



BULLETIN 15-91

May 1991

CORROSION PROTECTION FOR NEW STEEL ROOF DECKS

When steel roof decks are specified, the National Roofing Contractors Association (NRCA) recommends the building designer specify the decking be factory galvanized or factory coated with aluminum zinc alloy for corrosion protection.

When specifying galvanized protection, in the section of the specifications addressing metal decking, the building designer should specify a coating that complies with ASTM A 525 Class G-60 or Class G-90. A G-90 coating provides greater corrosion protection than a G-60 coating (the ASTM specification previously identified G-60 as "light commercial" and G-90 as "commercial.")

When specifying aluminum zinc alloy protection, in the section of the specifications addressing metal decking, the building designer should specify a coating that complies with ASTM A 792. An aluminum zinc alloy coating provides greater corrosion protection than a G-90 galvanized coating.¹

Note: The above recommendation applies to most buildings. However, as noted in the Steel Deck Institute Design Manual, in highly corrosive or chemical atmospheres, special care in specifying protective finishes should be taken, and individual deck manufacturers should be contacted.

Commentary

Steel roof decks are typically painted with primer (prime coated) or they are galvanized. The Steel Deck Institute Design Manual (1989 edition) states that the prime coat "shall be considered an impermanent and provisional coating."

This bulletin was promulgated because of the long-term need for structural integrity of steel roof decks. To achieve this, adequate corrosion protection should be specified by the building designer.

Reference

- ¹ "Twenty-Year Atmospheric Corrosion Tests of Hot-Dip-Coated Steel Sheet," NACE Symposium on Atmospheric Corrosion, 1987.

Support

The following organizations support this NRCA bulletin:

- American Institute of Architects (AIA)
- Asphalt Roofing Manufacturers Association (ARMA)
- Institute of Roofing and Waterproofing Consultants (IRWC)
- Roof Consultants Institute (RCI)