

RENOVATION AND STRENGTHENING OF REINFORCED CONCRETE STRUCTURES WITH COLLABORATIVE CASTINGS

Floors and roofs reinforcement

APPLICATION DATA SHEET

Renovation and strengthening of reinforced concrete structures with collaborative castings by:

1. Preparation of the surface;
2. treatment of the existing metal reinforcement;
3. protective treatment of the reinforcement bars;
4. Insertion of rods and connectors;
5. pouring of the castings;
6. final protective coat.

1) PREPARATION OF THE SURFACE

The surfaces to be restored must be prepared by completely removing the damaged concrete by hand or mechanical chipping or by other suitable means such as hydro-scarifying, in order to obtain a solid support, free of loose parts and sufficiently rough.

Make sure the surface is clean and free from dust, grease, oil and release agents in general.

2) TREATMENT OF EXISTING METAL REINFORCEMENT

Perform the brushing of exposed reinforcing bars or proceed with hydro-sandblasting in order to remove the rust and bring the surface to "white-metal" condition (hydro-sandblasting is not necessary if the preparation of the surface has been carried out by hydro-scarification, but it is necessary when a long period of time elapses from this operation due to particular organizational requirements of the site, before the treatment of the reinforcing bars).

3) PROTECTIVE TREATMENT OF THE REINFORCEMENT BARS

Carry out the protective treatment of exposed reinforcement bars by applying single-component anticorrosive hydraulic mortar Betonfix KIMIFER, with a CE mark in conformity with UNI EN 1504-7, applied with a

brush, according to the consumption rates in the Technical Data Sheet, on the metal reinforcement to be protected.

4) INSERTION OF RODS AND CONNECTORS

Possible placement of new metal reinforcement bars or collaborative electro-welded mesh, in the case of significant oxidation of the existing bars with a strong reduction of the section, and grouting with special epoxy resins or cement-based grout (consult our Technical Office). If necessary, prepare the formwork; it is advisable to treat it with a release agent.

5) POURING OF THE CASTING

Wet both the formwork and the area to be treated to saturation and eliminate, at the time of casting, any stagnation of water (s.s.d condition) by hydro-washing.

Mix Betonfix CR, CE marked according to UNI EN 1504-3 Class R4, with a cement mixer for about 5 minutes, adding the 3/4 of necessary water and then the product with the remaining water until the desired consistency is obtained. Respect the consumption rates indicated in the Technical Data Sheet.

The inserts must have a suitable contrast reinforcement anchored to the existing structure with a minimum cover of 2 cm.

For thicknesses greater than 10 cm, mix Betonfix CR with about 30% of washed siliceous aggregates, free of impurities, with minimum particle size greater than 10 mm and maximum diameter depending on the thickness of the jet

6) APPLICATION OF ANTI-EVAPORATOR

Apply anti-evaporator ANTIEVAPORANTE W on the fresh concrete mortar, using a roller or spray. This protects the concrete by preventing the evaporation of the mixing water in the first phases of curing of the product.