

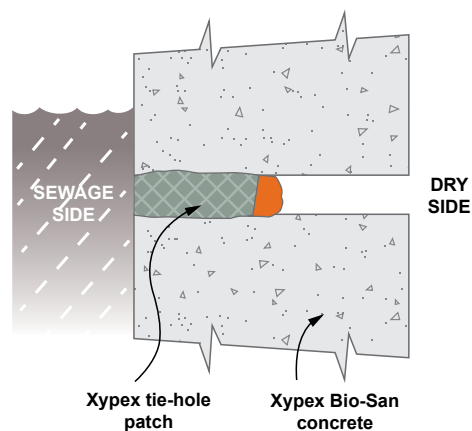
FILLING TIE-HOLES IN XYPEX BIO-SAN C500 TREATED CONCRETE

2019-08

There are several ways of holding forms together during placement of concrete. Most of these methods involve the use of some type of steel tie that connects the forms together and holds them from spreading. These ties inevitably leave a leak path for water and need to be detailed in order to achieve a waterproof structure.

The following provides one recommended procedure for waterproofing each of the two most common types of concrete ties that might be found in sewerage structure construction: gang form taper ties and cone snap ties. These procedures are specific to concrete where Xypex Bio-San C500 admixture has been used. If other form tie assemblies are used please contact Xypex Technical Services for direction.

The following assemblies are meant to be installed from the sewage water side of the concrete element.



If other form tie assemblies are used, please contact Xypex Technical Services for direction.

Waterproofing Gang Form Taper Tie Holes

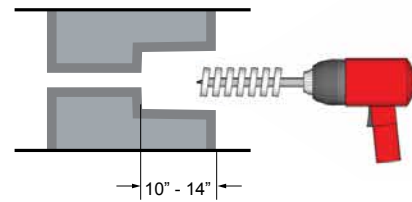
As illustrated below, taper ties are long steel bars that are threaded at each end and have a slight taper through the full length of the bar between the threaded areas. They are usually used in thick section walls of 20" (500 mm) or more.

The following procedure is meant for use when waterproofing a thick section wall. If the concrete section is thinner than 10" (250 mm) contact Xypex Technical Services for direction. The following installation is meant to be installed from the positive or wet side of the concrete element.

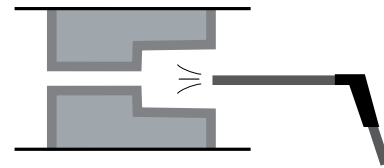


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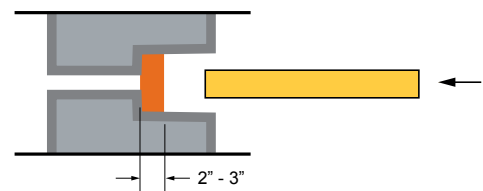
STEP 1: Using a hammer drill bit that is slightly larger than the outside diameter of the taper tie hole, drill out the hole to a depth of 10" - 14" (250 - 350 mm) leaving the inner wall of the hole rough.



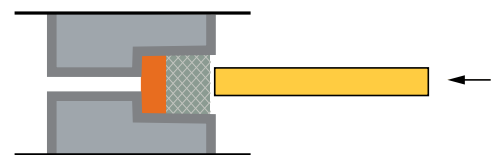
STEP 2: Remove all loose material within the void. Thoroughly clean and saturate the void with water. Allow water to soak into concrete and then remove all surface water. All surfaces should be left saturated-surface-dry (SSD – wet but with no glistening water).



STEP 3: Compact a blend of 3 parts Xypex Concentrate and 1 part Xypex Patch'n Plug made to a mortar consistency into the bottom of the prepared section of the hole to form a plug. The plug is to be 2" - 3" (50 - 75 mm) thick. There must remain at least a 8" (200 mm) of space between the top of the plug and the surface of the concrete element. Remove any of the plugging material from the outer surface of the concrete wall or element by scrubbing or grinding.



STEP 4: Fill the remaining void to the surface with Xypex Megamix II with Bio-San mixed to a stiff mortar consistence. Use an appropriate method to get full compaction of the Xypex Megamix II with Bio-San.

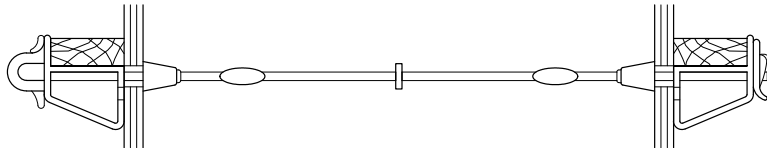


STEP 5: Cure by keeping moist for two to three days. Open to water contact as per Xypex guidelines.

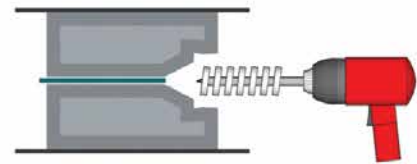
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Snap Ties with Cone Spreaders

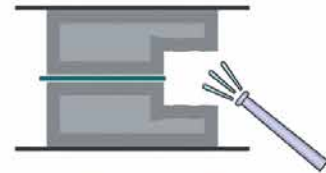
The following procedure is meant for snap cone ties that leave a solid steel rod through the concrete and a cone-shaped impression approximately 1" in diameter x 1.5" (25 x 37 mm) deep, at the surface of the concrete. When specifying form ties for a project, Xypex recommends a cone depth of greater than 1.5" (37 mm) and that ties have a built in waterstop included.



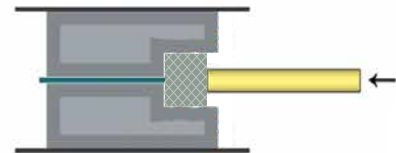
STEP 1: Using a hammer drill, or chisel bit that is slightly larger than the outside diameter of the cone, drill out or chip out the cone shape to the full depth of the indentation leaving a rough surfaced, straight-sided void.



STEP 2: Remove all loose material within the void. Thoroughly clean and saturate this area with water. Allow water to soak into concrete and then remove all surface water. All surfaces should be left saturated-surface-dry (SSD – wet but with no glistening water).



STEP 3: Fill the void to the surface with Xypex Megamix II with Bio-San mixed to a stiff mortar consistence. Use an appropriate method to get full compaction of the Xypex Megamix II with Bio-San.



STEP 4: Cure by keeping moist for two to three days. Open to water contact as per Xypex guidelines.