

Topic: CMU Wire Reinforcing

Question:

What is the best type of wire reinforcement for use in Single-Wythe CMU or Multi-Wythe CMU Cavity Wall Systems?

Answer:

Contrary to popular belief, wire reinforcement does not contribute to structural stability in standard reinforced CMU walls. In fact, the primary purpose of wire reinforcement in modern masonry wall systems is simply to help resist CMU shrinkage cracking. Typically, vertical and bond beam rebar reinforcement serves to resist wind loading.

Ladder wire with cross rods spaced 16 inches on center allows code required centering of rebar, freer flow of grout and promotes full embedment in mortar at every intersection where side and cross rods meet on the inner and outer CMU face-shell, resisting wall shrinkage.

Truss wire is not recommended for use in reinforced CMU. Diagonal cross rods make it impossible to meet grouting standards referenced in IBC and sub-referenced in ACI Building Code Requirements for Masonry Structures.

Surrounding heavy duty 3/16 inch diameter wire with mortar when placed in 3/8 inch bed joints is difficult to say the least. It can actually be detrimental. This is especially evident when considering allowed tolerances for masonry units and joint sizes. Mortar better surrounds wire when utilizing 9 gauge flush-welded side and cross rods, increasing resistance to shrinkage cracking.

Field-formed corners and mesh ties at intersections offer greater performance, economy and safety. Meet code and performance requirements with standard mill galvanized finish for interior walls not exposed to moisture and hot dip galvanized for exterior walls and interior walls exposed to high moisture or humidity.

In the case of CMU wire reinforcement there is truth to the old adage "Less is More".

[Less Is More](#)

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Supporting Documents:



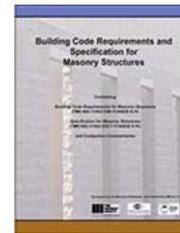
[NCMA TEK 12-2B](#)
Joint Reinforcement for
Masonry Structures



[NCMA TEK 10-3 \(Table 2\)](#)
Control Joints for
Concrete Masonry Walls



[Mario J. Catani](#) -
Selecting the right joint
reinforcement for the job



[Building Code Requirements and Specifications for Masonry Structures](#) -

- [3.4 B.11 a & b Placement tolerances](#)
- [3.3 B. 3.d Placing mortar and units](#)
- [1.16.2.3 Size of reinforcement](#)
- [3.3 F.1.b Site tolerances](#)
- [1.16.4.2 Protection of reinforcement](#)
- [3.4 B. 10.b Joint reinforcement](#)