



Car park restored by a Conjet hydrodemolition robot



The Conjet Robot 230 at work in the carpark.

The Swedish hydrodemolition contractor NCC Waterjet, with its fleet of seven Conjet Robot high pressure water jetting machines, was employed by the telecommunications company Ericsson to carry out SEK 7M of repairs to one of its reinforced concrete carparks, outside of Stockholm.

The four storey carpark was built in the 1970s and a combination of frost and de-icing salts, brought into the carpark when vehicles are parking, has since caused extensive decay to the two intermediate floors and many supporting columns.

Selective removal to depths, varying between 50 and 120 mm

The bulk of the repair is to the 220 mm thick reinforced concrete floor slabs where NCC

Waterjet is using one of its remotely operated, computer controlled Conjet Robots to selectively remove only the badly decayed concrete down to an average depth of 80 mm. But damage is so inconsistent the Conjet Robot is taking out sub-standard concrete to depths varying between 50 mm and 120 mm and in some instances even cutting right through the floor slab. The Conjet Robot has built in automatic quality control. Once the machine has been pre-set by the operator the Conjet Robot only removes weak and damaged areas of concrete to the pre-determined quality depth. This can be above or below any steel reinforcement, which, if exposed, is also cleaned of rust.

The scope of the project

NCC Waterjet has to restore approximately 1350 m² of deck in a sequence of some days. After the decayed concrete has been cut out from each bay, fresh concrete, with a strength of 40 Mpa, is poured in to complete the rep-

Case Stories



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APPLIED WATERJET TECHNOLOGY

air. The contractor has supplemented its Conjet Robot with a high pressure hand held lance to cut out similarly decayed concrete from around the bases of about 150 columns, which are being strengthened with short cast insitu concrete collars.

Equipment Used

1 Conjet Robot 230
1 Conjet Power pack 540
Rated 232 lit/min at 1150 bar (61
gpm at 17,000 psi).



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