

## **Application Report No. A 10-1e**

### **Concrete Renovation - Manual**

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Status: 03/2005

PTC, Italy

More and more, the technology of ultra high pressure water jetting (2000 to 3000 bar) is being applied, when it comes to renovating concrete surfaces.

In this particular case, it was necessary to remove a thick epoxy coating from the facade of a 17-story building in Milan, removing the damaged concrete at the same time.

The reinforcement bars were too close to the surface, which meant that they were not sufficiently covered with concrete. The problem was that water could find its way to the reinforcement bars and these began to rust, increase in volume and cause the concrete to break-up. For this reason, the concrete renovation was essential.



Photo above:

**PTC Unit      KAMJET   K 10016**

Max. working pressure:    2500 bar

Max. capacity :              23 l/min.

Photo on the left:

For this job, a pneumatically-driven KAMAT "**Roto-Lance**" was used, which achieves an even jetting performance.



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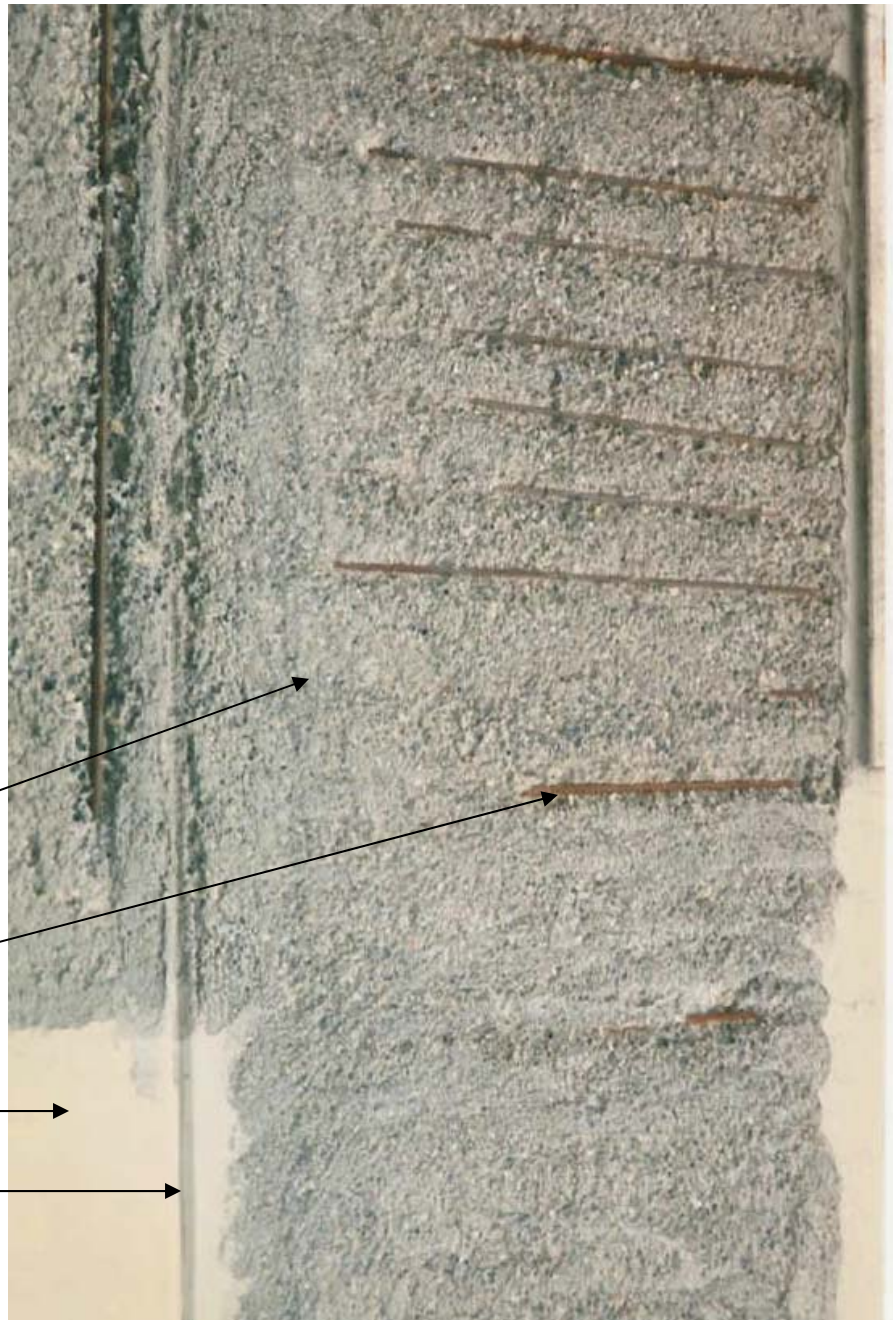
PTC, Italy

On the photo the concrete area which was blasted at 2000 bar is clearly visible.

As described on the first page, the reinforcement bars near to the surface were exposed completely.

Concrete surfaces which have been treated with this method have an adhesive tensile strength of at least **1,5 N/mm<sup>2</sup>**.

- Treated surface
- Reinforcement bars exposed
- Untreated surface
- Expansion joint



This method of renovation is particularly suitable for work near to windows, expansion joints, antennas, cables, etc., as there is no damage to the surrounding areas.