

Breaking Thick Reinforced Concrete

During the winter of 2004, Precision Concrete Cutting was invited to bid on a project at a manufacturing facility, by a long time and valued contractor.

This project was interesting in the fact that the concrete was thicker than conventional cutting methods would allow. The 38" thick concrete was embedded with 4" x 8" I beams of varied length, running perpendicular to a 2' wide x 3' deep steel trough, which ran the entire length of a 20' wide x 120' slab, which was sloped considerably towards the trough from the outside edge, exposing portions of the I beams. The I beams were cast in place on a level plane to support the equipment. The equipment was removed prior to any work commencing.

We approached the project with a variety of ideas including, wire sawing, deep flat sawing, and breaking. Since the flat sawing would involve removing the I beams prior to cutting, that idea was quickly dismissed. Wire sawing was then considered, but also dismissed to keep costs within budget. We then concentrated on breaking.

To accomplish this idea we acquired two Rock Breakers, sufficient to break through the heavily reinforced concrete. With assistance from an excavator, to separate and remove the broken pieces, we tackled the project using two operators, working in unison, one coring and one operating both breakers. 224 cores were drilled 26" in depth to accommodate the breakers. Using standard wedges on one breaker and following it with a breaker set up with expanding wedges. We were able to adequately break, and spread the concrete, so that the excavator could then remove the pieces. The project was completed in just 6 days staying well within the time frame designated by the contractor.