Technical Note
Field Cutting Coated Wire Hangers

C. E. Shepherd Company

Wire Galvanizing

We galvanize our wire BEFORE welding to assure the most uniform coating of zinc possible. This eliminates the potential for zinc to concentrate at the welds where it is least needed. Contrary to popular misconception, welded wire is not prone to corrode preferentially at the welds. In fact, resistance welding of galvanized wire creates a zinc rich iron alloy around the perimeter of the weld interface. This zinc iron alloy is much more corrosion resistant than the low carbon steel wire core and provides additional protection to the weld joint which is already naturally corrosion resistant (even without the cathodic protection of the zinc).

Corrosion and Cut Ends

In brief, cut ends of galvanized steel wire do not rust so long as they are protected by the zinc on the surface of the wire. The zinc on the periphery of the wire serves in a sacrificial manner to protect the steel face of the cut end. Offered as evidence of this are the Twenty Year Report (ASTM 585 A) and the Thirty Two Year Report (ASTM DS 65) both conducted at State College, PA. The data in these reports was gathered from observations of cut ends of four galvanized chain link fence locations. At the end of twenty years, all fences were found to be 100G (100% gray metallic). In other words, no rust was present. After thirty two years, three fences were found to be 100G and the fourth was 70Y (70% of the cut face had a yellow alloy layer of protection) and 30R (30% of the cut face had rusted).

Field Cuts

During the installation of wire hangers in cooling tower fill replacements and in new construction, it is often necessary to cut wire panels to avoid interference with cooling tower structural members. When necessary, field cuts should be made a minimum of 1/4” away from the intersection of horizontal and vertical wires. Additional protective coating of the cut end may be applied if desired but is not necessary per the discussion in the preceding paragraph.

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