

Single Family Residential/Commercial & Industrial Masonry Construction and Wall Ties

From The Masonry Advisory Council

To: Architects/Engineers/Developers/Building Officials/Building Commissioners/Mayors & Village Presidents

Item I:

1. Corrugated wall ties are only allowed, by code, to be used in veneer work on wooden studs.
2. If brick is veneered over concrete block, or concrete backing- only wire anchors, adjustable anchors or joint reinforcement is allowed by code. That is the LAW! Copy enclosed. 85 to 90% of corrugated ties used in the Chicagoland area, with block backup, is by non-union, or very uneducated bricklayers. 10 to 15% is by local residential bricklayers, who are moving up from residential wooden framed veneer, to brick with block backup for small commercial construction. By the way, where is the architect on this job? What is called for on the drawings? On the drawings (under Mandatory Specifications Checklist in the TMS 420 Code, notes to Architect/Engineer), specify the location, spacing and type of accessories not indicated on the project drawings.

Item II:

If the brick & block wall has already been laid up with corrugated ties, then a retro tie will have to be installed, by drilling and installing such anchor. (Copy Enclosed.) If the block has been laid up with corrugated ties and the brick veneer has not been laid up yet, another option is to install D/A 5213 anchors onto the CMU backup and wire pintle should be installed to tie the brick veneer to the backup.

Item III:

On all exterior walls- all joint reinforcement, wire ties, or wire anchors, minimally must be hot dipped galvanized-to ASTM A153 (1.5 oz/ft²) (That is the law!)

How can you tell it is hot dipped compared to just mil galvanized? (They both look silver!) For wire reinforcing, it comes banded together and is labeled, HD, on the end of each bundle. Individual hot dipped pieces look like they were dipped in a trough of silver paint and the metal is encapsulated.



This project addition in the western suburbs used corrugated ties and had other major masonry problems. It has since been torn down and will be rebuilt in the spring.



In this example, the use of corrugated ties in a brick / block cavity wall is illegal and not built to code!

From Building Code Requirements for Masonry Structures




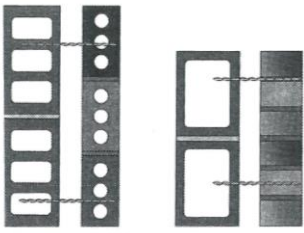
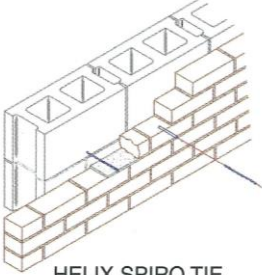

6.2.2.8 Masonry Veneer anchored or concrete backing

6.2.2.8.1 Attach veneer to masonry backing with wire anchors, adjustable anchors, or joint reinforcement.




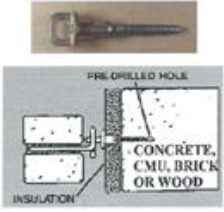
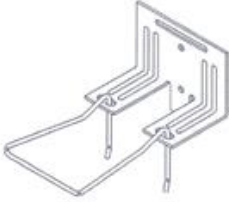
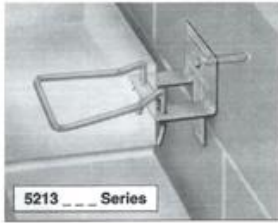
2.4 F Coatings for corrosion protection


b. Joint reinforcement, wire ties, or wire anchors in exterior walls exposed to a mean relative humidity exceeding 75 percent (for example, natatoria and food processing) ASTM A153 Hot Dipped – Galvanized.

EXAMPLES OF SUGGESTED ANCHORS TO USE IF A BRICK VENEER WAS LAID UP USING CORRUGATED TIES

		
 <p>d. Brick to concrete block e. Brick to concrete block (mortar joint or solid brick)</p>	 <p>HELIX SPIRO TIE</p>	<p>FLEXIBLE WALL STABILIZING ANCHOR</p> 
<p>FROM : RESTORATION SUPPLY INC. 773-472-3575</p>	<p>FROM : BRACING SYSTEMS 630-665-2732</p>	<p>FROM : BRACING SYSTEMS 630-665-2732</p>

EXAMPLES OF SUGGESTED ANCHORS TO USE IF BLOCK WAS LAID UP WITH CORRUGATED TIES AND BRICK NOT LAID UP YET (LEAVED CORRUGATED TIES IN PLACE – BENT UP OR DOWN)

		
 <p>TAPCON SCREW FOR BRICK VENEER TO CONCRETE BLOCK</p>	 <p>HB-200</p>	 <p>5213 ___ Series</p>
<p>FROM : LANCE CONSTRUCTION SUPPLY 773-522-1900</p>	<p>FROM : BRACING SYSTEMS 630-665-2732</p>	<p>FROM : LANCE CONSTRUCTION SUPPLY 773-522-1900</p>

 <p>ITEM # 602227 LADUR 8 - S 9 GA X 9 GA HOT DIP 18" O.C. 10 8" / L 500' / BOL DUR-O-WAL</p>	<p>THIS IS AN EXAMPLE (REDUCED IN SIZE FOR DEMONSTRATION PURPOSES) OF HOW JOINT REINFORCEMENT IS LABELLED ON THE END WRAP. THIS MAKES IT EASY TO DETERMINE THAT THE REINFORCEMENT USED IS INDEED HOT DIPPED.</p>
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