method.



SEALING THE HOLES

After the injection process, all of the holes are sealed with Injection Mortar.



WATERPROOFING THE INJECTION AREA

After sealing the holes, the whole area is waterproofed with Sulfatex Grout.

MASONRY INJECTION AGAINST RISING DAMP (CAPILLARY MOISTURE)

Horizontal barriers that work

Masonry injections against capillary rising damp are designed to form horizontal barriers. These are always combined with other measures such as water-stopping, internal or external

waterproofing and refurbishment plaster systems. The site condition survey and analysis determines: the position of these horizontal barriers, the degree of capillary moisture flow

and the void volumes, plus it also determines the choice of method: gravity-fed or low-pressure injection and whether with or without pre-drying masonry requirements.

SEAL THE VOIDS, REPEL THE WATER

Injection methods work by void impregnation. Gravity-fed or low-pressure injection, they fill the capillary

network of the substrate material, to give a fully impregnated layer within and across the masonry walls.

The liquid materials injected into the masonry work as follows:

- The active substances are deposited in the substrates capillary network and restrict, then block the flow of water.
- They also seal the capillary walls themselves, which has the effect of producing an 'unwetable' layer i.e. there is no longer any capillary movement of water along the capillaries.



The Zarentin monastery church has been the subject of an independent study for a scientific research project over the past 10 years: The effectiveness of the Remmers Kiesol system that was originally applied still remains fully waterproof and in excellent condition today.

KIESOL STOPS THE WATER

Kiesol is a water repellent, void sealing material, which is extremely durable. Its long term efficiency is demonstrated by over 50 years of practical experience on many challenging buildings, where waterproofing has been included as part of National Heritage conservation

projects. The water transport mechanisms within the masonry substrates are reduced by over 90%, the salt transport decreases dramatically and Kiesol can even be used where there is high water infiltration and hydrostatic pressure.

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